

Draft Report

Louisiana Hurricane Ike Coastal High Water Mark Data Collection

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DRAFT

FEMA Reviewers, please NOTE:

The attached document is a Draft: This document is intended to be a working document for FEMA review. We anticipate comments and encourage your feedback on all aspects of the report.

Depending on the comments received from FEMA, there may be another iteration of this level of report to ensure that we are adequately addressing the needs of the task order.

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CORS	Continuously Operating Reference Stations
ESP	ESP Associates, P.A.
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GPS	Global Positioning System
HMTAP	Hazard Mitigation Technical Assistance Program
HWM	High Water Mark
HWM ID	High Water Mark Identification Number
mb	Millibar
mph	Miles per hour
NAD 83	North American Datum of 1983
NAVD 88	North American Vertical Datum of 1988
NGS	National Geodetic Survey
NGVD 29	National Geodetic Vertical Datum of 1929
NHC	National Hurricane Center
NOAA	National Oceanic and Atmospheric Administration
OPUS	On-line Positioning User Service
PELICAN	Pelican Land Surveying, LLC.
QA	Quality Assurance
RTK	Real Time Kinematic
SLOSH	Sea, Lake, and Overland Surges from Hurricanes
SOW	Scope of Work
U-DIMS	URS Disaster Information Management System
URS	URS Group, Inc.
USGS	U.S. Geological Survey

Term	Definition
Debris Line	Defines the extent of flooding where debris, such as parts of houses, docks, cars, or other non-natural materials, are carried by flood waters with some velocity and then dropped as the flood waters lose velocity and begin to recede.
Flagging	Marking or otherwise documenting the horizontal and vertical location of a high water mark so that the high water mark data are preserved for future surveying. These data will then be available even if the homeowner cleans the property or it rains, thereby eliminating the visible high water mark.
Hazard Mitigation Grant Program	A FEMA program that provides grants to States and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The program may be used to fund projects that will reduce or eliminate losses from future disasters by providing a long-term solution to a problem.
High Water	The maximum elevation that flood waters reach as a result of a storm event.
High Water Mark	A physical mark, such as a mud line, that designates the location and elevation of flood waters from a storm event.
Individual Assistance	Federal assistance provided to families or individuals following a major disaster or emergency declaration, which includes cash grants for housing (hotel or motel expenses reimbursement, rental assistance, home repair and replacement cash grants, and permanent housing construction assistance in rare circumstances) and other needs (medical, dental, and funeral costs, transportation costs, and other disaster-related needs).
Inundation Maps	Maps that delineate the areas flooded during a storm.
Mitigation	Any measure that reduces or eliminates the long-term risk to life and property from a disaster event.
National Flood Insurance Program	The Federal program created by Congress in passing the National Flood Insurance Act of 1968 that makes flood insurance available in communities that enact and enforce satisfactory floodplain management regulations. The program provides insurance claim information, floodplain management, and flood hazard identification.
North American Vertical Datum of 1988 (NAVD 88)	The most widely used vertical control datum in the United States today. It was established by the minimum-constraint adjustment of the Canadian-Mexican-United States leveling observations. The general adjustment of NAVD 88 was completed in June 1991.

Term	Definition
Public Assistance	Federal assistance provided to State and local governments, Native American tribes, and certain non-profit organizations after a Presidential disaster declaration. Public Assistance includes supplemental Federal disaster grant assistance for the repair, replacement, or restoration of disaster-damaged publicly owned facilities, and the facilities of certain private non-profit organizations. This includes emergency work and permanent work.
Water Mark	A mark, usually on structures, left by flood waters.
Wrack Line	Defines the extent of flooding where organic-type debris such as grass and weeds are carried by flood waters and left behind as the flood waters recede.

INTRODUCTION AND PURPOSE OF THE STUDY

Hurricane Ike made landfall on the United States near Galveston, TX, on September 13, 2008. The resulting storm surge struck the western coast of Louisiana as well as the coast of Texas. The Federal Emergency Management Agency (FEMA) contracted URS Group, Inc. (URS) under Task Order HSFEHQ-09-J-0001 of the Hazard Mitigation Technical Assistance Program (HMTAP) contract to assist in the collection of the coastal High Water Marks (HWMs) following Hurricane Ike in Louisiana.

URS received a Notice to Proceed from FEMA on October 27, 2008. On October 28, 2008, URS arranged travel and lodging for field staff, finalized orientation material, and obtained equipment (e.g., hand-held Global Positioning System [GPS] units, cameras, and health and safety equipment) to conduct the HWM collection. An orientation meeting for the field staff to distribute equipment and to assign field coverage areas was held in Metairie, LA, on October 30, 2008, and the field data collection was initiated on the next day.

URS collected HWMs along the shorelines of the Gulf of Mexico and the estimated limits of the landward extent of coastal storm surge flooding within Acadia, Ascension, Assumption, Calcasieu, Cameron, Iberia, Iberville, Jefferson, Jefferson Davis, Lafayette, Lafourche, Livingston, Plaquemines, Saint Bernard, Saint Charles, Saint James, Saint John the Baptist, Saint Martin, Saint Mary, Saint Tammany, Tangipahoa, Terrebonne, and Vermilion parishes. Additionally, the search for HWMs extended into Orleans, East Baton Rouge, and West Baton Rouge; however, no HWMs were located in these parishes.

Because the study area was affected by both Hurricane Gustav (landfall on September 1, 2008) and Hurricane Ike (landfall on September 13, 2008), there is the potential for confusion as to which storm created a particular HWM. Based on National Oceanic and Atmospheric Administration (NOAA) and U.S. Geological Survey (USGS) gage data, Hurricane Ike had a more pronounced effect on the gages along the coast, especially along the western half of the Louisiana coastline. In general, higher peak stages were seen during Hurricane Gustav on gages located in the inland riverine systems of Louisiana. While exceptions to these generalities exist, FEMA determined that HWM data collected south of the I-10/I-12 corridor would be attributed to Hurricane Ike, while those HWMs north of the I-10/I-12 corridor would be attributed to Hurricane Gustav (see separate HWM report on Hurricane Gustav, FEMA-1786-DR-LA).

Before and during deployment, URS also contacted the respective parish Emergency Managers to find out if there were any additional priority areas that should be visited. The Emergency Managers for Acadia, Jefferson Davis, and Plaquemines Parishes indicated that there was no flooding damage resulting from Hurricane Ike. The Emergency Manager for Saint Bernard Parish did not respond. The remaining Emergency Managers provided descriptions of the damage and committed to providing staff during flagging activities to help identify HWMs.

The purpose of this study was to document the extent of flooding and the maximum flooding elevations that occurred as a result of Hurricane Ike in Louisiana by collecting HWMs in the affected areas identified above. HWM data collection helps accurately document a flooding event and assists in response, recovery, and mitigation for future disasters. These HWMs help place the event within a historical context, improve estimates of current flood risk, and enable governments to make cost-effective decisions about mitigation efforts.

METHODOLOGY

HWMs are perishable; therefore, it was important to quickly capture HWM information before the HWMs were cleaned, removed, or generally lost. Consequently, the traditional two-person flagger teams and two-person survey teams were used. The two-person flagger teams can proceed quickly, which allows documentation of the HWM information before it is lost. The flaggers identified the location and flagged the HWM to be surveyed. Several days later, the survey teams visited the locations identified by the flagger teams and surveyed the HWM elevation.

The other option would have been employing embedded flagger teams in which the surveyor travels with the flagger; however, this was not feasible for this task order, because: 1) the teams expected to use vertical offsets more frequently than in the past due to the nature and age of the HWMs, and 2) it was decided to use the more cost-effective method of having the surveying conducted after a parish was thoroughly marked in order to avoid unnecessary back and fourth travel.

Within the parishes identified above, the flagger teams identified and flagged HWMs as indicated by mud lines, water lines, and, if possible, areas with debris lines (i.e., from manmade materials) or wrack lines (i.e., from plant materials). In coastal areas, when possible, multiple HWMs were flagged in the same area to document different coastal flood types (i.e., stillwater-only, wave height, or wave runup). The height of flood waters can be affected by outside forces such as wind and shielding by other structures. Therefore, in significantly damaged areas, and if available, multiple HWMs were recorded to provide better flood elevation data.

At each location, the flaggers entered the collected information (i.e., measured height, pictures, location of the mark, GPS coordinates, type of mark, etc.) into a computer program called URS Disaster Information Management System (U-DIMS). Once the data collection was complete, the details of the mark were transferred through wireless Internet from the field to a central server, and was then accessible to the project manager for review and management of the field work.

URS teams flagged the HWMs, and URS' subcontractors, ESP Associates, P.A. (ESP), and Pelican Land Surveying, L.L.C. (PELICAN), performed the surveying. The HWMs were surveyed horizontally in the North American Datum of 1983 (NAD 83) and in the Louisiana South State Plane Coordinate System, and vertically in the North American Vertical Datum of 1988 (NAVD 88). The surveys were conducted in U.S. survey feet. The HWMs were surveyed to the accuracy of 0.25 foot vertically and 10 feet horizontally, with a 95 percent level of accuracy.

SECTION ONE INTRODUCTION

1.1 GENERAL

Section 1 of this report summarizes the purpose of the task order and provides an overview of Hurricane Ike, which produced the High Water Marks (HWMs) described in this report. Section 2 discusses the methodology used to collect the HWMs, Section 3 explains the types of coastal flooding that produced the HWMs, and Section 4 summarizes the results from the HWM collection efforts. The appendices include the detailed results from the HWM survey.

The Federal Emergency Management Agency (FEMA) contracted URS Group, Inc. (URS) under Task Order HSFEHQ-09-J-0001 of the Hazard Mitigation Technical Assistance Program (HMTAP) contract to assist in the collection of the coastal HWMs from the effects of Hurricane Ike in Louisiana. This study documents the coastal HWM collection efforts along the shorelines of the Gulf of Mexico, Lake Pontchartrain, and the estimated limits of the landward extent of coastal storm surge flooding within the parishes of Acadia, Ascension, Assumption, Calcasieu, Cameron, Iberia, Iberville, Jefferson, Jefferson Davis, Lafayette, Lafourche, Livingston, Plaquemines, Saint Bernard, Saint Charles, Saint James, Saint John the Baptist, Saint Martin, Saint Mary, Saint Tammany, Tangipahoa, Terrebonne, and Vermilion. Additionally, the search for HWMs extended into Orleans, East Baton Rouge, and West Baton Rouge; however, no HWMs were located in these parishes.

Before and during deployment, URS also contacted the respective parish Emergency Managers to find out if there were any additional priority areas that should be visited. The Emergency Managers for Acadia, Jefferson Davis, and Plaquemines Parishes indicated that there was no flooding damage resulting from Hurricane Ike. The Emergency Manager for Saint Bernard Parish did not respond. The remaining Emergency Managers provided descriptions of the damage and committed to providing staff during flagging activities to help identify HWMs.

Maps showing the locations where HWMs were collected on an individual parish basis are provided in Appendix B.

1.2 PURPOSE

After significant flooding from a hurricane, it is imperative to collect data rapidly to document the event; assist in response, recovery, and mitigation; and improve disaster preparedness and prevention for future disasters. HWM data collection is an initial step in accurately documenting an event. These data help place the event within a historical context, improve estimates of current flood risk, and enable governments to make cost-effective decisions about mitigation efforts.

Collection of site-specific HWM data along rivers, bayous, bays, and coasts has numerous applications. The purpose of this study was to document the maximum flooding elevations that occurred as a result of Hurricane Ike in Louisiana.

There are a number of applications that the HWM elevation data can be used for, including:

- Estimation of storm frequency and severity
- Assessment of the accuracy of the Flood Insurance Rate Maps (FIRMs)
- Preparation of inundation maps

- Sharing information for Building Performance Assessments
- Sharing information for calibrating models that simulate the storm
- Assisting in prioritizing mitigation projects and preparing their benefit-cost analyses
- Determining depth of flooding of structures

Specific FEMA programs that directly benefit from post-disaster flood data collection include Individual Assistance, Public Assistance, the Hazard Mitigation Grant Program, and the National Flood Insurance Program.

1.3 OVERVIEW OF HURRICANE IKE

Hurricane Ike was the ninth named storm, fifth hurricane, and third major hurricane of the 2008 Atlantic hurricane season.¹ It originated as tropical wave that moved off the West African coast on August 28, 2008, and become a tropical depression on September 1, 2008, about 1,470 miles east of the Leeward Islands.² The tropical depression quickly strengthened, and by September 3, 2008, Ike became a hurricane. By September 4, 2008, Hurricane Ike had reached its peak intensity of 145 miles per hour (mph) with a pressure of 935 millibar (mb), thus making it the most intense storm in the 2008 Atlantic hurricane season.³ According to the National Oceanic and Atmospheric Administration (NOAA) National Hurricane Center (NHC), Hurricane Ike continued moving westward and made landfall along the northeast coast of Cuba on September 8, 2008, and again on Cuba's extreme southeastern coast on September 9, 2008. After emerging from Cuba, Hurricane Ike developed a large wind field as it moved northwest, across the Gulf of Mexico, towards the Louisiana coast. Hurricane Ike made U.S. landfall near Galveston, TX, on September 13, 2008, at 2:10 a.m., central daylight time, as a Category 2 hurricane on the Saffir-Simpson Hurricane Scale, with winds of 110 mph and a central pressure of 952 mb.

¹ Kleinberg, Eliot (2008-09-02). "[U.S. tracking tropical storms Hanna, Ike, Josephine. This was the first and only time the atlantic name "Ike" was used.](#)", Palm Beach Post. Retrieved on October 27, 2008

² National Oceanic and Atmospheric Administration (NOAA), National Hurricane Center

³ <http://www.srh.noaa.gov/hgx/projects/ike08.htm> Retrieved on October 27, 2008

SECTION TWO METHODOLOGY

2.1 GENERAL

This section summarizes the methodology used to flag and survey the HWMs. After significant flooding from a hurricane, it is important to quickly mark or flag HWMs to capture the data before residents clean up, or before subsequent rains eliminate the HWMs. Therefore, every effort was made to quickly flag the HWMs for survey to determine the HWM elevations.

2.2 PRE-FIELD DEPLOYMENT

URS received Notice to Proceed on the HWM Task Order from FEMA on October 27, 2008. On October 28, 2008, URS arranged travel and lodging for field staff, finalized orientation material, and obtained equipment (e.g., hand-held Global Positioning System [GPS] units, cameras, and health and safety equipment) to conduct the HWM collection.

An orientation meeting was held for the field staff and the survey crew in Metairie, LA, on October 30, 2008. Flaggers, data collectors, quality assurance staff, survey professionals, and managers attended the meeting in Metairie. The orientation included discussions on selecting HWM locations, review of field processes (including data capture, documentation, and information transfer), distribution of equipment, and a health and safety briefing. Prior to the deployment, the URS Task Order Coordinator and Project Quality Assurance Officer held telephone conversations with the FEMA Project Monitor to discuss specific areas of concern, known problem areas, and priorities to ensure that HWMs were collected in the best possible locations. URS also conducted telephone inquiries with the various Louisiana Parish Emergency Preparedness contacts to facilitate HWM collection efforts.

2.3 DATA SOURCES

On October 27, 2008, URS began to collect available information on the extent of coastal flooding in Louisiana to assist in identifying locations for the HWM collection. This included planning efforts based on discussions with FEMA and calls to the Acadia, Ascension, Assumption, Calcasieu, Cameron, Iberia, Iberville, Jefferson, Jefferson Davis, Lafayette, Lafourche, Livingston, Plaquemines, Saint Bernard, St. Charles, Saint James, Saint John the Baptist, Saint Martin, Saint Mary, Saint Tammany, Tangipahoa, Terrebone, and Vermilion Parish Emergency Managers to find out if there were any additional priority areas for collecting HWMs. URS was initially successful in contacting only the Ascension, Cameron, Iberville, Saint John the Baptist, Saint Tammany, and Terrebonne Parish Emergency Managers.

The areas identified by the Jefferson Parish Emergency Manager, such as Grand Isle, were already part of the areas designated by URS to collect HWM data, while the Acadia, Jefferson Davis, Saint Mary, and Plaquemines Parish Emergency Managers indicated that no significant flooding occurred in their respective parishes. To estimate the potential extent of inland flooding, URS also reviewed the results of the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model runs prepared by the NOAA NHC on September 16, 2008.

2.4 IDENTIFICATION OF THE STUDY AREA

URS prepared a Work Plan for the Louisiana Hurricane Ike coastal HWM collection efforts, which was submitted to FEMA on October 15, 2008. The purpose of the Work Plan was to outline the locations where HWMs would be collected. This plan was based on discussions with

FEMA and also from available information indicating locations that experienced significant storm surge flooding.

Based on the Scope of Work (SOW) requirements, URS focused the HWM collection efforts in the Parishes identified in Section 1.1 above. Figure 2-1 highlights the area south of the I-10/I-12 corridor where HWMs were investigated and/or collected, and it defines the project area. Discussion and justification as to why the project area was delineated in this way follows.

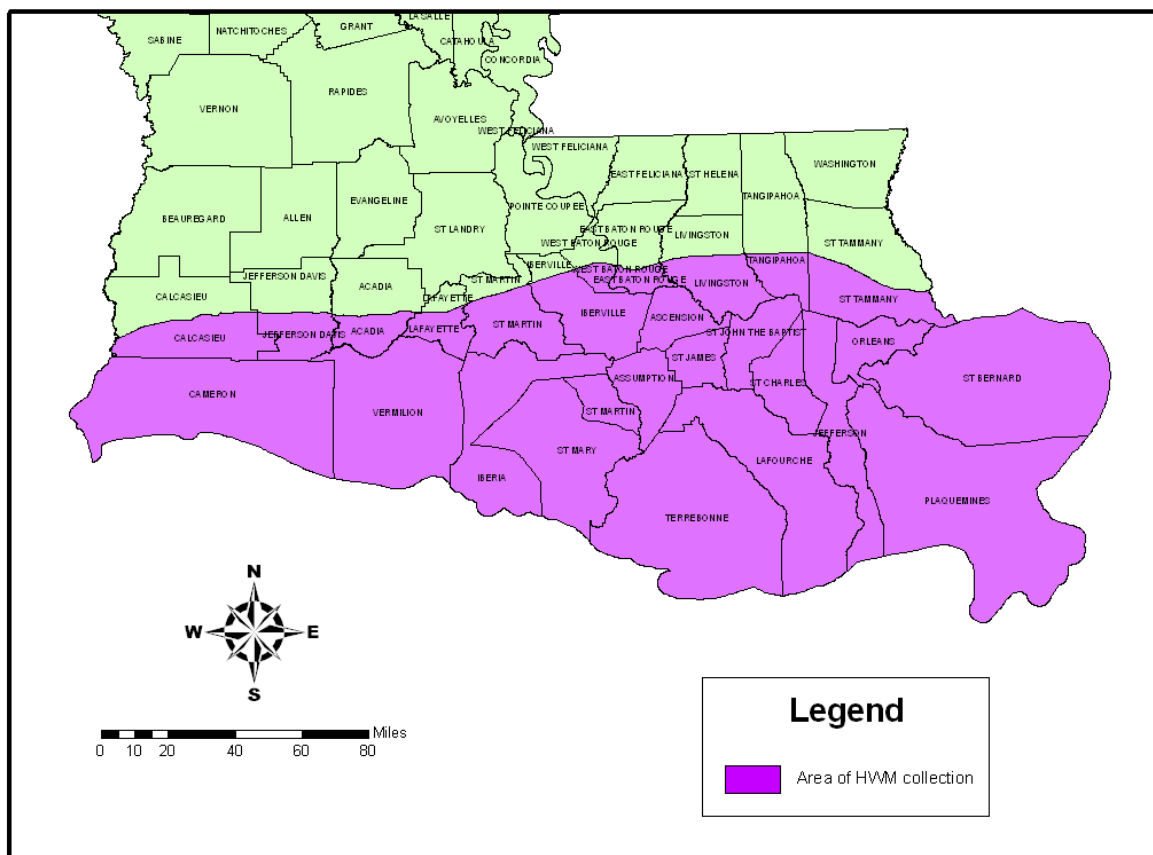


Figure 2-1: Project Area

The study area was affected by both Hurricane Gustav (landfall on September 1, 2008) and Hurricane Ike (landfall on September 13, 2008). Based on NOAA and U.S. Geological Survey (USGS) gage data, Hurricane Ike had a more pronounced effect on the gages along the coast, especially along the western half of the Louisiana coastline. Of the 46 active USGS and NOAA gages in the project area reviewed for this analysis, 26 gages showed the higher peak resulting from Hurricane Ike, while only 9 gages showed a higher peak for Hurricane Gustav. The remaining 11 gages were inconclusive as to which peak was higher.

Unfortunately, these generalities are not consistent throughout the project area, and there is the potential for confusion as to which storm event to attribute to a particular HWM. Figure 2-2 shows the difficulty in attributing a particular HWM to either Hurricane Ike or Gustav. Several USGS gages within Plaquemines and Jefferson Parishes were active during both Hurricanes Gustav and Ike. Their respective water levels during both events are shown as insets. USGS

gage 07374527: Northeast Bay Gardene near Point-A-LA-Hache, LA, shows a higher peak for Hurricane Gustav, while a neighboring gage USGS 07380241: Suzie Bayou at L. Hermitage Road near Deer Range, LA, shows a higher peak for Hurricane Ike. The USGS gage at Barataria Pass at Grand Isle, LA (USGS 073802516), showed nearly equivalent peaks for both Hurricanes Gustav and Ike. Missing data during Hurricane Ike precluded the use of gage USGS 073745257: Crooked B. NW of L. Cuatro Caballo near Delacroix.

Because of the difficulty in assigning HWMs to a particular storm event, FEMA determined that HWM data collected south of the I-10/I-12 corridor would be attributed to Hurricane Ike, while those HWMs north of the I-10/I-12 corridor would be attributed to Hurricane Gustav. (See separate HWM report on Hurricane Gustav, FEMA-1786-DR-LA)

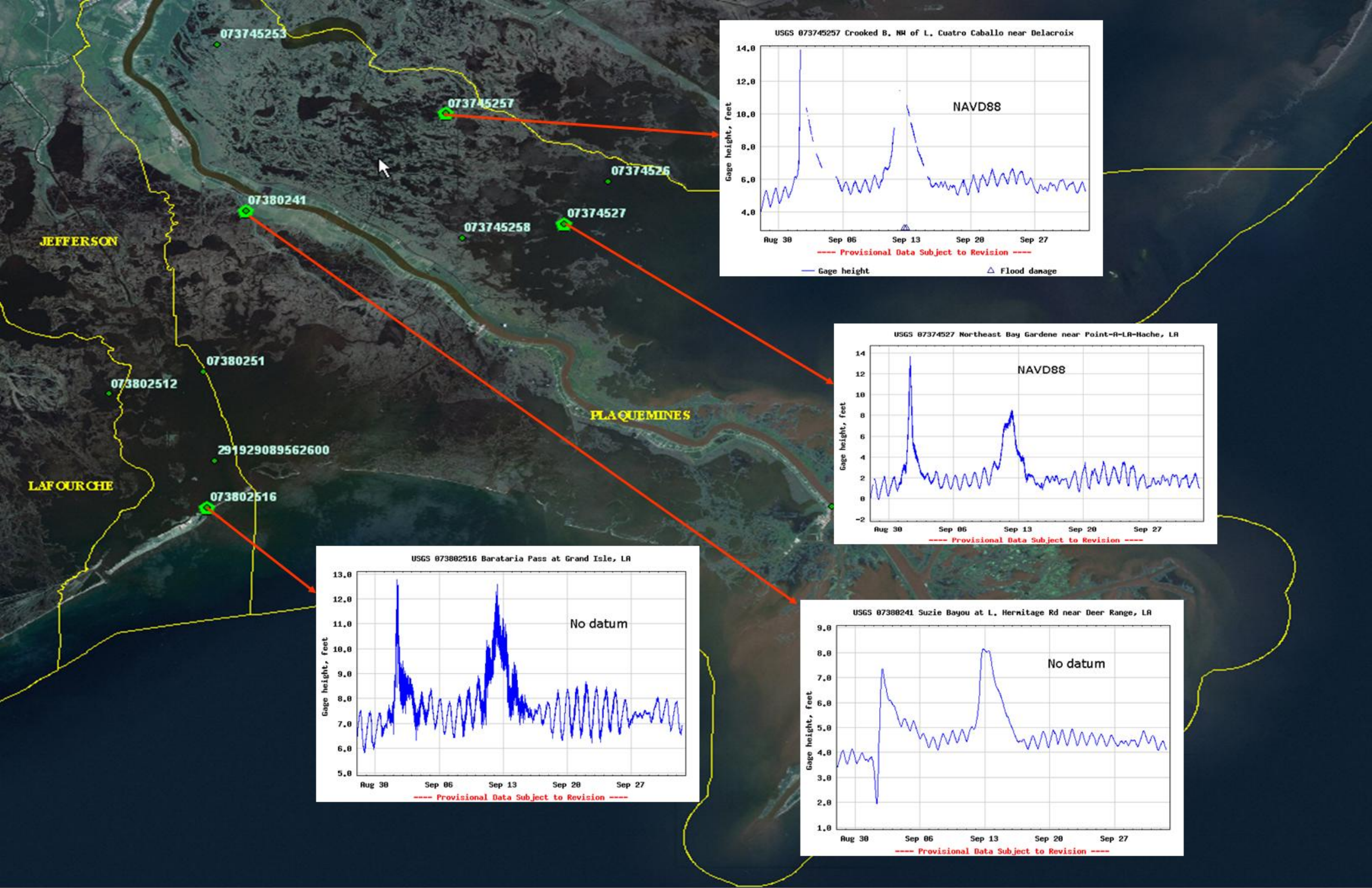


Figure 2-2: Comparison of Hurricanes Gustav (September 1, 2008) & Ike (September 13, 2008)

2.5 FLAGGING AND FIELD DATA COLLECTION PROCEDURES

The field work for the Hurricane Ike coastal HWM flagging began on October 31, 2008, and ended on November 7, 2008. Eight field teams were deployed for this task order to quickly obtain HWM data. For these HWM data collection efforts, the traditional two-person flagger teams and two-person survey teams were used. The flaggers identified the location and flagged the HWM to be surveyed. The flagged HWM elevations and locations were then surveyed a few of days later by the survey teams. The teams reviewed the HWMs collected that day and discussed the next day's assignments. A technical manager reviewed the compiled data daily, discussed the issues with each area, and directed the teams to the general areas of HWM collection.

At the start of the project the two-person flagging teams were given a geographic area in which to identify and flag the HWMs. The teams visited these areas and searched for structures with mud or water lines and areas with debris lines (i.e., manmade materials) or wrack lines (i.e., plant materials). Upon visiting the assigned geographic area, the flaggers first determined whether the area appeared to be affected by flooding. If the area did not appear to be affected by flooding, the flaggers noted this for their daily briefing with the project manager and proceeded to the next area. If the area appeared to have been affected by flooding, the flaggers searched for a visible HWM to flag. The actual survey of the HWM elevation occurred within a few days after the flagging activities took place.

A structure is the preferred location for a HWM to be flagged. When structures affected by flooding were still standing, the flaggers searched for visible HWMs. The preferred HWM location is inside the structure; therefore, the flaggers searched the structure's interior for a visible HWM when access was available. If no interior HWM could be obtained, an exterior HWM that best represented the flooding conditions was flagged. In areas where there were no visible HWMs on buildings, the flaggers searched for other signs of high water, such as debris lines or wrack lines on the ground, vegetation, bridge embankments, or fences. Visible HWMs are often difficult to find because coastal flooding typically enters and exits a site quickly, receding before a water mark is left.

Examples of typical HWMs are shown in Figures 2-3 through 2-6.



Figure 2-3: Interior Mud Line HWM



Figure 2-4: Debris in Fence HWM



Figure 2-5: Stain Line HWM



Figure 2-6: Wrack Line HWM

The spacing of the flagged HWMs was irregular. Coastal and inland HWMs were flagged to determine the extent of flooding. HWMs were flagged to document different coastal flood types (e.g., surge-only, wave height, wave runoff). The flagging teams were also on the lookout for flooding from levee issues (such as levee breaks or interior levee flooding).

The HWMs were selected for flagging based on the flagging team's evaluation of site conditions, as well as best judgment regarding the height of flood waters and which HWMs would provide the highest quality data. Since the height of flood waters can be affected by outside forces such as wind and shielding by other structures, if available, multiple HWMs were obtained in significantly damaged areas to provide better flood elevation data. Fewer HWMs were flagged in areas that received less flooding, or where there were fewer buildings. Whenever possible, the flaggers obtained anecdotal information from residents as to the timing of the flood and a description of flood levels. The flaggers used the location of the HWM in relation to other land features to estimate of the type of coastal flooding (e.g., surge-only, wave height, and wave

runup). For example, a debris or wrack line on a stretch of open coast is the result of wave runup. However, when significant amounts of vegetation block or dampen the wave effect, these marks are identified as surge-only.

At each location, the flaggers entered the collected information (e.g., measured height, pictures, location of the mark, GPS coordinates, type of mark) into a computer program called URS Disaster Information Management System (U-DIMS). Once the data collection was completed, the details of the mark were transferred through wireless Internet from the field to a central server, and was then available for the project management to direct the teams in the field.

2.6 SURVEY PROCEDURES

In order to comply with the current Robert T. Stafford Disaster Relief and Emergency Assistance requirements, URS initiated an effort to include a local surveying company. In addition to our HMTAP surveying partner, ESP Associates, P.A. (ESP), URS also contracted with Pelican Land Surveying, L.L.C. (PELICAN) based in Sulphur, LA, to performed the surveying.

To quickly obtain surveyed HWM information, URS subcontractor ESP began the survey field work shortly after the HWMs were flagged. ESP began to establish the benchmark/control network on November 15, 2008. ESP completed the initial survey of the HWMs on November 25, 2008.

URS subcontractor PELICAN also began the survey field work shortly after the HWMs were flagged. PELICAN began to establish the benchmark/control network on November 24, 2008. PELICAN completed the initial survey of their HWMs on December 19, 2008. Of the 300 HWMs assigned for survey, two HWMs could not be located.

To establish elevation control points, ESP survey crews used Static or Fast Static GPS methods. Each new HWM control point was established using a minimum of two post-processed independent baselines from existing National Geodetic Survey (NGS) monuments or NGS Continuously Operating Reference Stations (CORS). All Real Time Kinematic (RTK) GPS bases were established using direct Fast Static GPS ties to two separate existing NGS monuments. All HWMs that could not be directly surveyed (horizontally and vertically) using either of the GPS methods were surveyed using conventional leveling techniques (vertical) and located using mapping grade (sub-meter) GPS receivers (horizontal). The HWMs were surveyed horizontally in the North American Datum of 1983 (NAD 83) using the 2006.81 adjusted monuments (per the recommendation of the NGS Louisiana State Advisor) and in the Louisiana State Plane Coordinate System (South 1702 Zone), and vertically in the North American Vertical Datum of 1988 (NAVD 88). Corpscon Ver. 5.11.08 software was used to convert the NAVD 88 vertical datum elevations to National Geodetic Vertical Datum of 1929 (NGVD 29) vertical datum elevations. ESP used Static or Fast Static GPS procedures for establishing HWM control within Saint Martin, Assumption, Terrebonne, Lafourche, Jefferson, Plaquemines, Saint Bernard, Saint Charles, Saint James, Saint John the Baptist, Ascension, Livingston, Tangipahoa, and Saint Tammany parishes.

PELICAN used published NGS monuments for horizontal and vertical control to survey the HWMs. The horizontal datum of each monument is NAD 83 (2007) and the vertical datum is NAVD88 (2006.81). A GPS static session was performed at each monument and processed through On-line Positioning User Service (OPUS). The OPUS solutions were compared to the published values to verify the monument's coordinates and elevation. A combination of RTK

and Fast Static methods were used to survey the HWMs. The data was processed through Trimble Geomatics Office. As quality control checks in the field, levels were run through points at each HWM to verify GPS data. Also, other NGS monuments were surveyed during the GPS sessions and the results compared to the NGS published values.

The surveys were conducted in U.S. survey feet. The HWMs were surveyed to the accuracy of 0.25 foot vertically and 10 feet horizontally, relative to the primary control used, with a 95 percent level of confidence.

2.7 QUALITY ASSURANCE REVIEW

Upon receipt of the data from the surveyor, URS began the quality assurance (QA) process. The QA process involved checking each data field in the database, including HWM elevation and flood type. The URS QA review of the data also included checking the surveyed elevation for reasonableness based on other nearby HWMs and available topography. Other QA checks included reviewing the flooding source, nearest municipality, parish, photographs, consistency of data, and similar factors. If a discrepancy was identified, the information was sent back to the surveyor for review. If the discrepancy could not be resolved, or if there was still a question about the validity of the HWM after the review by the surveyor, the HWM was excluded from the database and report.

When referenced to a standard vertical datum, USGS and NOAA gages were also used to check the reasonability of HWM elevation data. The USGS storm surge analysis was also used.⁴ See Section 4 of this report for more discussion of the results of the comparison.

The URS QA review also included examination of the flooding type. While the flaggers made their best judgment on the flooding type based on observed field conditions, the flooding type can sometimes be better identified after the HWM locations and elevations are mapped. Therefore, the flooding type for each HWM was reviewed based on mapped locations and elevations of the surveyed HWMs.

The HWMs designated as coastal flooding were further designated as representing surge-only, wave height, and wave runup (see Section 3 for discussions of these flooding types). The QA review included evaluation of the coastal flooding types that the flaggers identified. HWMs collected inside a building or within other protected areas were designated as surge-only HWMs. URS evaluated the HWMs using photographs, the location of the HWM relative to other land features, and other nearby HWM elevations to confirm the coastal flooding type.

Two HWM points could not be located by the survey crews. The QA review process removed an additional 44 HWMs. HWMs were removed from the data set if inconsistencies in HWM elevation were seen between adjacent HWMs. Section 4 of this report notes that several HWMs within the Atchafalaya Basin were attributed to spring flooding and were therefore removed from the data set. Some HWMs were attributed to roof drain splatter, while others were attributed to a subsequent tidal action. These HWMs were also removed. The remaining 254 HWMs were deemed appropriate.

⁴ East, J.W., Turco, M.J., and Mason, R.R., Jr., 2008, Monitoring inland storm surge and flooding from Hurricane Ike in Texas and Louisiana, September 2008: U.S. Geological Survey Open-File Report 2008–1365 [<http://pubs.usgs.gov/of/2008/1365/>]

SECTION THREE FLOOD TYPES

3.1 GENERAL

This project is the product of a HMTAP Task Order and required that the HWMs be quickly flagged, surveyed, and reported. Flooding types were designated based on observations made during the field work. A detailed analysis of land conditions, such as topography, all levee locations, or levee performance, was not performed; this level of analysis was not part of the SOW and not possible due to the time limitations. Therefore, all classifications are estimates based on the best available data at the time of HWM collection.

3.2 COASTAL FLOODING

Coastal flooding is caused when coastal waters are driven inland by waves and wind. Coastal flooding conditions are more varied in their origin than those associated with riverine flooding. The coastal flooding types are discussed below and presented graphically in Figures 3-1 through 3-9. These figures illustrate ideal situations of coastal flooding, which will not necessarily occur in any one location or particular storm event. Each of the three basic types of coastal HWMs—surge-only, wave height, and wave runoff—are often found close to each other, but can differ in elevation. Each coastal flood type provides information that helps characterize the nature and behavior of the coastal flooding event.

Collecting HWMs for the different types of coastal flooding is beneficial because each type offers a different set of information. Table 3-1 shows the typical coastal flooding type needed for each of the uses of the HWM data.

Table 3-1: Coastal Flooding Type Required For Various Uses of HWM Data

HWM Data Use	Coastal Flooding Type Required
Quickly estimate event frequency and severity for different areas	Surge-Only and Wave Height
Assess FIRMS	Surge-Only and Wave Height
Assist in preparation of wind-water line maps	Any type
Prepare inundation maps	Surge-Only (typical), Wave Height, and Wave Runup
Conduct building performance assessment	Wave Height
Perform modeling	Surge-Only
Provide public and agencies with elevations for prioritizing mitigation and preparing benefit-cost analysis	Wave Height
Determine depth of flooding of structures	Surge-Only

3.2.1 Surge-Only

Figure 3-1 shows the simplest form of coastal flooding (surge-only, also known as stillwater flood level). In this type of flooding, as the water level during the storm rises to a maximum level, it can leave marks on both the interior and exterior walls of a structure that are of equal elevation. Both of these water marks indicate a coastal flooding level that is not complicated by

other factors, such as waves. However, these situations occur only where the structure is at a location sheltered from waves.

Ideally, surge-only flooding has maximum elevations that are either level or have a slight slope that is not easy to detect visually. A level surge is shown schematically in Figure 3-2. However, this is not always the case in the coastal zone. As shown in Figure 3-3, coastal surges can also have sloped water surfaces. High water caused by a hurricane storm surge is due to the combination of rapidly changing factors, such as wind speed, wind direction, lowered barometric pressure, and the storm track. Surge-only flooding represents the rise in the water level where the location was shielded from waves. In some cases, the surge develops in open water areas and spreads inland over large distances because the coastal lands have minimal topographic change. The overland flow can be retarded by inland marsh areas and other obstructions so that the flood water surface slopes downward towards the inland shore, as shown as Case A in Figure 3-3. Under other circumstances, a strong offshore wind can force the overland coastal flood waters further inland, forming an upward slope towards the inland shore, as shown in Case B in Figure 3-3.

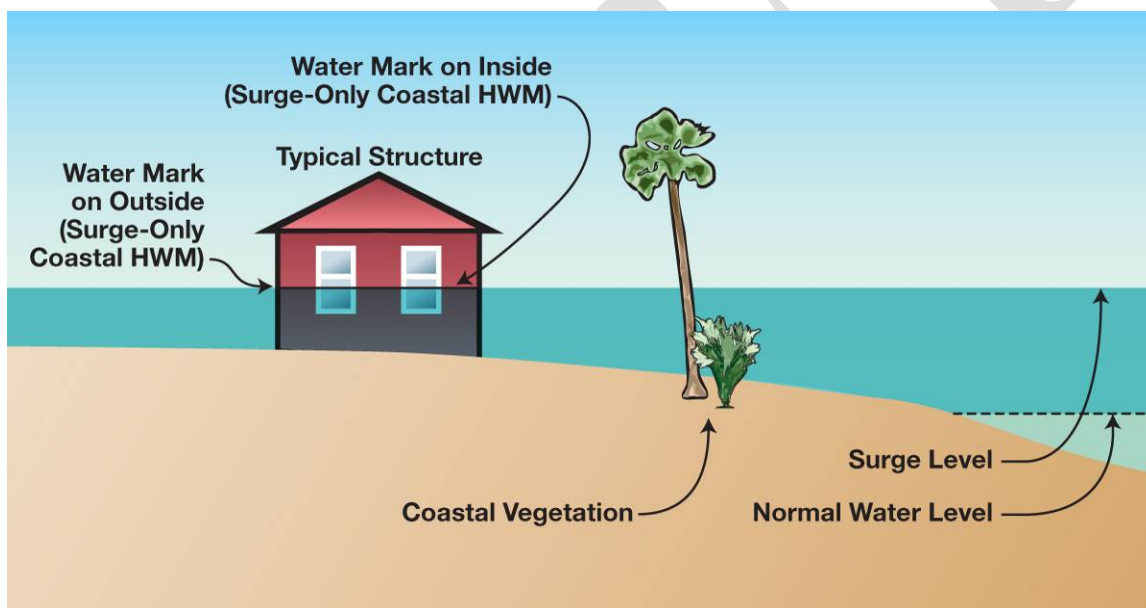


Figure 3-1: Coastal HWM Resulting from Surge-Only

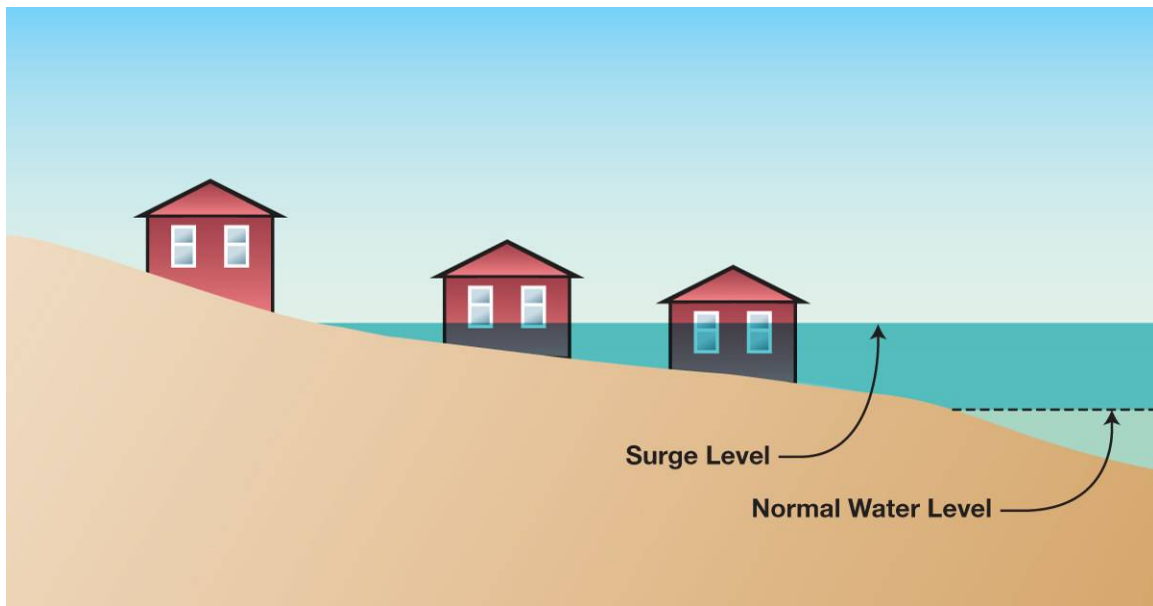


Figure 3-2: Coastal Storm Surge with a Level Water Surface

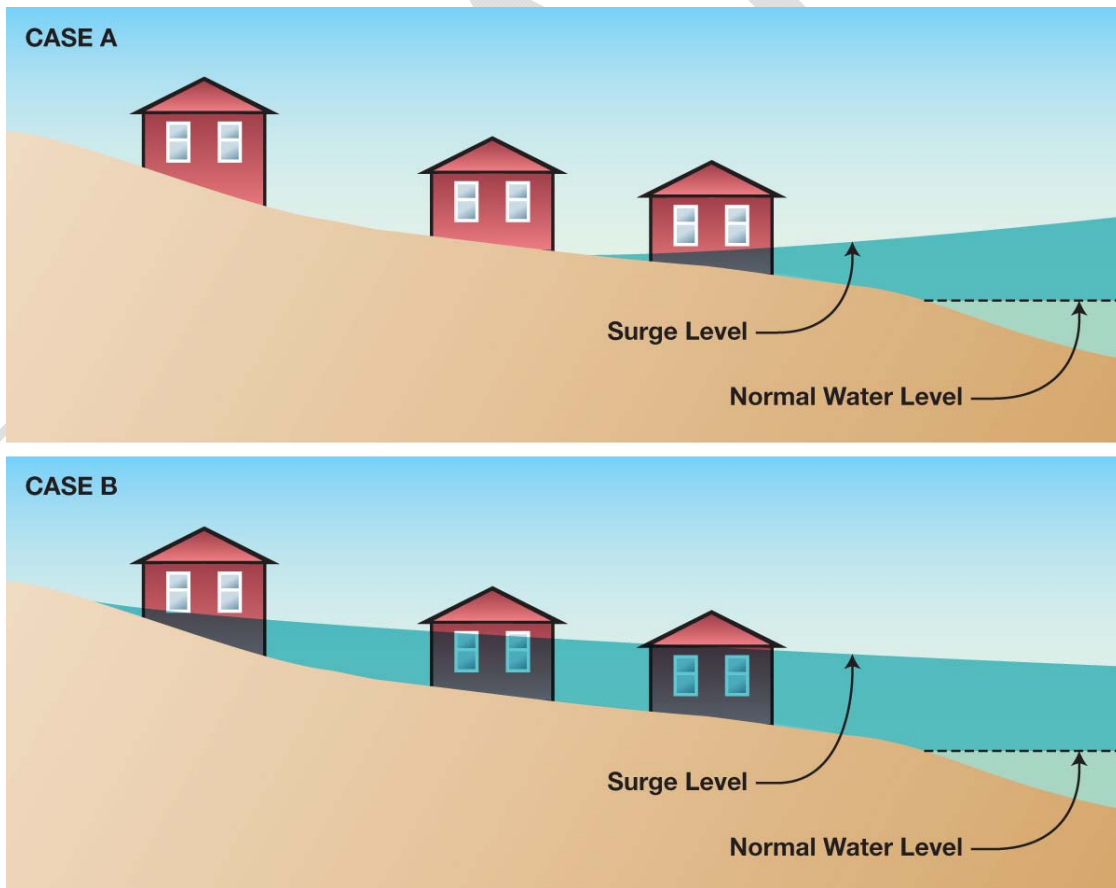


Figure 3-3: Two Cases of Storm Surges with Sloped Water Surfaces

3.2.2 Wave Height

The second type of coastal flooding is coastal wave height flooding, which involves action due to waves. As coastal flood waves propagate, high water conditions on structures and land vary. Coastal wave height flooding is created by the crest of the wave riding on the surge. Figure 3-4 shows how HWMs found inside and outside of a structure can differ considerably if they are affected by waves. HWMs corresponding to the conditions shown on the exterior wall in Figure 3-4 are designated as wave height flooding because the crests of the waves that are riding on the surge leave the highest mark. HWMs corresponding to the situation shown on the interior wall in Figure 3-4 are designated as surge-only flooding, because the structure blocks the wave action, and therefore the HWM corresponds to a water level unaffected by the waves.

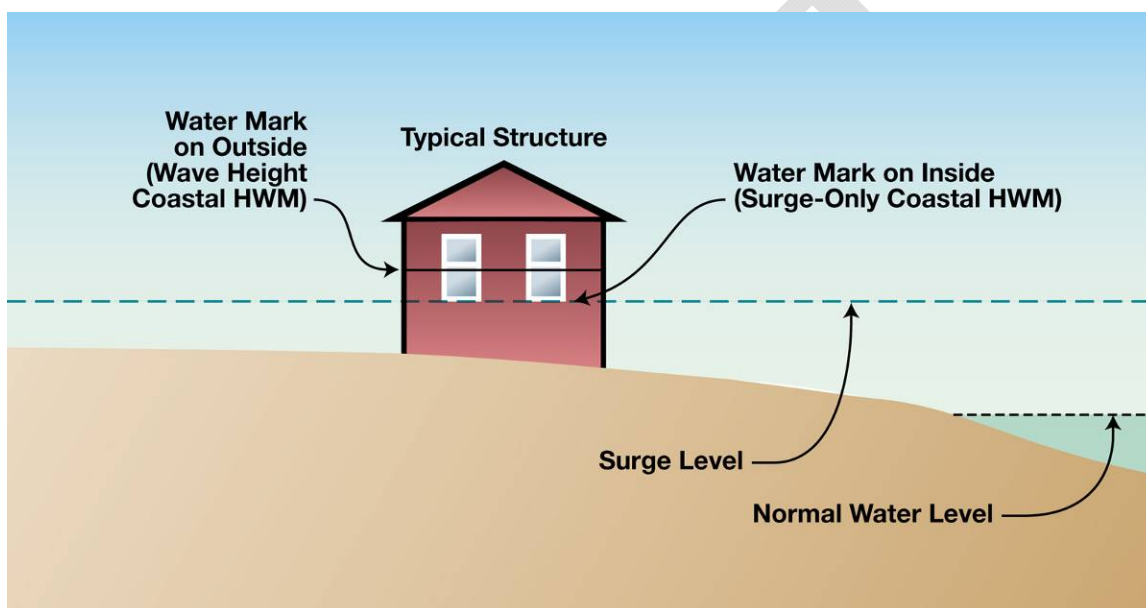


Figure 3-4: Coastal HWM Resulting from Wave Height

3.2.3 Wave Runup

The third type of coastal flooding is coastal wave runup, which involves wave action runup as illustrated in Figure 3-5. With coastal wave runup flooding, the situation is complicated by the presence of a surf zone, which is the broad zone of spilling and breaking waves between the open water body and the beach. At the very top of the surf zone, the remaining energy of the wave causes the waves to wash up the beach slope. The result is referred to as wave runup. Wave runup often pushes debris to its maximum limit, where it is left as a debris or wrack line. HWMs of this type are designated as wave runup flooding.

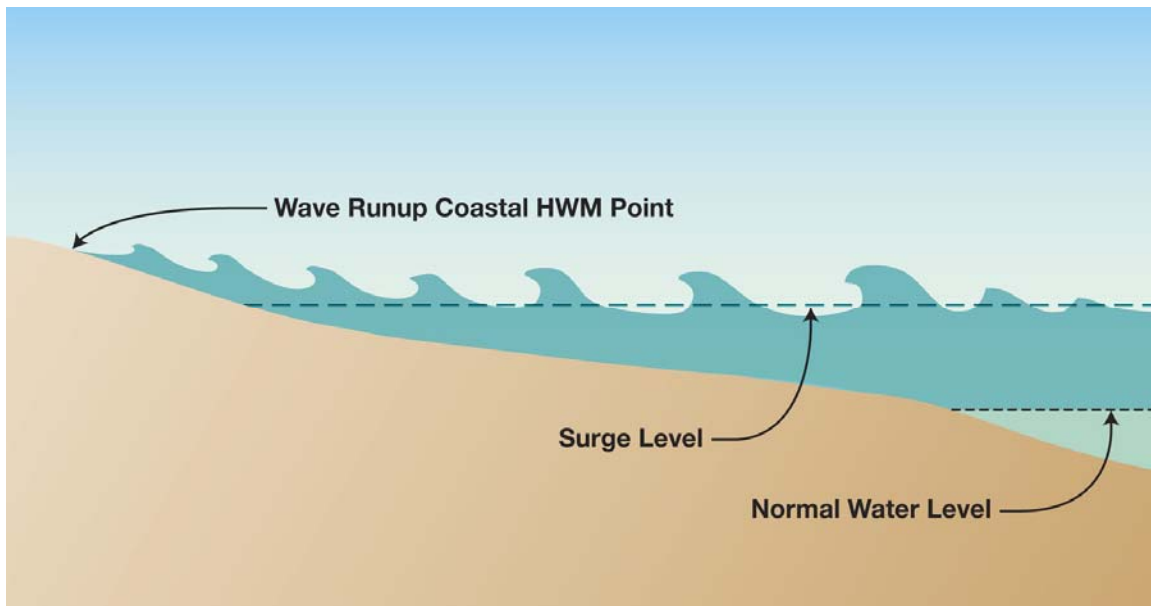


Figure 3-5: Coastal HWM Resulting from Wave Runup

3.2.4 Impact of Mounds

Figure 3-6 shows more variable conditions of coastal flooding caused by land conditions, such as mounds or elevated roads and railroads. It is not uncommon for the wave runup in a storm to be so large that it completely crosses the mound and conveys the water to low areas behind the mound. Figure 3-6 shows three structures at different locations along the mound, each affected differently by coastal flood waters during the storm. When the corresponding HWMs are found, marked, and surveyed, the elevations can differ up to several feet over a relatively short distance (e.g., 1,000 feet).

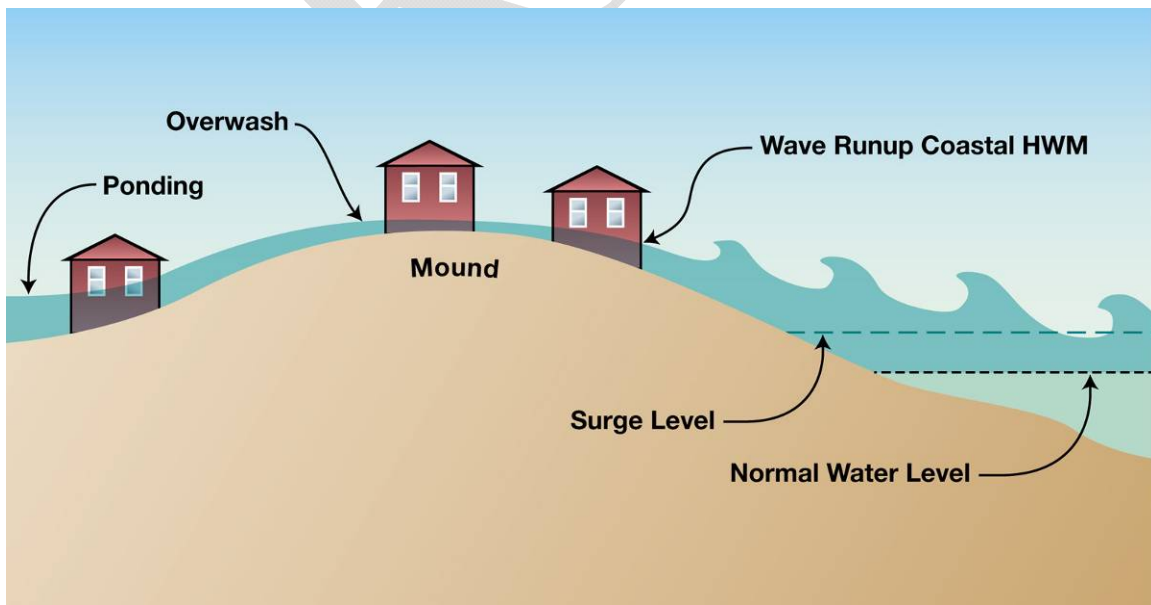


Figure 3-6: Variations in Coastal Flooding Levels Due to Washover of Mound

3.3 LEVEE RELATED FLOODING

Multiple levee breaches were reported in Terrebonne and Lafourche parishes. While no damage from the resulting flooding was noted in Lafourche parish, the low-lying levees south of Houma were the site of the some flooding damage. Flooding of houses was also reported in Saint Mary for areas outside of the protection of levees. A discussion on levee-related flooding is provided below for background information.

Levee-related flooding involves high water conditions in areas protected by systems of levees, floodwalls, floodgates, etc., further distinguished as levee-break flooding and interior flooding. The levee-related flooding types are discussed below and presented graphically in Figures 3-7 through 3-9.

3.3.1 Levee-Break Flooding

Flooding from levee breaks includes both areas where the protection system was structurally breached and areas where the structure was overtopped. In these situations, the water levels will equalize within the associated basin. Figure 3-7 shows a levee being overtopped, and Figure 3-8 shows a levee breach. Both show elevated flood waters on the ocean side of the levee and flooded, yet lower, waters on the land side of the levee.

3.3.2 Levee-Interior Flooding

Interior flooding occurs inside the levee when the interior drainage pumps fail, are shut down, or are inadequate. Figure 3-9 shows a levee system with flooding in the interior areas. In most areas identified as levee-interior flooding, a basin with a reasonably consistent water level can be defined. Variations in flood levels will likely occur due to activity in the basin (e.g., local flow blockages, boat wakes). Levee-interior flood levels will generally, depending on timing, have minimal relation with the water levels outside of the levee, and may show increased variation due to more localized conditions.

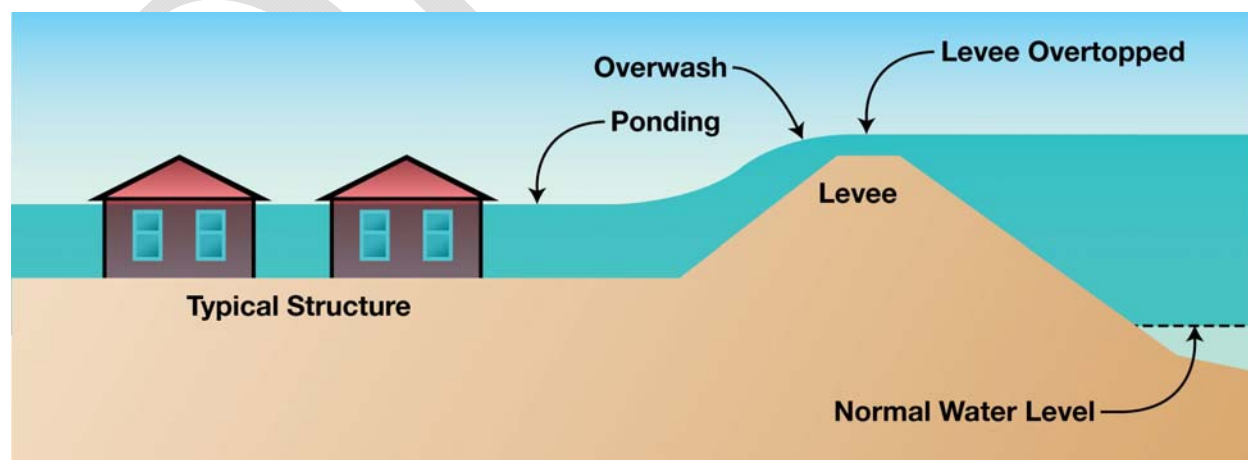


Figure 3-7: Levee Break Flooding Due to Levee Overtopping

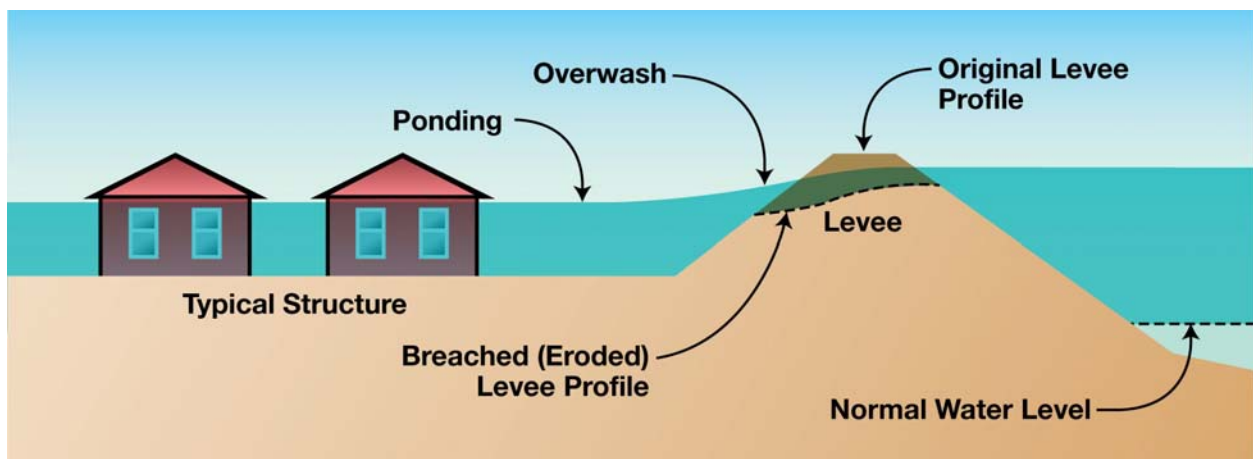


Figure 3-8: Levee Break Flooding Due to Levee Breach

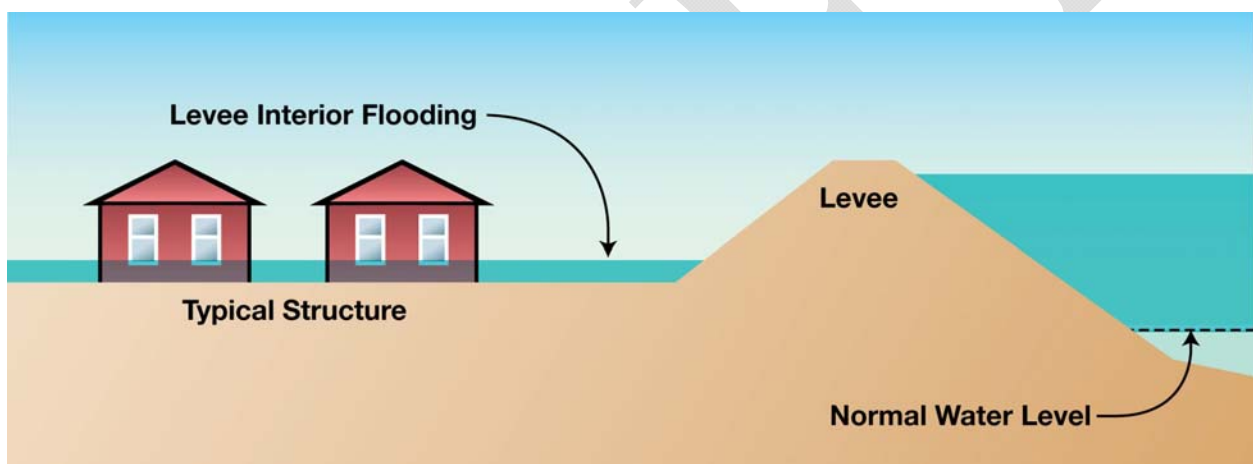


Figure 3-9: Levee Interior Flooding

SECTION FOUR RESULTS

A summary of results for all HWMs collected is provided in Appendix B. Data collected for the HWMs is presented on an individual Parish basis on one-page forms in Appendix C. Maps showing the locations of the HWMs are also included in Appendix B. The HWMs are identified with a unique point number, the High Water Mark Identifier (HWM ID), as shown on the one-page HWM form. The HWM forms include data for the storm event, flood type, location, point description, surveyed point coordinates (latitude/longitude), and elevations.

The results in Appendices B and C include an estimate of the flooding types, such as coastal-stillwater, coastal-wave height, and coastal-wave runoff. Since eyewitness accounts are typically not available, the flooding types are based on best engineering judgment. Flooding type is based on the physical evidence, tracking of the storm, and the HWMs proximity to a large body of water. As Hurricane Ike tracked over the eastern edge of Texas, the storm surge and waves pushed water along the coast and into the lakes and bayous of Louisiana on the eastern side of the storm.

Several HWMs were collected in the area known as Atchafalaya Basin. Large levees protect the areas on either side of the Atchafalaya basin. During flagging, numerous eyewitnesses stated that the water levels within the Atchafalaya basin were much higher during the spring rains than during either Hurricanes Ike or Gustav. This anecdotal evidence was confirmed by reviewing some of the gage data within this area. Data from four USGS gages within this area, shown in Figures 4-1a through 4-1d, were reviewed to determine the impact of Hurricane Ike on this region.

The four gages show that the peak stage resulting from Hurricane Ike (mid September) was not as severe as the peak stages during the rain events of the previous spring (late April – early May). The gages that are referenced to the NGVD 29 vertical datum confirmed that the HWM collected in the field were attributable to these spring flood stages. Therefore, seven HWMs located within the Atchafalaya Basin were removed from this data set. A review of other coastal USGS gages outside of the Atchafalaya Basin confirmed that the situation was unique to this area, i.e., flood stages from Hurricane Ike were higher than the flood stages of the previous spring floods elsewhere.

The open-file report—East, J.W., Turco, M.J., and Mason, R.R., Jr., 2008, Monitoring inland storm surge and flooding from Hurricane Ike in Texas and Louisiana, September 2008: U.S. Geological Survey Open-File Report 2008–1365 [<http://pubs.usgs.gov/of/2008/1365/>—was also used to check HWM data. The report referenced six surge pressure gages within Cameron Parish, and two within Vermilion Parish. These pressure gages helped confirm that five of the HWMs within Cameron Parish were not reflective of the actual storm surge elevations and should be removed from the data set. In total, 44 flagged and surveyed points were removed from the data set.

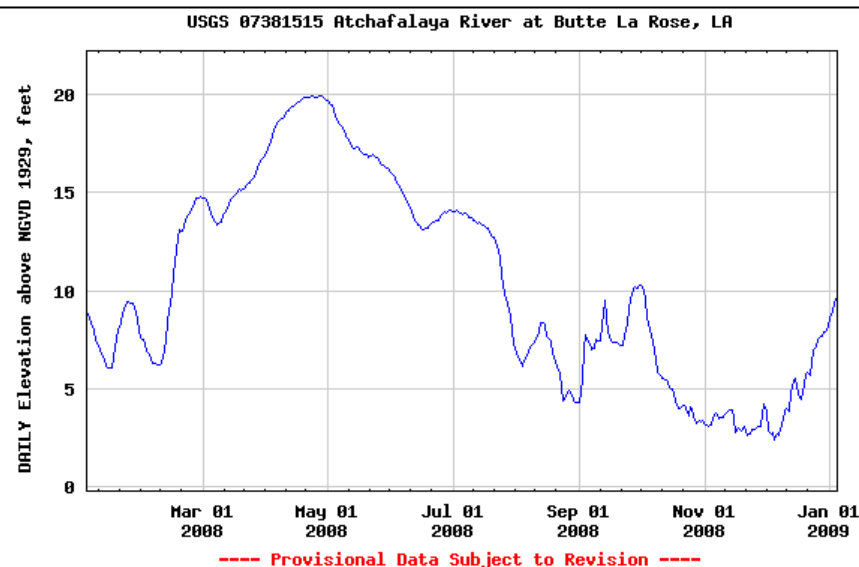


Figure 4-1a: USGS 07381515

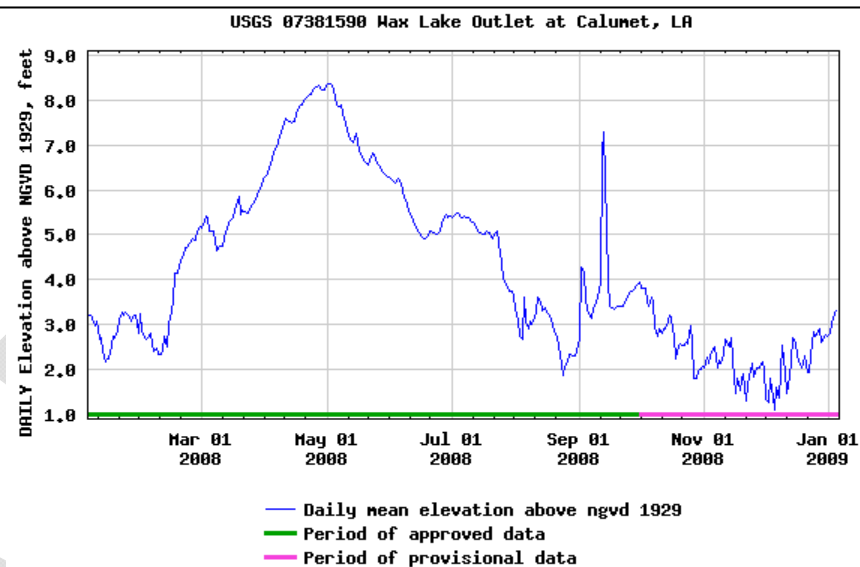


Figure 4-1c: USGS 07381590



Figure 4-1b: USGS 302020091435700

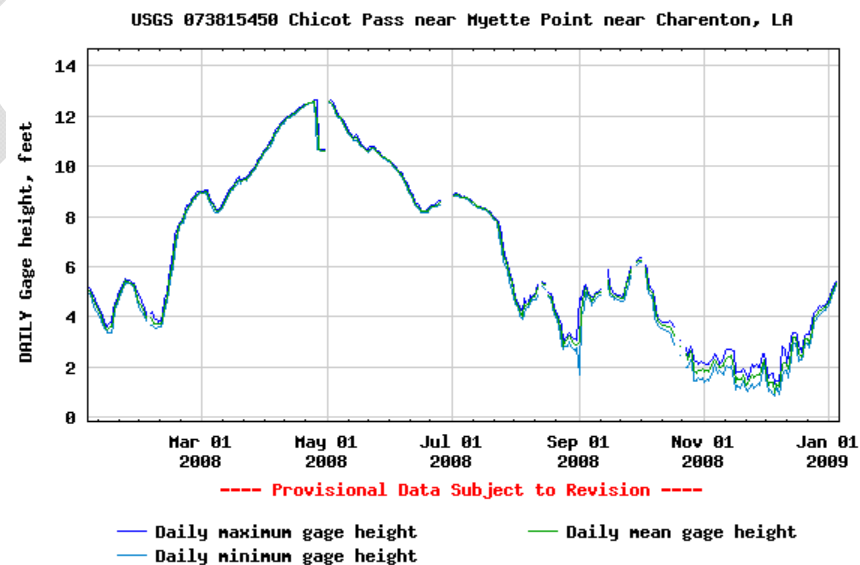


Figure 4-1d: USGS 073815450

As was stated in section 2.4, the study area was affected by both Hurricane Gustav (landfall on September 1, 2008) and Hurricane Ike (landfall on September 13, 2008). Based on NOAA and U.S. Geological Survey (USGS) gage data, Hurricane Ike had a more pronounced effect on the gages along the coast, especially along the western half of the Louisiana coastline. Because the gage data showed that the peak flood stages could not be attributed to one storm event, there is the potential for confusion as to which storm event to attribute to a particular HWM. Therefore, FEMA determined that HWM data collected south of the I-10/I-12 corridor would be attributed to Hurricane Ike, while those HWMs north of the I-10/I-12 corridor would be attributed to Hurricane Gustav. (See separate HWM report on Hurricane Gustav, FEMA-1786-DR-LA)

DRAFT

Appendix A
Field Data Collection Forms

UDIMS 2008 FLAGGER HIGH WATER MARK DATA COLLECTION

Location/Address			
Storm Name <i>REQUIRED</i>			
Task Order # <i>REQUIRED</i>			
Team # <i>REQUIRED</i>			
HWM ID & HWM Number <i>REQUIRED</i>			
HWM Street Address			
Apt., Suite, Etc.			
Municipality		State <i>REQUIRED</i>	
County <i>REQUIRED</i>			
Location of High Water Mark Object if No Street Address Available			
Wind-Water Line?	(circle one)	Yes	No
Fast Track HWM	(circle one)	Yes	No
Is Point Requested?	(circle one)	Yes	No
Team Lead Approved	Only to be completed by Team Lead.		
Directions for Surveyor			

UDIMS 2008 FLAGGER HIGH WATER MARK DATA COLLECTION

HWM ID (repeat in case forms are separated)			
Event & Flagger Information			
Date of Flood Event		Date of Peak	
Source for Date of Peak			
Date of Flagging/Interview REQUIRED			
Name of Flagger/Interviewer 1 REQUIRED		Flagger 1 Company REQUIRED	
Name of Flagger/Interviewer 2		Flagger 2 Company Name	
HWM Info			
Type of High Water Evidence (select only one) REQUIRED	• Mud line • Debris line • Debris in Tree • Personal Account* *If personal account is selected, you MUST provide fill in the information in the “Eyewitness” section. • Seed Line • Stain Line • Wash Line • Water Line • Wrack line • Other Comment:		
HWM Object, Surface (Select one) REQUIRED			
Direction HWM Object Faces	Select one: • North • Northeast • Northwest • South • Southeast • Southwest • East • West • NA (use if HWM Object, Surface field is: Interior Wall Transferred to Exterior Wall or Interior Wall).		
HWM Quality (Select one)	Good	Fair	Poor
Flagger HWM Latitude REQUIRED			
Flagger HWM Longitude REQUIRED			

UDIMS 2008 FLAGGER HIGH WATER MARK DATA COLLECTION

HWM ID (repeat in case forms are separated)			
Flooding Type (Select one)	Riverine Choices: • Riverine- Heavy Rain • Riverine - Hurricane	Coastal Choices: • Coastal- Stillwater Only • Coastal- Wave Height • Coastal – Wave Run Up	Levee Choices: • Levee- Break/Overtopping • Levee- Interior Drainage/Pump
Stream Name/Flood Source			
Flagger Comments Note items such as if appears downstream bridge/culvert was obstructed			
Marker (Select one) REQUIRED	Choices are: • Base of wooden stake at ground • Bottom of paint line • Bottom of tape • Nail with flagging • No mark left, vertical offset used • Paint in street with horizontal offset (describe offset) • Stake with horizontal offset (describe offset) • Other – Explain:		
Description of Marker & Horizontal Offset			
Permission to Survey (Select one)	Choices are: • Yes • No	• NA since Public Property • Resident/Owner not available	
Vertical Offset Distance (feet) REQUIRED			
Vertical Offset Set Point REQUIRED			
Vertical Distance HWM to ground (feet) REQUIRED			
Flagger's Visual Estimate of HWM Elevation (feet)			
Basis of Flagger's Visual Estimate of HWM Elevation			
Survey of HWM Needed	Yes	No	
Sketch Completed? SKETCH REQUIRED	Yes	No	

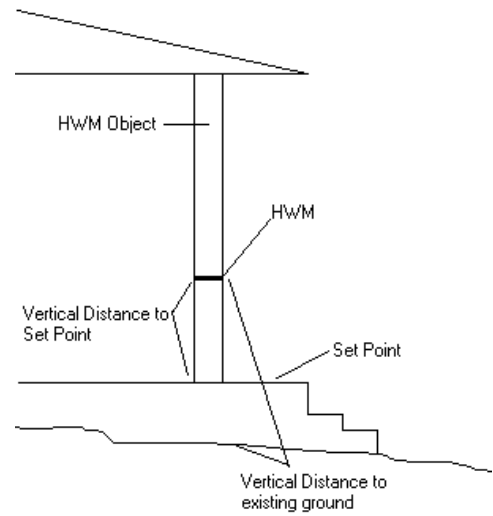
UDIMS 2008 FLAGGER HIGH WATER MARK DATA COLLECTION

Photo Information	
Photo ID	
Photo Description	
Photo ID	
Photo Description	
Photo ID	
Photo Description	
Photo ID	
Photo Description	

Eyewitness Information			
Name of Witness to High Water Mark			
Witness Street Address			
Apt., Suite, Etc.			
Municipality:	State:	Zip:	County:
Phone			
Length of Residence			
Witness Information			

UDIMS 2008 FLAGGER HIGH WATER MARK DATA COLLECTION

Example Measurements



Appendix B
HWM Summary Table and Location Maps

Appendix B
HWM Summary Table and Location Maps

Summary of High Water Mark Survey Results

HWM ID	Parish	Surveyed Elevation (feet) NAVD 88	Surveyed Latitude	Surveyed Longitude	Flood Type
401-ILA-02-009	Acadia	3.8	30.0817	-92.5062	Coastal - Stillwater Only
401-ILA-02-011	Acadia	3.5	30.1898	-92.5898	Coastal - Stillwater Only
401-ILA-01-006	Ascension	4.1	30.1906	-90.7862	Coastal - Stillwater Only
401-ILA-01-012	Ascension	3.8	30.1735	-90.7880	Coastal - Stillwater Only
401-ILA-03-005	Assumption	4.1	30.0006	-91.1932	Coastal - Stillwater Only
401-ILA-03-006	Assumption	3.1	29.9570	-91.2020	Coastal - Stillwater Only
401-ILA-03-007	Assumption	2.9	29.9008	-91.1861	Coastal - Stillwater Only
401-ILA-03-008	Assumption	2.9	29.8664	-91.1081	Coastal - Stillwater Only
401-ILA-03-012	Assumption	3.1	29.9366	-91.2213	Coastal - Stillwater Only
401-ILA-05-005	Calcasieu	8.7	30.1032	-93.3361	Coastal - Stillwater Only
401-ILA-05-006	Calcasieu	9.2	30.1140	-93.3417	Coastal - Stillwater Only
401-ILA-05-007	Calcasieu	5.6	30.0659	-93.3484	Coastal - Stillwater Only
401-ILA-05-013	Calcasieu	5.5	30.1910	-93.2680	Coastal - Stillwater Only
401-ILA-05-014	Calcasieu	9.2	30.1689	-93.2985	Coastal - Stillwater Only
401-ILA-05-015	Calcasieu	9.3	30.1043	-93.3063	Coastal - Stillwater Only
401-ILA-05-022	Calcasieu	4.5	30.1296	-92.9077	Coastal - Stillwater Only
401-ILA-05-027	Calcasieu	9.6	30.2366	-93.2300	Coastal - Stillwater Only
401-ILA-05-028	Calcasieu	8.4	30.2193	-93.2233	Coastal - Stillwater Only
401-ILA-05-029	Calcasieu	9.3	30.2110	-93.2356	Coastal - Stillwater Only
401-ILA-05-030	Calcasieu	9.2	30.2036	-93.2393	Coastal - Stillwater Only
401-ILA-05-008	Cameron	8.9	30.0049	-93.3433	Coastal - Stillwater Only
401-ILA-05-009	Cameron	8.9	29.9907	-93.4092	Coastal - Stillwater Only
401-ILA-05-010	Cameron	9.7	29.8904	-93.4020	Coastal - Stillwater Only
401-ILA-05-012	Cameron	12.6	29.7718	-93.4560	Coastal - Wave Height
401-ILA-05-016	Cameron	7.4	30.0108	-93.2274	Coastal - Stillwater Only
401-ILA-05-018	Cameron	3.8	29.9382	-93.0797	Coastal - Stillwater Only
401-ILA-05-019	Cameron	6.1	29.8943	-93.0796	Coastal - Stillwater Only
401-ILA-05-020	Cameron	8.7	29.8154	-93.1143	Coastal - Stillwater Only

Appendix B
HWM Summary Table and Location Maps

Summary of High Water Mark Survey Results

HWM ID	Parish	Surveyed Elevation (feet) NAVD 88	Surveyed Latitude	Surveyed Longitude	Flood Type
401-ILA-05-026	Cameron	11.7	29.7648	-93.8810	Coastal - Stillwater Only
401-ILA-05-031	Cameron	7.0	30.0093	-93.1820	Coastal - Stillwater Only
401-ILA-05-032	Cameron	9.6	29.9886	-93.2663	Coastal - Stillwater Only
401-ILA-05-033	Cameron	9.0	29.8085	-93.1655	Coastal - Stillwater Only
401-ILA-05-034	Cameron	11.2	29.7871	-93.1314	Coastal - Wave Height
401-ILA-05-038	Cameron	8.0	29.7440	-92.8778	Coastal - Stillwater Only
401-ILA-05-040	Cameron	3.3	30.0318	-92.7513	Coastal - Stillwater Only
401-ILA-05-041	Cameron	3.0	30.0377	-92.6718	Coastal - Stillwater Only
401-ILA-05-042	Cameron	3.2	30.0224	-92.7688	Coastal - Stillwater Only
401-ILA-05-043	Cameron	2.3	30.0321	-92.7926	Coastal - Stillwater Only
401-ILA-05-044	Cameron	9.4	29.9837	-93.3750	Coastal - Stillwater Only
401-ILA-05-045	Cameron	8.7	29.9839	-93.4275	Coastal - Stillwater Only
401-ILA-02-002	Iberia	4.7	30.0617	-91.6086	Coastal - Stillwater Only
401-ILA-02-025	Iberia	5.2	30.0581	-91.6078	Coastal - Stillwater Only
401-ILA-02-026	Iberia	8.2	29.9519	-91.9849	Coastal - Stillwater Only
401-ILA-02-027	Iberia	6.4	29.9675	-91.9781	Coastal - Stillwater Only
401-ILA-02-028	Iberia	8.2	29.9472	-91.9840	Coastal - Stillwater Only
401-ILA-02-029	Iberia	8.5	29.9490	-91.9886	Coastal - Stillwater Only
401-ILA-02-030	Iberia	8.4	29.9146	-91.9045	Coastal - Stillwater Only
401-ILA-02-032	Iberia	7.2	29.9345	-91.8635	Coastal - Stillwater Only
401-ILA-02-034	Iberia	8.5	29.9497	-91.8359	Coastal - Stillwater Only
401-ILA-02-035	Iberia	8.1	29.9382	-91.8338	Coastal - Stillwater Only
401-ILA-02-038	Iberia	8.9	29.8265	-91.8081	Coastal - Stillwater Only
401-ILA-02-039	Iberia	5.1	29.9145	-91.6622	Coastal - Stillwater Only
401-ILA-02-040	Iberia	5.3	29.9789	-91.7539	Coastal - Stillwater Only
401-ILA-02-041	Iberia	5.5	30.0111	-91.7433	Coastal - Stillwater Only
401-ILA-02-042	Iberia	4.5	30.0192	-91.6808	Coastal - Stillwater Only
401-ILA-02-043	Iberia	7.1	30.0569	-91.7400	Riverine - Hurricane

Appendix B
HWM Summary Table and Location Maps

Summary of High Water Mark Survey Results

HWM ID	Parish	Surveyed Elevation (feet) NAVD 88	Surveyed Latitude	Surveyed Longitude	Flood Type
401-ILA-02-044	Iberia	5.3	30.0060	-91.8170	Coastal - Stillwater Only
401-ILA-02-045	Iberia	5.0	30.0161	-91.7739	Coastal - Stillwater Only
401-ILA-01-007	Iberville	5.9	30.2193	-91.3177	Coastal - Stillwater Only
401-ILA-01-018	Iberville	3.2	30.1348	-91.0932	Coastal - Stillwater Only
401-ILA-01-019	Iberville	4.3	30.1034	-91.1984	Coastal - Stillwater Only
401-ILA-01-020	Iberville	9.8	30.3214	-91.0209	Coastal - Stillwater Only
401-ILA-01-021	Iberville	3.3	30.1264	-91.2761	Coastal - Stillwater Only
401-ILA-01-022	Iberville	5.1	30.1502	-91.3278	Coastal - Stillwater Only
401-ILA-04-020	Jefferson	5.2	29.6533	-90.1063	Coastal - Stillwater Only
401-ILA-04-022	Jefferson	4.7	29.8851	-90.1623	Coastal - Stillwater Only
401-ILA-04-023	Jefferson	4.8	30.0420	-90.2354	Coastal - Stillwater Only
401-ILA-04-025	Jefferson	5.3	30.0214	-90.1432	Coastal - Stillwater Only
401-ILA-06-001	Jefferson	4.9	29.2377	-89.9923	Coastal - Stillwater Only
401-ILA-06-002	Jefferson	4.9	29.2626	-89.9621	Coastal - Stillwater Only
401-ILA-06-004	Jefferson	4.7	29.2256	-90.0070	Coastal - Stillwater Only
401-ILA-06-005	Jefferson	5.1	29.2165	-90.0254	Coastal - Stillwater Only
401-ILA-06-006	Jefferson	6.1	29.2037	-90.0398	Coastal - Wave Height
401-ILA-02-010	Jefferson Davis	3.3	30.0727	-92.6594	Coastal - Stillwater Only
401-ILA-05-001	Jefferson Davis	4.0	30.0733	-92.6607	Coastal - Stillwater Only
401-ILA-05-002	Jefferson Davis	3.8	30.0752	-92.6771	Coastal - Stillwater Only
401-ILA-05-003	Jefferson Davis	3.3	30.0570	-92.7194	Coastal - Stillwater Only
401-ILA-05-004	Jefferson Davis	3.6	30.0694	-92.8842	Coastal - Stillwater Only
401-ILA-05-023	Jefferson Davis	3.5	30.1376	-92.8864	Coastal - Stillwater Only
401-ILA-02-004	Lafayette	8.0	30.2192	-91.9559	Coastal - Stillwater Only
401-ILA-06-008	Lafourche	7.6	29.1555	-90.1834	Coastal - Stillwater Only
401-ILA-06-009	Lafourche	8.3	29.1254	-90.1969	Coastal - Stillwater Only
401-ILA-06-010	Lafourche	8.0	29.1577	-90.1791	Coastal - Stillwater Only
401-ILA-06-011	Lafourche	7.0	29.2112	-90.2198	Coastal - Stillwater Only

Appendix B
HWM Summary Table and Location Maps

Summary of High Water Mark Survey Results

HWM ID	Parish	Surveyed Elevation (feet) NAVD 88	Surveyed Latitude	Surveyed Longitude	Flood Type
401-ILA-06-013	Lafourche	6.7	29.2359	-90.2104	Coastal - Stillwater Only
401-ILA-06-014	Lafourche	5.8	29.2567	-90.2139	Coastal - Stillwater Only
401-ILA-06-016	Lafourche	6.2	29.3416	-90.2469	Coastal - Wave Height
401-ILA-06-017	Lafourche	4.4	29.5892	-90.3702	Coastal - Stillwater Only
401-ILA-06-018	Lafourche	4.4	29.5827	-90.3748	Coastal - Stillwater Only
401-ILA-06-019	Lafourche	4.3	29.5574	-90.3890	Coastal - Stillwater Only
401-ILA-06-020	Lafourche	3.9	29.5527	-90.5346	Coastal - Stillwater Only
401-ILA-01-004	Livingston	7.2	30.3268	-90.8233	Riverine - Hurricane
401-ILA-01-005	Livingston	4.4	30.2749	-90.7788	Coastal - Stillwater Only
401-ILA-07-024	Livingston	3.3	30.4335	-90.5472	Coastal - Stillwater Only
401-ILA-07-026	Livingston	4.0	30.3766	-90.5372	Coastal - Stillwater Only
401-ILA-07-028	Livingston	4.6	30.2618	-90.7128	Coastal - Stillwater Only
401-ILA-07-029	Livingston	4.0	30.2838	-90.7085	Coastal - Stillwater Only
401-ILA-07-030	Livingston	4.5	30.2732	-90.7105	Coastal - Stillwater Only
401-ILA-07-031	Livingston	4.4	30.2668	-90.7289	Coastal - Stillwater Only
401-ILA-07-032	Livingston	4.4	30.2754	-90.7387	Coastal - Stillwater Only
401-ILA-07-033	Livingston	3.7	30.2610	-90.7637	Coastal - Stillwater Only
401-ILA-07-034	Livingston	4.5	30.2639	-90.6419	Coastal - Stillwater Only
401-ILA-04-001	Plaquemines	3.7	29.6355	-89.9527	Coastal - Stillwater Only
401-ILA-04-002	Plaquemines	7.5	29.3540	-89.5359	Coastal - Wave Height
401-ILA-04-003	Plaquemines	6.4	29.2212	-89.3943	Coastal - Wave Height
401-ILA-04-004	Plaquemines	4.1	29.6990	-89.9913	Coastal - Stillwater Only
401-ILA-04-005	Plaquemines	3.6	29.6481	-89.9629	Coastal - Stillwater Only
401-ILA-04-006	Plaquemines	4.3	29.6023	-89.8784	Coastal - Stillwater Only
401-ILA-04-008	Plaquemines	6.2	29.4169	-89.6167	Coastal - Stillwater Only
401-ILA-04-010	Plaquemines	10.9	29.5861	-89.7972	Coastal - Stillwater Only
401-ILA-04-011	Plaquemines	8.1	29.6359	-89.9056	Coastal - Stillwater Only
401-ILA-04-012	Plaquemines	8.4	29.7426	-89.9872	Coastal - Stillwater Only

Appendix B
HWM Summary Table and Location Maps

Summary of High Water Mark Survey Results

HWM ID	Parish	Surveyed Elevation (feet) NAVD 88	Surveyed Latitude	Surveyed Longitude	Flood Type
401-ILA-04-013	Plaquemines	8.2	29.6484	-89.9357	Coastal - Stillwater Only
401-ILA-04-014	Plaquemines	9.0	29.8603	-89.9073	Coastal - Stillwater Only
401-ILA-04-019	Plaquemines	5.2	29.8363	-90.0456	Coastal - Stillwater Only
401-ILA-04-016	St. Bernard	9.4	29.8199	-89.6112	Coastal - Stillwater Only
401-ILA-04-017	St. Bernard	8.8	29.8408	-89.7561	Coastal - Stillwater Only
401-ILA-06-021	St. Charles	3.4	29.7891	-90.4204	Coastal - Stillwater Only
401-ILA-06-022	St. Charles	3.5	29.7824	-90.4048	Coastal - Stillwater Only
401-ILA-06-024	St. Charles	2.7	29.8737	-90.4489	Coastal - Stillwater Only
401-ILA-06-025	St. Charles	2.7	29.8625	-90.4545	Coastal - Stillwater Only
401-ILA-01-001	St. James	3.7	30.1018	-90.7349	Coastal - Stillwater Only
401-ILA-01-002	St. James	3.3	30.0691	-90.7499	Coastal - Stillwater Only
401-ILA-01-013	St. James	3.4	30.0566	-90.7116	Coastal - Stillwater Only
401-ILA-01-014	St. James	3.3	30.0561	-90.7110	Coastal - Stillwater Only
401-ILA-01-015	St. James	2.5	29.9224	-90.6720	Coastal - Stillwater Only
401-ILA-01-016	St. James	2.4	29.9539	-90.6920	Coastal - Stillwater Only
401-ILA-01-017	St. James	2.2	29.9114	-90.7288	Coastal - Stillwater Only
401-ILA-01-008	St. John The Baptist	2.6	29.9199	-90.6221	Coastal - Stillwater Only
401-ILA-06-026	St. John The Baptist	4.6	30.0936	-90.4379	Coastal - Stillwater Only
401-ILA-06-027	St. John The Baptist	4.9	30.0884	-90.4420	Coastal - Stillwater Only
401-ILA-06-028	St. John The Baptist	4.7	30.0859	-90.4469	Coastal - Stillwater Only
401-ILA-06-029	St. John The Baptist	4.7	30.0910	-90.4597	Coastal - Stillwater Only
401-ILA-06-030	St. John The Baptist	4.8	30.0940	-90.4692	Coastal - Stillwater Only
401-ILA-06-031	St. John The Baptist	4.7	30.1062	-90.4983	Coastal - Stillwater Only
401-ILA-06-033	St. John The Baptist	3.6	30.1899	-90.4385	Coastal - Stillwater Only
401-ILA-06-034	St. John The Baptist	7.3	30.1067	-90.4229	Coastal - Wave Height
401-ILA-06-035	St. John The Baptist	4.6	30.0958	-90.4370	Coastal - Stillwater Only
401-ILA-06-036	St. John The Baptist	4.5	30.0608	-90.4393	Coastal - Stillwater Only
401-ILA-06-037	St. John The Baptist	4.2	30.0606	-90.4344	Coastal - Stillwater Only

Appendix B
HWM Summary Table and Location Maps

Summary of High Water Mark Survey Results

HWM ID	Parish	Surveyed Elevation (feet) NAVD 88	Surveyed Latitude	Surveyed Longitude	Flood Type
401-ILA-06-038	St. John The Baptist	4.1	30.0600	-90.4333	Coastal - Stillwater Only
401-ILA-06-040	St. John The Baptist	4.5	30.0802	-90.4611	Coastal - Stillwater Only
401-ILA-06-041	St. John The Baptist	4.3	30.0779	-90.5525	Coastal - Stillwater Only
401-ILA-06-042	St. John The Baptist	3.9	30.0785	-90.5459	Coastal - Stillwater Only
401-ILA-06-043	St. John The Baptist	4.0	30.0844	-90.5134	Coastal - Stillwater Only
401-ILA-02-014	St. Martin	8.4	30.3243	-91.7900	Coastal - Stillwater Only
401-ILA-02-017	St. Martin	7.4	30.3053	-91.7536	Coastal - Stillwater Only
401-ILA-02-018	St. Martin	7.2	30.2914	-91.7452	Coastal - Stillwater Only
401-ILA-02-021	St. Martin	5.3	30.2180	-91.6979	Coastal - Stillwater Only
401-ILA-02-022	St. Martin	5.5	30.1758	-91.6908	Coastal - Stillwater Only
401-ILA-03-001	St. Martin	3.0	29.8158	-91.1033	Coastal - Stillwater Only
401-ILA-03-003	St. Martin	9.3	29.8557	-91.1980	Coastal - Stillwater Only
401-ILA-03-004	St. Martin	3.1	29.9083	-91.2165	Coastal - Stillwater Only
401-ILA-03-009	St. Martin	2.6	29.7679	-91.1653	Coastal - Stillwater Only
401-ILA-03-010	St. Martin	8.0	29.7640	-91.1758	Coastal - Stillwater Only
401-ILA-03-011	St. Martin	9.7	29.9027	-91.2134	Coastal - Stillwater Only
401-ILA-02-036	St. Mary	9.3	29.7342	-91.8523	Coastal - Stillwater Only
401-ILA-02-037	St. Mary	10.6	29.7143	-91.8769	Coastal - Stillwater Only
401-ILA-03-056	St. Mary	7.3	29.6896	-91.0997	Coastal - Stillwater Only
401-ILA-03-057	St. Mary	6.7	29.6870	-91.1887	Coastal - Stillwater Only
401-ILA-03-058	St. Mary	4.2	29.6828	-91.1923	Coastal - Stillwater Only
401-ILA-03-059	St. Mary	6.9	29.6954	-91.2104	Coastal - Stillwater Only
401-ILA-03-060	St. Mary	6.8	29.6934	-91.2162	Coastal - Stillwater Only
401-ILA-03-061	St. Mary	7.4	29.6854	-91.2188	Coastal - Stillwater Only
401-ILA-03-062	St. Mary	6.7	29.9021	-91.5135	Coastal - Stillwater Only
401-ILA-03-063	St. Mary	4.7	29.8795	-91.4544	Coastal - Stillwater Only
401-ILA-03-064	St. Mary	9.7	29.7644	-91.3940	Coastal - Stillwater Only
401-ILA-03-065	St. Mary	4.8	29.7585	-91.4078	Coastal - Stillwater Only

Appendix B
HWM Summary Table and Location Maps

Summary of High Water Mark Survey Results

HWM ID	Parish	Surveyed Elevation (feet) NAVD 88	Surveyed Latitude	Surveyed Longitude	Flood Type
401-ILA-03-066	St. Mary	5.1	29.7104	-91.3819	Coastal - Stillwater Only
401-ILA-03-067	St. Mary	6.4	29.7010	-91.3711	Coastal - Stillwater Only
401-ILA-03-068	St. Mary	5.1	29.7622	-91.4193	Coastal - Stillwater Only
401-ILA-08-029	St. Mary	10.2	29.7127	-91.8771	Coastal - Stillwater Only
401-ILA-08-030	St. Mary	8.7	29.7711	-91.7848	Coastal - Stillwater Only
401-ILA-08-032	St. Mary	6.0	29.7882	-91.5190	Coastal - Stillwater Only
401-ILA-08-034	St. Mary	6.9	29.7867	-91.5173	Coastal - Stillwater Only
401-ILA-08-037	St. Mary	6.3	29.8291	-91.5664	Coastal - Stillwater Only
401-ILA-08-038	St. Mary	4.4	29.8870	-91.5227	Coastal - Stillwater Only
401-ILA-08-039	St. Mary	4.0	29.8900	-91.5246	Coastal - Stillwater Only
401-ILA-08-040	St. Mary	5.5	29.8407	-91.4548	Coastal - Stillwater Only
401-ILA-08-042	St. Mary	4.7	29.8795	-91.5858	Coastal - Stillwater Only
401-ILA-08-044	St. Mary	8.1	29.5590	-91.5251	Coastal - Stillwater Only
401-ILA-08-045	St. Mary	6.2	29.6017	-91.5247	Coastal - Stillwater Only
401-ILA-08-048	St. Mary	5.1	29.7874	-91.4953	Coastal - Stillwater Only
401-ILA-08-049	St. Mary	6.7	29.7976	-91.4968	Coastal - Stillwater Only
401-ILA-08-050	St. Mary	5.3	29.7720	-91.4814	Coastal - Stillwater Only
401-ILA-07-001	St. Tammany	6.6	30.4083	-90.1420	Coastal - Stillwater Only
401-ILA-07-002	St. Tammany	6.3	30.3449	-90.0534	Coastal - Stillwater Only
401-ILA-07-004	St. Tammany	6.6	30.3657	-90.0959	Coastal - Stillwater Only
401-ILA-07-005	St. Tammany	6.7	30.3526	-90.0673	Coastal - Stillwater Only
401-ILA-07-006	St. Tammany	4.7	30.3291	-90.0044	Coastal - Stillwater Only
401-ILA-07-007	St. Tammany	5.5	30.2651	-89.9565	Coastal - Stillwater Only
401-ILA-07-008	St. Tammany	4.6	30.2912	-89.9279	Coastal - Stillwater Only
401-ILA-07-009	St. Tammany	4.9	30.2841	-89.9170	Coastal - Stillwater Only
401-ILA-07-012	St. Tammany	4.3	30.2795	-89.7844	Coastal - Stillwater Only
401-ILA-07-013	St. Tammany	5.2	30.2611	-89.8033	Coastal - Stillwater Only
401-ILA-07-014	St. Tammany	5.1	30.2346	-89.8553	Coastal - Stillwater Only

Appendix B
HWM Summary Table and Location Maps

Summary of High Water Mark Survey Results

HWM ID	Parish	Surveyed Elevation (feet) NAVD 88	Surveyed Latitude	Surveyed Longitude	Flood Type
401-ILA-07-016	St. Tammany	4.8	30.1853	-89.7572	Coastal - Stillwater Only
401-ILA-07-017	St. Tammany	6.5	30.3943	-90.1203	Coastal - Stillwater Only
401-ILA-07-018	St. Tammany	6.6	30.4027	-90.1561	Coastal - Stillwater Only
401-ILA-07-019	St. Tammany	6.6	30.3977	-90.1562	Coastal - Stillwater Only
401-ILA-07-021	Tangipahoa	5.2	30.2897	-90.4014	Coastal - Stillwater Only
401-ILA-03-015	Terrebonne	5.3	29.5853	-90.6774	Coastal - Stillwater Only
401-ILA-03-016	Terrebonne	6.0	29.5545	-90.6592	Coastal - Stillwater Only
401-ILA-03-020	Terrebonne	6.0	29.5191	-90.6753	Coastal - Stillwater Only
401-ILA-03-022	Terrebonne	6.4	29.4822	-90.6983	Coastal - Stillwater Only
401-ILA-03-023	Terrebonne	7.1	29.4254	-90.7020	Coastal - Stillwater Only
401-ILA-03-024	Terrebonne	7.0	29.3946	-90.7120	Coastal - Stillwater Only
401-ILA-03-025	Terrebonne	6.9	29.3689	-90.7231	Coastal - Stillwater Only
401-ILA-03-026	Terrebonne	7.6	29.2532	-90.6600	Coastal - Stillwater Only
401-ILA-03-027	Terrebonne	7.7	29.2770	-90.6440	Coastal - Stillwater Only
401-ILA-03-028	Terrebonne	7.3	29.3047	-90.6480	Coastal - Stillwater Only
401-ILA-03-029	Terrebonne	6.9	29.3838	-90.6197	Coastal - Stillwater Only
401-ILA-03-030	Terrebonne	3.3	29.4737	-90.5575	Coastal - Stillwater Only
401-ILA-03-031	Terrebonne	3.9	29.4740	-90.5532	Coastal - Stillwater Only
401-ILA-03-032	Terrebonne	4.9	29.4804	-90.5517	Coastal - Stillwater Only
401-ILA-03-033	Terrebonne	8.0	29.3857	-90.5882	Coastal - Wave Height
401-ILA-03-034	Terrebonne	4.6	29.4992	-90.5512	Coastal - Stillwater Only
401-ILA-03-035	Terrebonne	7.8	29.3985	-90.4884	Coastal - Wave Height
401-ILA-03-037	Terrebonne	7.5	29.3986	-90.4888	Coastal - Stillwater Only
401-ILA-03-040	Terrebonne	7.1	29.4394	-90.4611	Coastal - Stillwater Only
401-ILA-03-041	Terrebonne	5.1	29.4905	-90.5198	Coastal - Stillwater Only
401-ILA-03-042	Terrebonne	5.5	29.5133	-90.5960	Coastal - Stillwater Only
401-ILA-03-043	Terrebonne	5.5	29.5161	-90.5978	Coastal - Stillwater Only
401-ILA-03-044	Terrebonne	4.7	29.5370	-90.7144	Coastal - Stillwater Only

Appendix B
HWM Summary Table and Location Maps

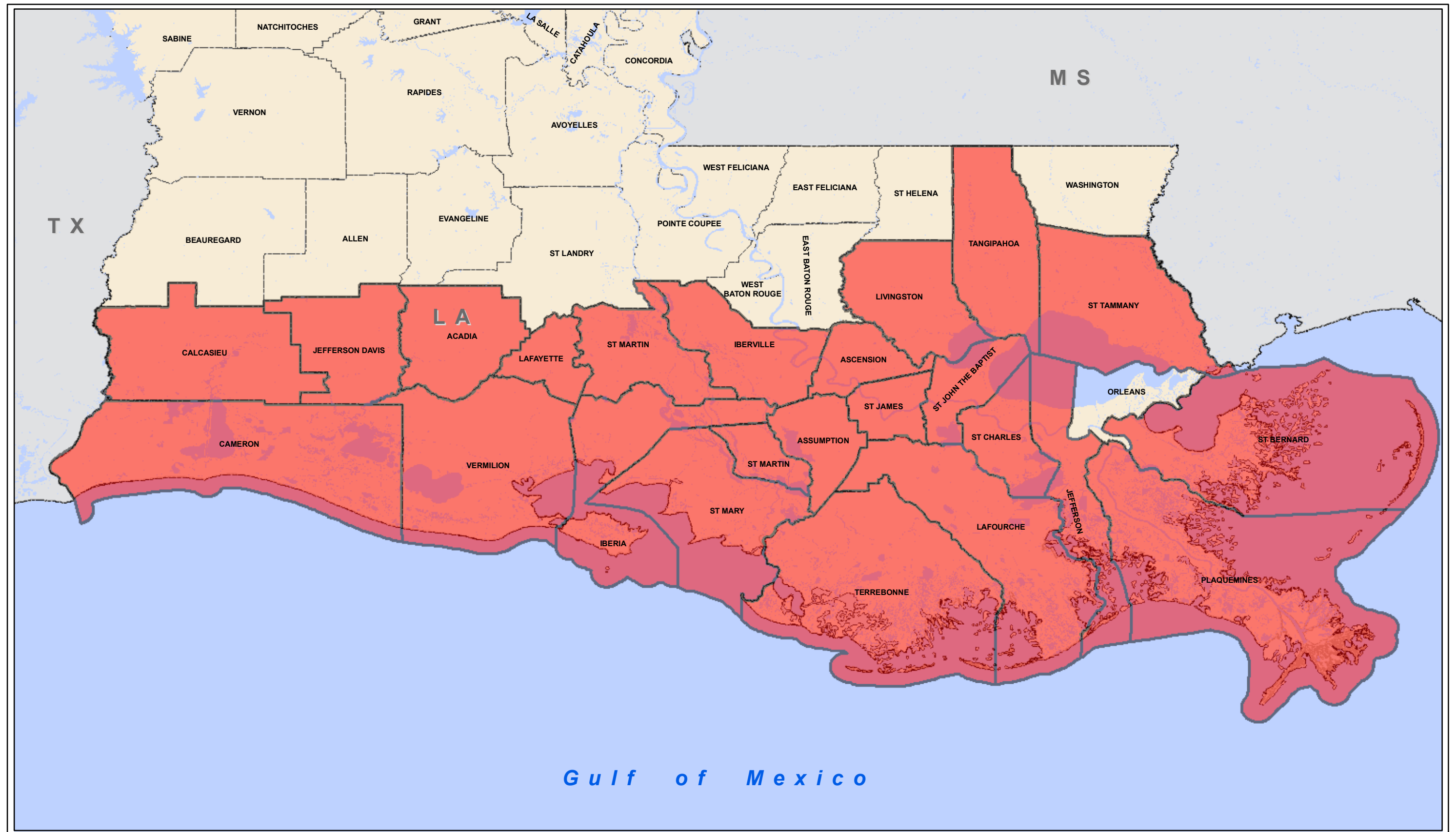
Summary of High Water Mark Survey Results

HWM ID	Parish	Surveyed Elevation (feet) NAVD 88	Surveyed Latitude	Surveyed Longitude	Flood Type
401-ILA-03-045	Terrebonne	3.9	29.5447	-90.7234	Coastal - Stillwater Only
401-ILA-03-046	Terrebonne	3.9	29.6050	-90.7050	Coastal - Stillwater Only
401-ILA-03-048	Terrebonne	4.0	29.5692	-90.7252	Coastal - Stillwater Only
401-ILA-03-049	Terrebonne	5.9	29.4282	-90.7644	Coastal - Stillwater Only
401-ILA-03-050	Terrebonne	5.7	29.4169	-90.7760	Coastal - Stillwater Only
401-ILA-03-051	Terrebonne	6.9	29.3340	-90.8483	Coastal - Wave Height
401-ILA-03-052	Terrebonne	5.7	29.3360	-90.8424	Coastal - Stillwater Only
401-ILA-03-053	Terrebonne	3.8	29.6163	-90.9022	Coastal - Stillwater Only
401-ILA-03-054	Terrebonne	3.9	29.6245	-90.9111	Coastal - Stillwater Only
401-ILA-05-039	Vermilion	4.0	30.0435	-92.7060	Coastal - Stillwater Only
401-ILA-08-002	Vermilion	9.4	29.7939	-92.1449	Coastal - Stillwater Only
401-ILA-08-004	Vermilion	8.0	29.9350	-92.1494	Coastal - Stillwater Only
401-ILA-08-005	Vermilion	8.6	29.8847	-92.1245	Coastal - Stillwater Only
401-ILA-08-006	Vermilion	8.3	29.9835	-92.1360	Coastal - Stillwater Only
401-ILA-08-007	Vermilion	5.4	29.8428	-92.1810	Coastal - Stillwater Only
401-ILA-08-008	Vermilion	7.4	29.8464	-92.2756	Coastal - Stillwater Only
401-ILA-08-009	Vermilion	5.9	29.8316	-92.3061	Coastal - Stillwater Only
401-ILA-08-011	Vermilion	7.9	29.6573	-92.3693	Coastal - Wave Height
401-ILA-08-012	Vermilion	7.8	29.6468	-92.4342	Coastal - Wave Height
401-ILA-08-015	Vermilion	6.1	29.8386	-92.3282	Coastal - Stillwater Only
401-ILA-08-016	Vermilion	8.3	29.6308	-92.3820	Coastal - Wave Height
401-ILA-08-017	Vermilion	8.1	29.9749	-92.1395	Coastal - Stillwater Only
401-ILA-08-018	Vermilion	3.5	30.0413	-92.7226	Coastal - Stillwater Only
401-ILA-08-019	Vermilion	3.3	30.0713	-92.6571	Coastal - Stillwater Only
401-ILA-08-020	Vermilion	3.6	30.1004	-92.5321	Coastal - Stillwater Only
401-ILA-08-021	Vermilion	3.2	29.9192	-92.5138	Coastal - Stillwater Only
401-ILA-08-022	Vermilion	2.8	29.9782	-92.4621	Coastal - Stillwater Only
401-ILA-08-025	Vermilion	7.8	29.8825	-92.0378	Coastal - Stillwater Only

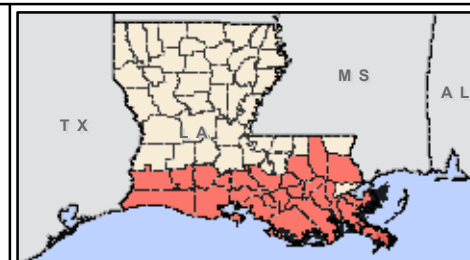
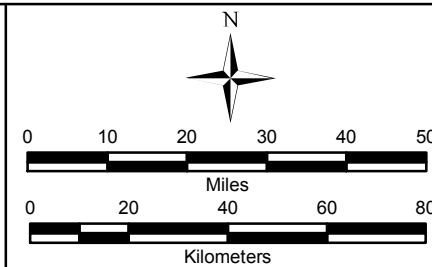
Summary of High Water Mark Survey Results

HWM ID	Parish	Surveyed Elevation (feet) NAVD 88	Surveyed Latitude	Surveyed Longitude	Flood Type
401-ILA-08-026	Vermilion	9.0	29.8770	-92.1269	Coastal - Stillwater Only
401-ILA-08-027	Vermilion	8.8	29.9751	-91.9940	Coastal - Stillwater Only

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Parish with High Water Mark

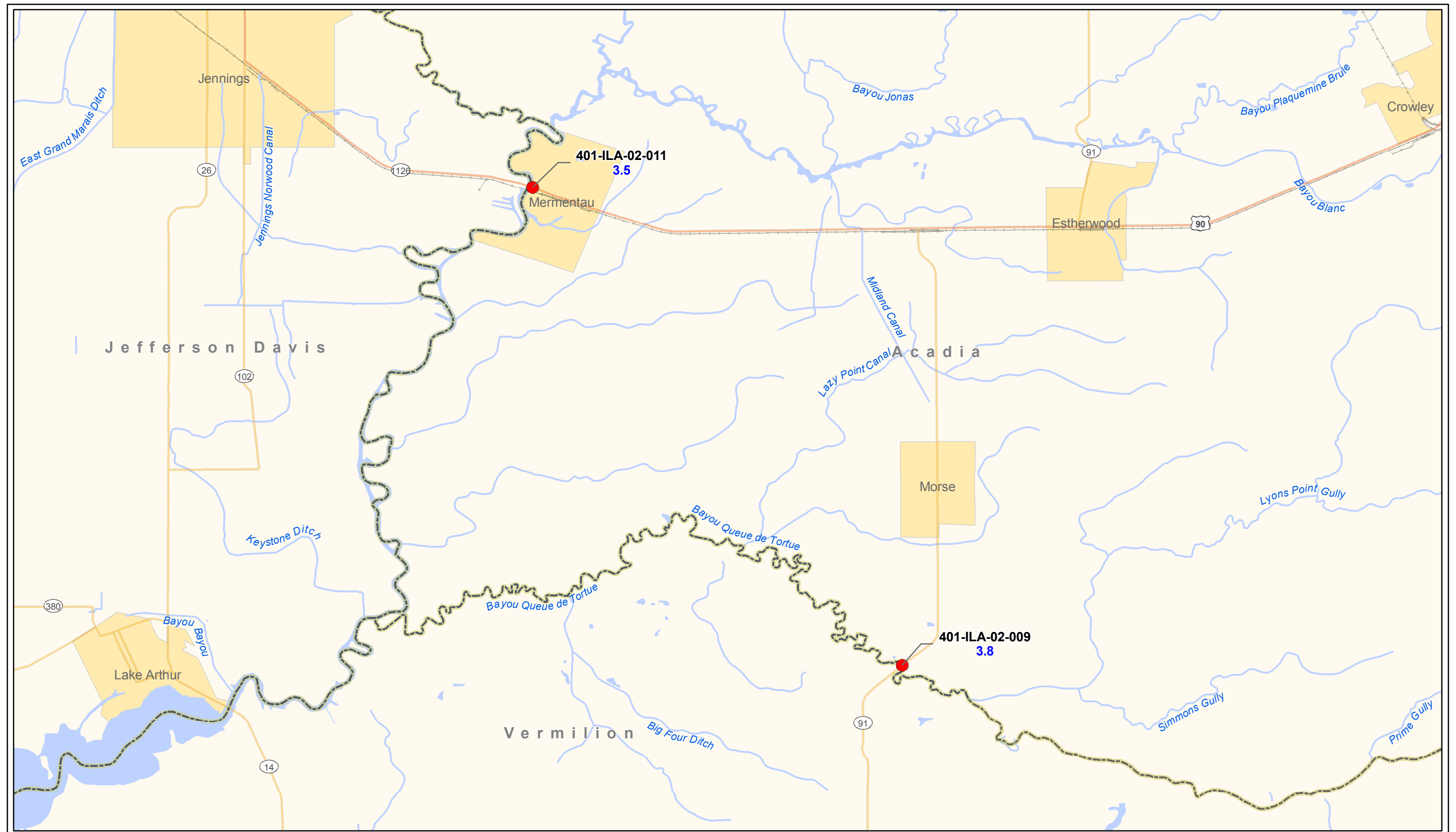


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Index Map

Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



Flooding Type	Number of Flooding Events	Percentage of Flooding Events
Partial Flooding	10	67%
Total Flooding	5	33%

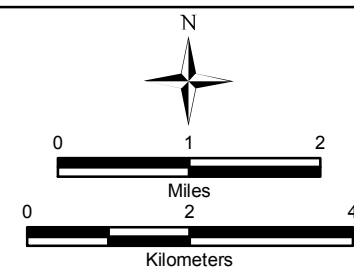
- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- ◆ Riverine - Hurricane

401-ILA-03-034 High Water Mark ID

4.6

High Water Mark Elevation NAVD88 (ft)

VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83

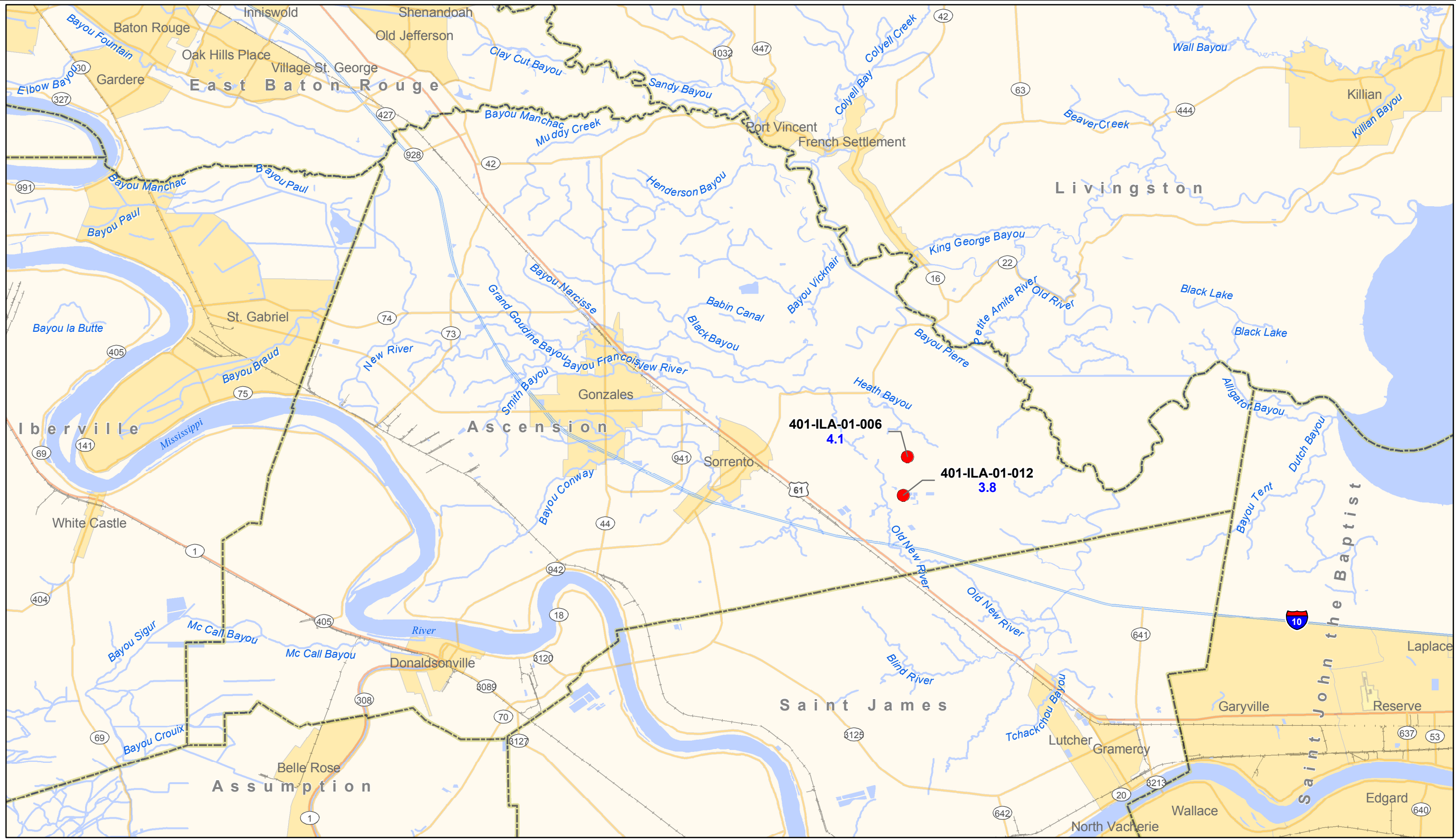


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Draft

Acadia Parish

Hurricane Ike September 2008, Louisiana Surveyed Locations of High Water Marks



Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- ◆ Riverine - Hurricane

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83

County Boundary
State Boundary

N

0 2 4 6
Miles

0 5 10
Kilometers

FEMA

Draft

Ascension Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



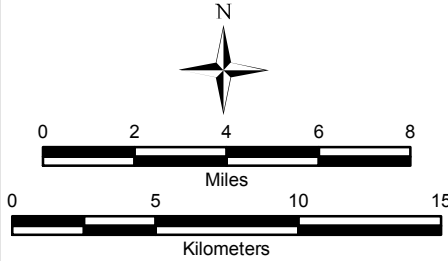
Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- Riverine - Hurricane

- County Boundary
- State Boundary

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

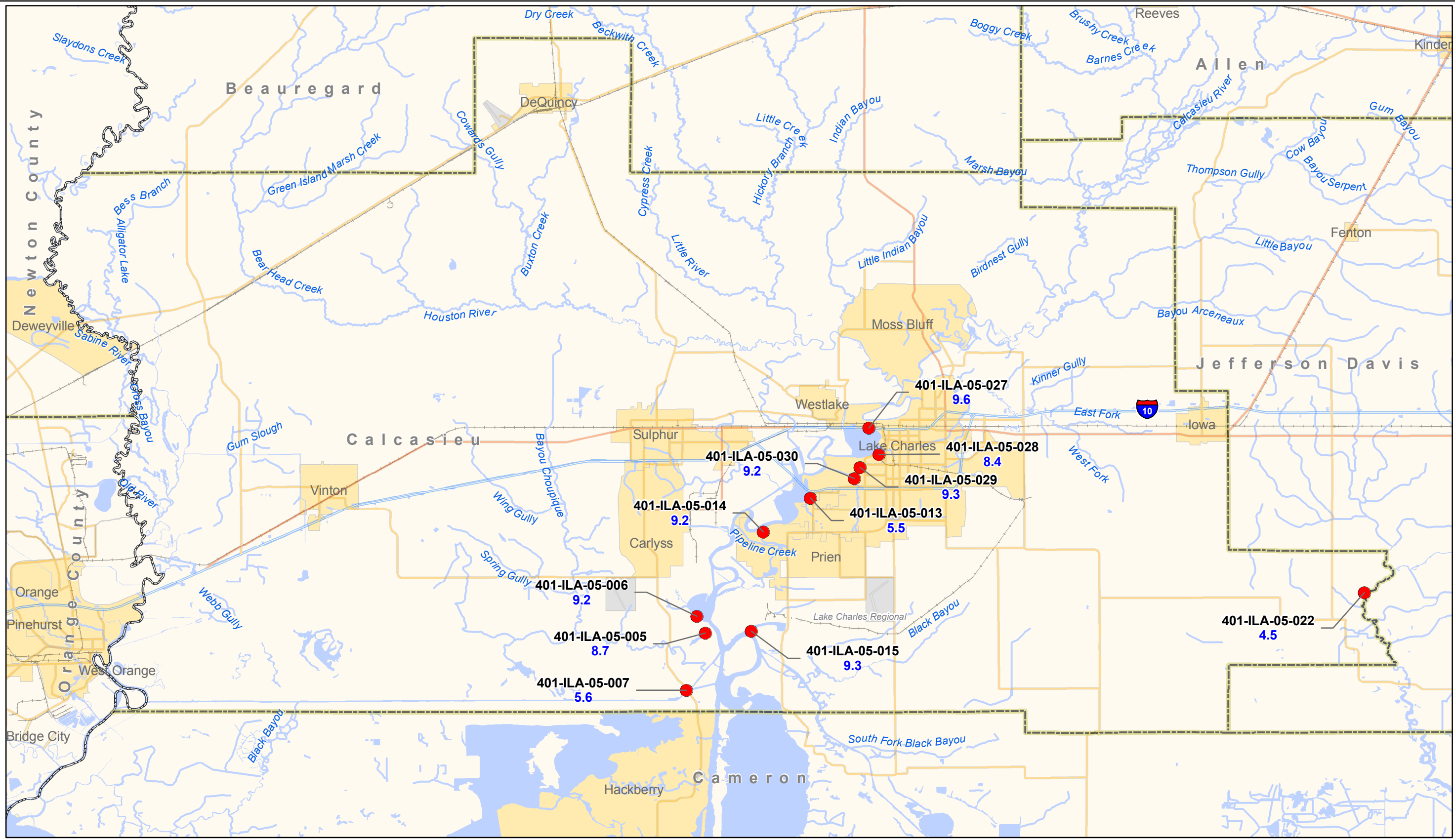
VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83



FEMA

Draft

Assumption Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



● Coastal - Stillwater Only

▲ Coastal - Wave Height

● Riverine - Hurricane

County Boundary

State Boundary

401-ILA-03-034

High Water Mark ID

4.6

High Water Mark Elevation NAVD88 (ft)

VERTICAL DATUM: NAVD88

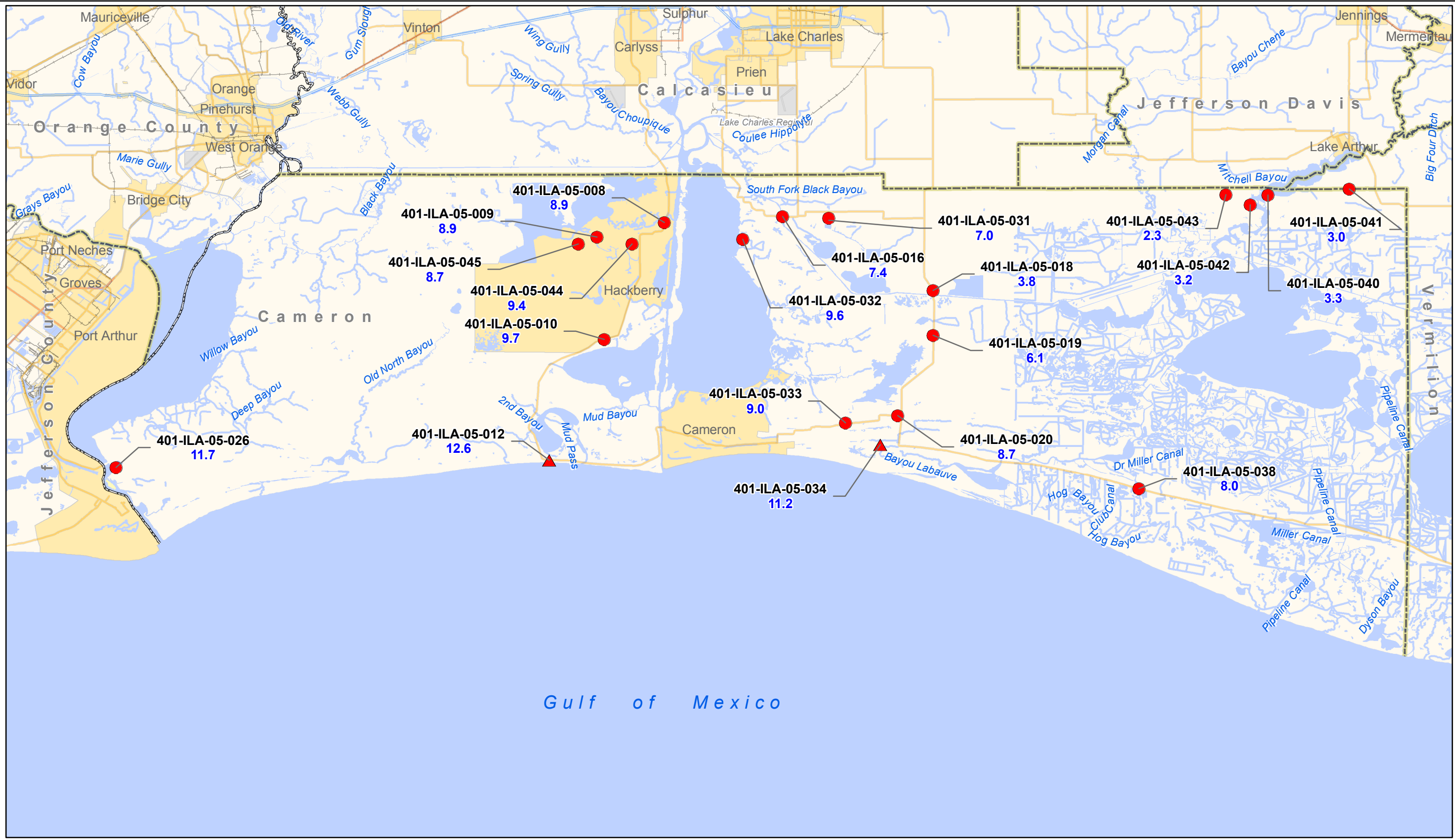
HORIZONTAL DATUM: NAD83

Draft

Calcasieu Parish

Hurricane Ike September 2008, Louisiana

Surveyed Locations of High Water Marks



Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- Riverine - Hurricane

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83

County Boundary
State Boundary

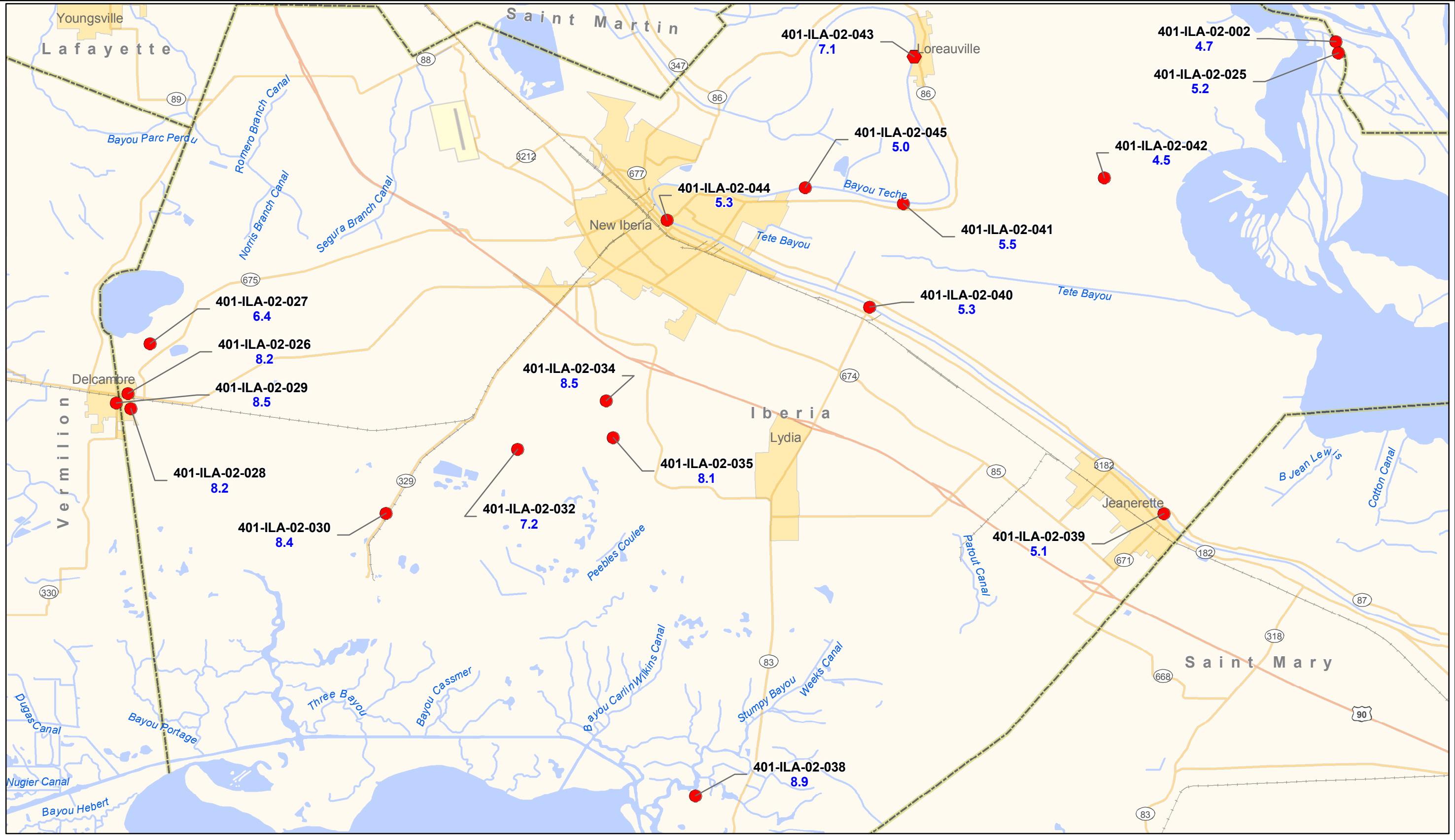
0 5 10
Miles

0 5 10 15 20
Kilometers

FEMA

Draft

Cameron Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- Riverine - Hurricane

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83

County Boundary
State Boundary

Scale

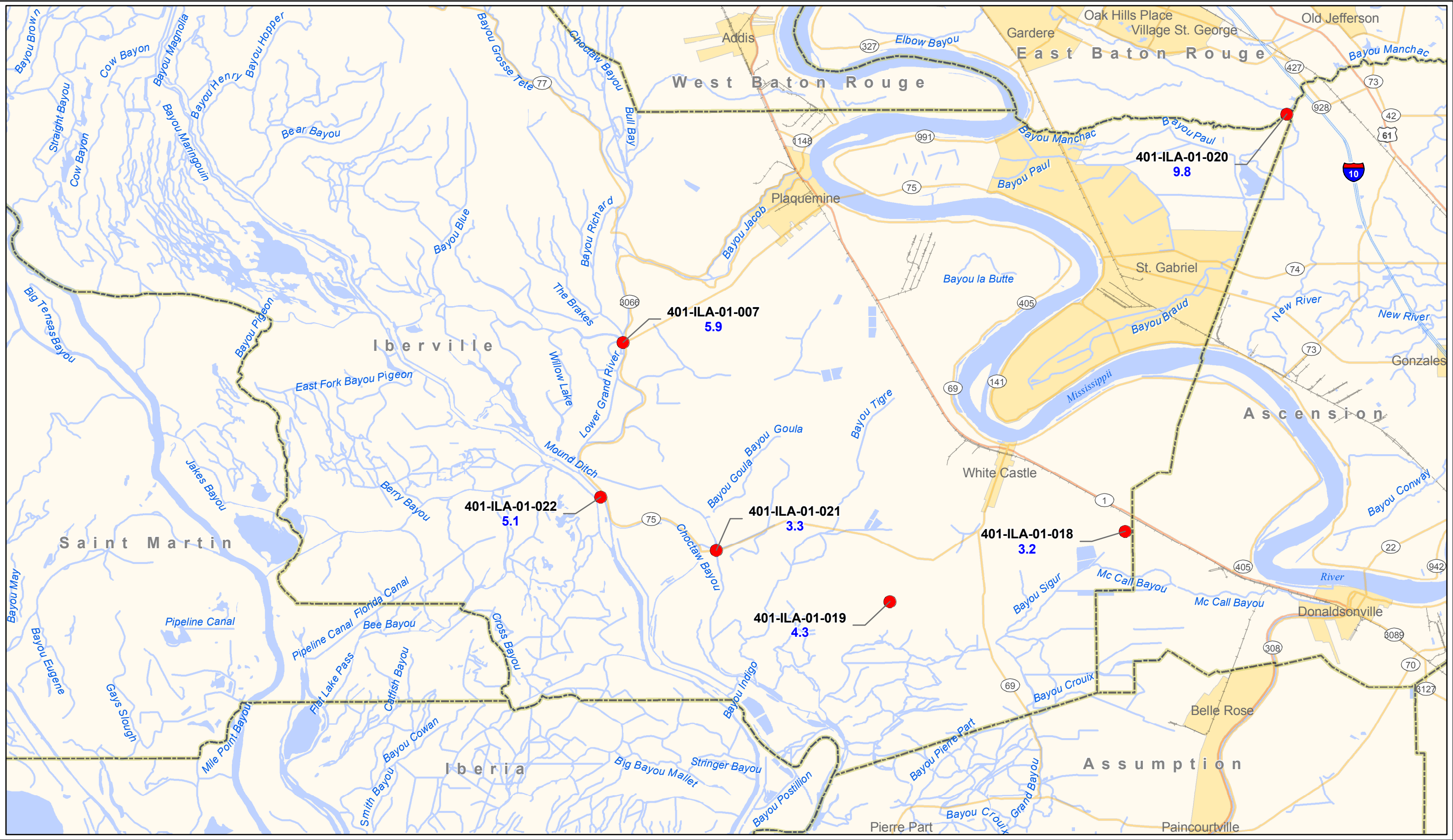
0 2 4 Miles
0 2 4 6 Kilometers

Map of Louisiana

FEMA

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Iberia Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



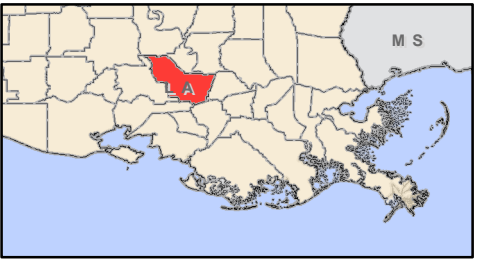
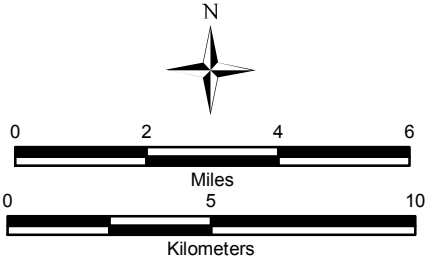
Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- Riverine - Hurricane

- County Boundary
- State Boundary

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

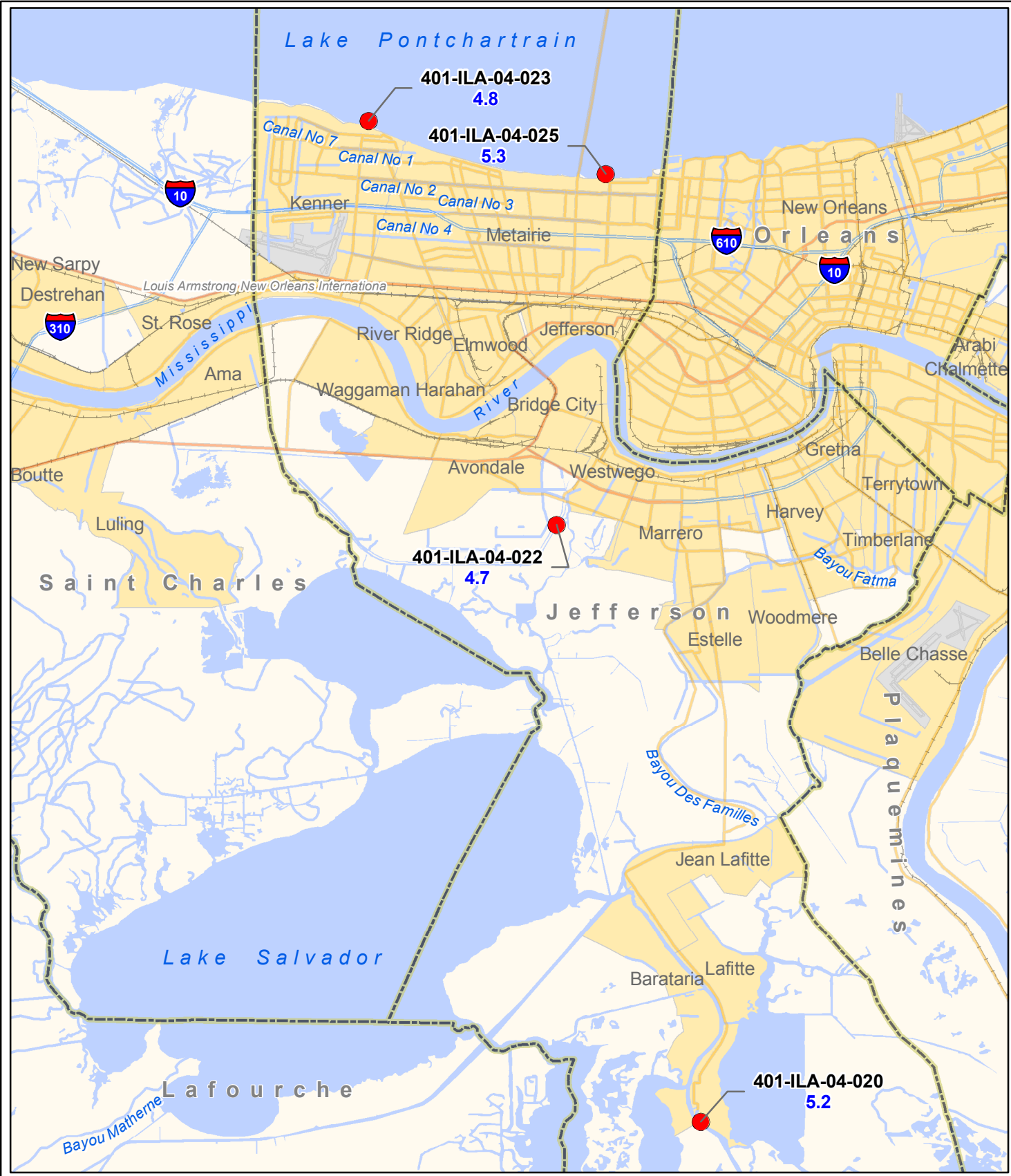
VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83



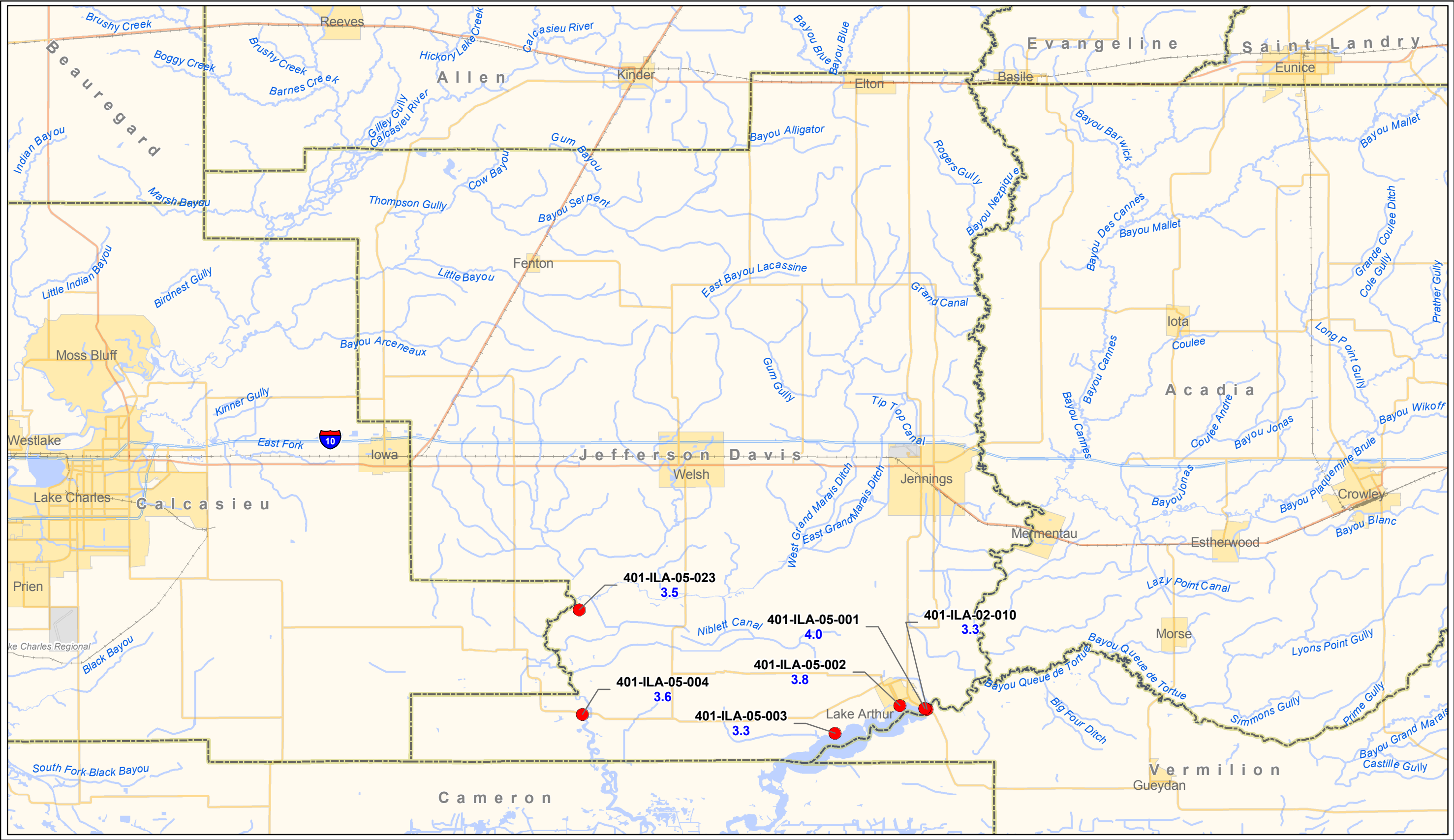
FEMA

Draft

Iberville Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



Flooding Type ● Coastal - Stillwater Only ▲ Coastal - Wave Height ● Riverine - Hurricane 401-ILA-03-034 High Water Mark ID 4.6 High Water Mark Elevation NAVD88 (ft) VERTICAL DATUM: NAVD88 HORIZONTAL DATUM: NAD83	County Boundary --- County Boundary --- State Boundary Scale 0 2 4 6 Miles 0 5 10 Kilometers	Map of Louisiana MS	FEMA U.S. DEPARTMENT OF HOMELAND SECURITY	Draft Jefferson Parish Hurricane Ike September 2008, Louisiana Surveyed Locations of High Water Marks
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● Coastal - Stillwater Only

▲ Coastal - Wave Height

● Riverine - Hurricane

401-ILA-03-034

4.6

High Water Mark ID

High Water Mark Elevation NAVD88 (ft)

County Boundary

State Boundary

VERTICAL DATUM: NAVD88

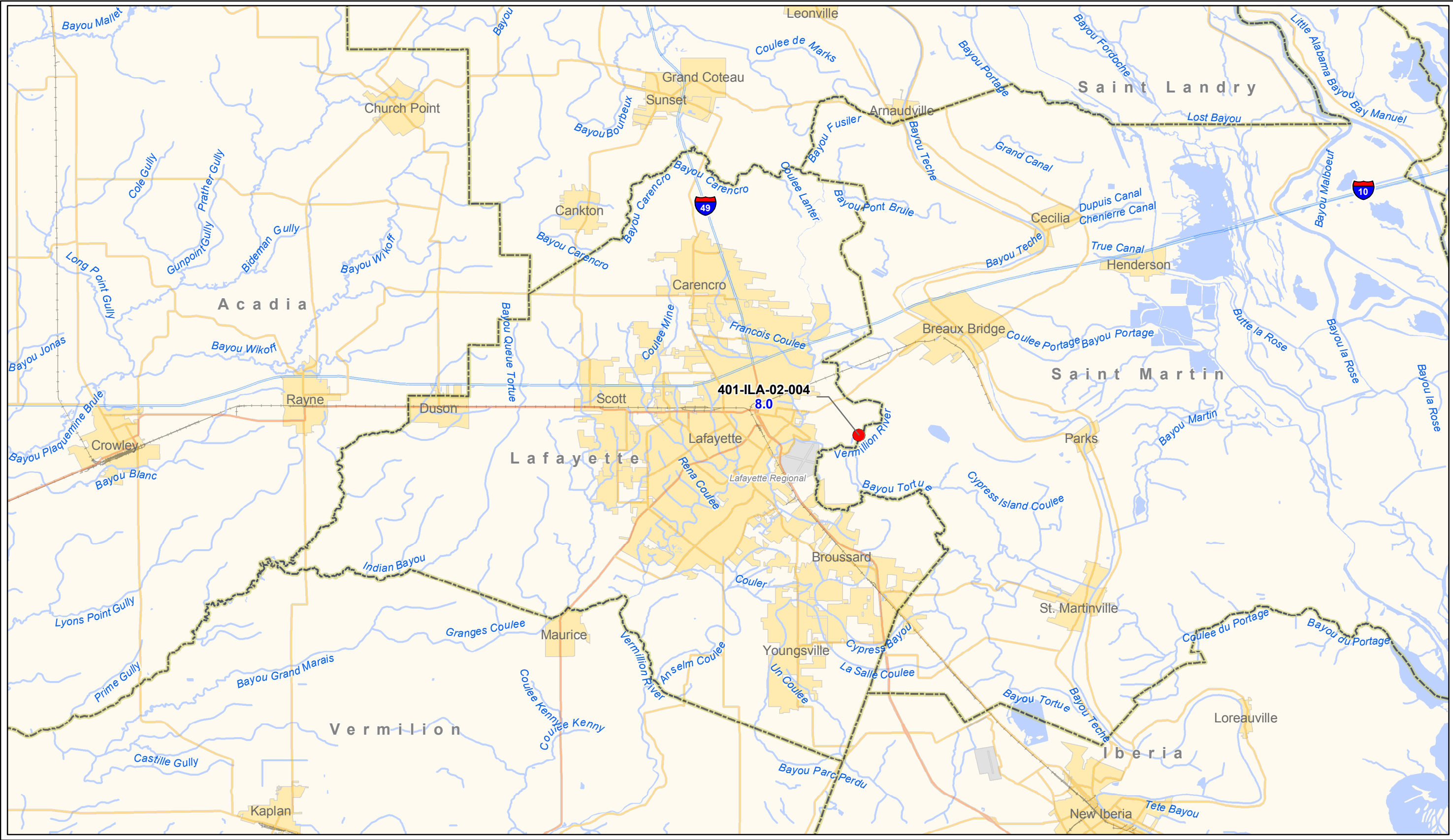
HORIZONTAL DATUM: NAD83

Draft

Jefferson Davis Parish

Hurricane Ike September 2008, Louisiana

Surveyed Locations of High Water Marks



Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- Riverine - Hurricane

--- County Boundary

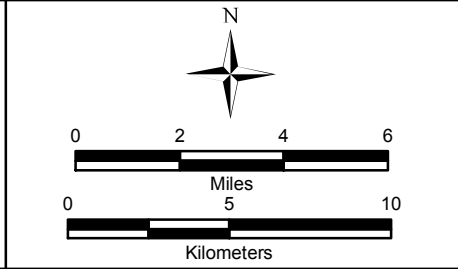
--- State Boundary

401-ILA-03-034 High Water Mark ID

4.6 High Water Mark Elevation NAVD88 (ft)

VERTICAL DATUM: NAVD88

HORIZONTAL DATUM: NAD83

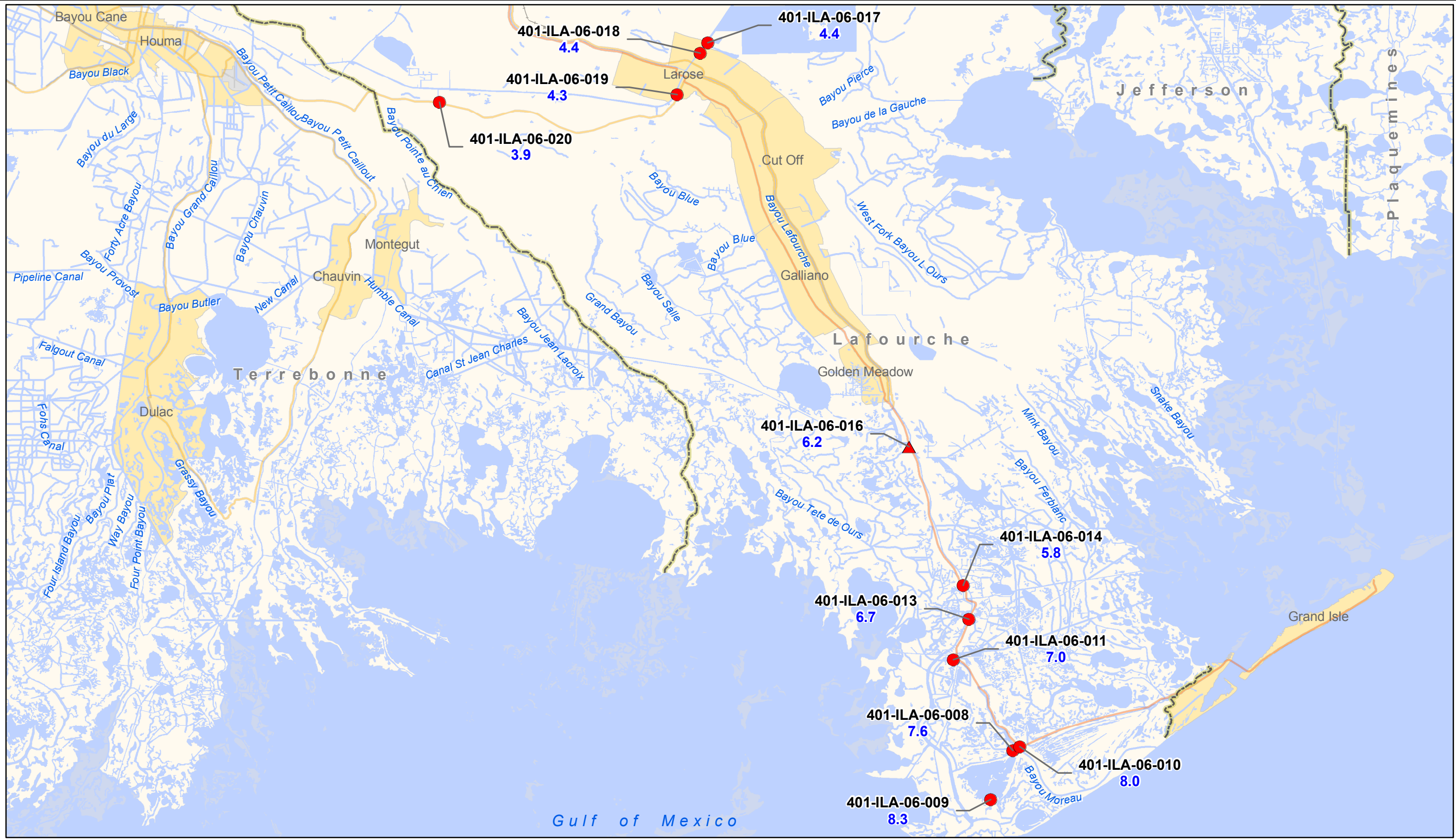


Draft

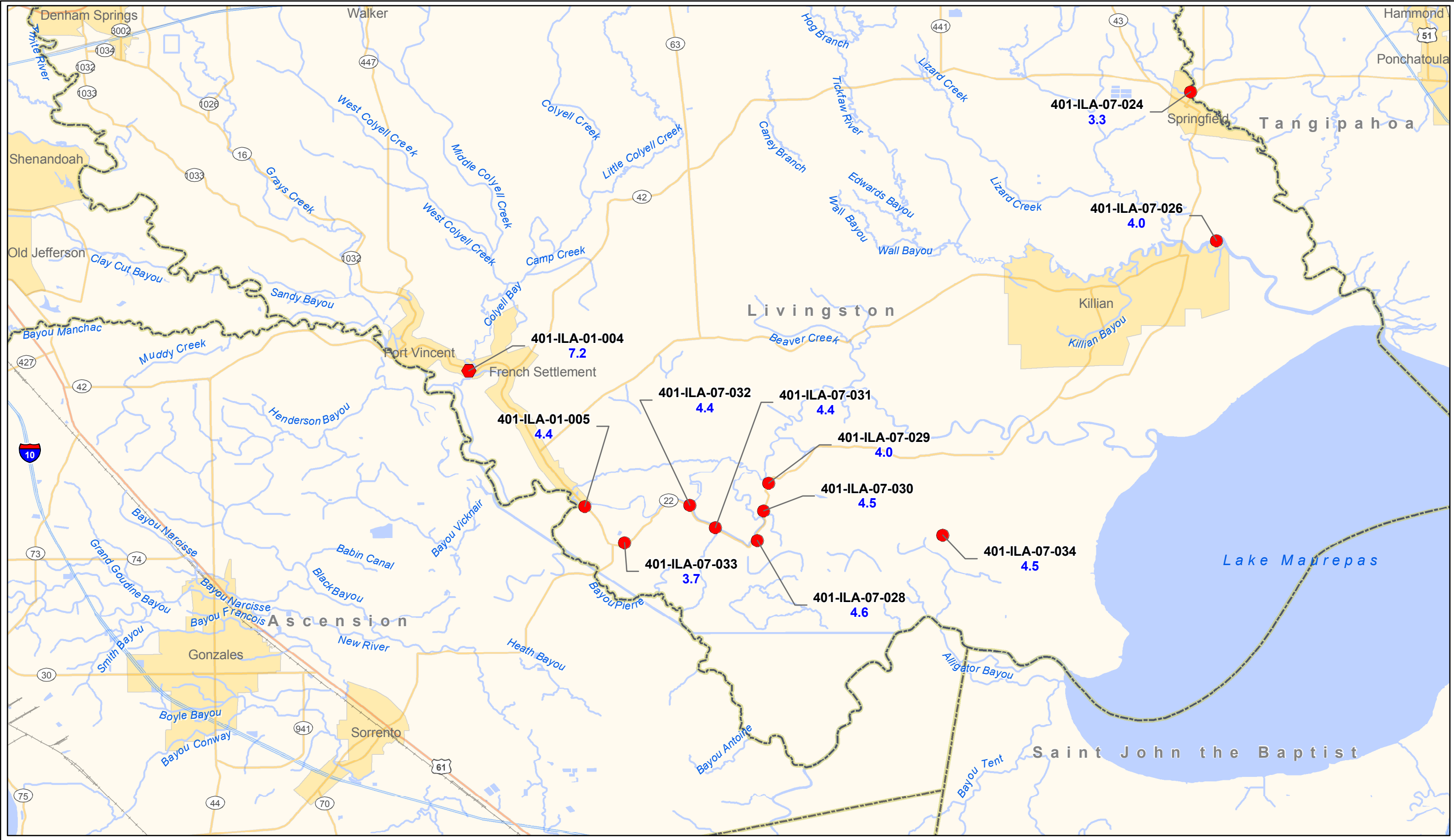
Lafayette Parish

Hurricane Ike September 2008, Louisiana

Surveyed Locations of High Water Marks



Flooding Type ● Coastal - Stillwater Only ▲ Coastal - Wave Height ● Riverine - Hurricane 401-ILA-03-034 High Water Mark ID 4.6 High Water Mark Elevation NAVD88 (ft) VERTICAL DATUM: NAVD88 HORIZONTAL DATUM: NAD83	County Boundary --- State Boundary --- 0 2 4 6 8 Miles 0 5 10 Kilometers		FEMA	Draft Lafourche Parish Hurricane Ike September 2008, Louisiana Surveyed Locations of High Water Marks
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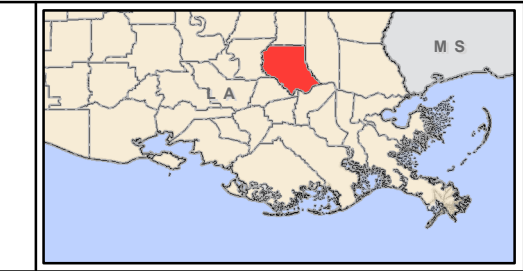
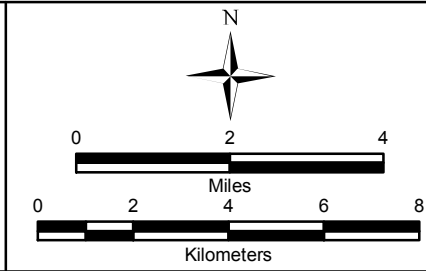
Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- ◆ Riverine - Hurricane

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

--- County Boundary
--- State Boundary

VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83



Draft

Livingston Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



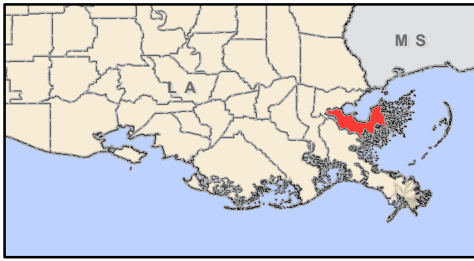
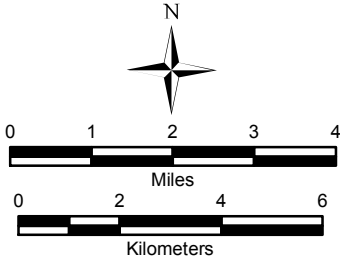
Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- ◆ Riverine - Hurricane

- County Boundary
- State Boundary

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

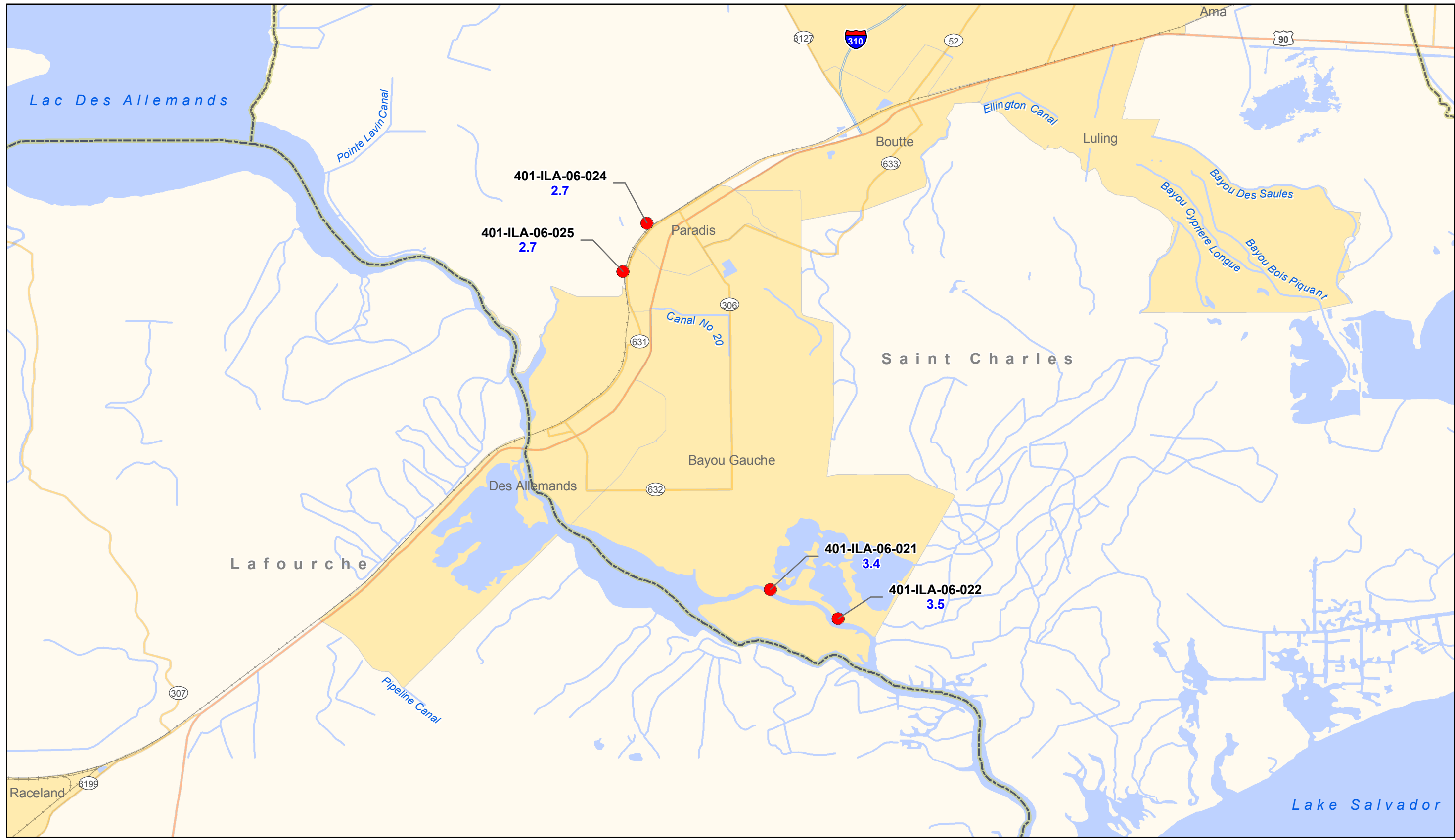
VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83



FEMA

Draft

Saint Bernard Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



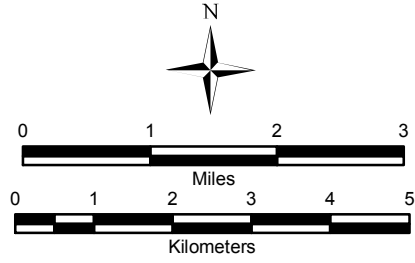
Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- Riverine - Hurricane

- County Boundary
- State Boundary

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

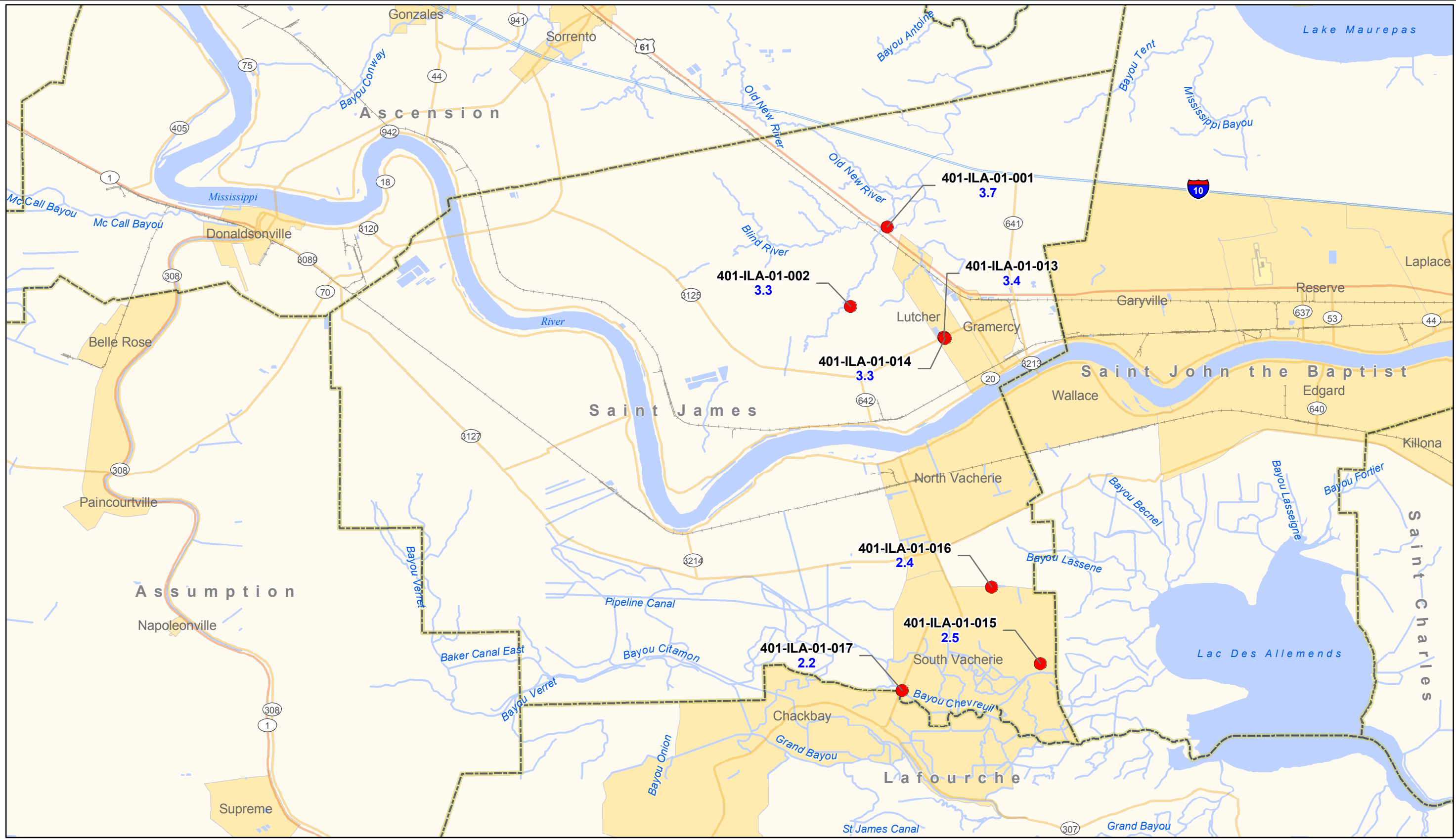
VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83



FEMA

Draft

Saint Charles Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



Flooding Type

- Coastal - Stillwater Only
- Coastal - Wave Height
- Riverine - Hurricane

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83

County Boundary
State Boundary

N

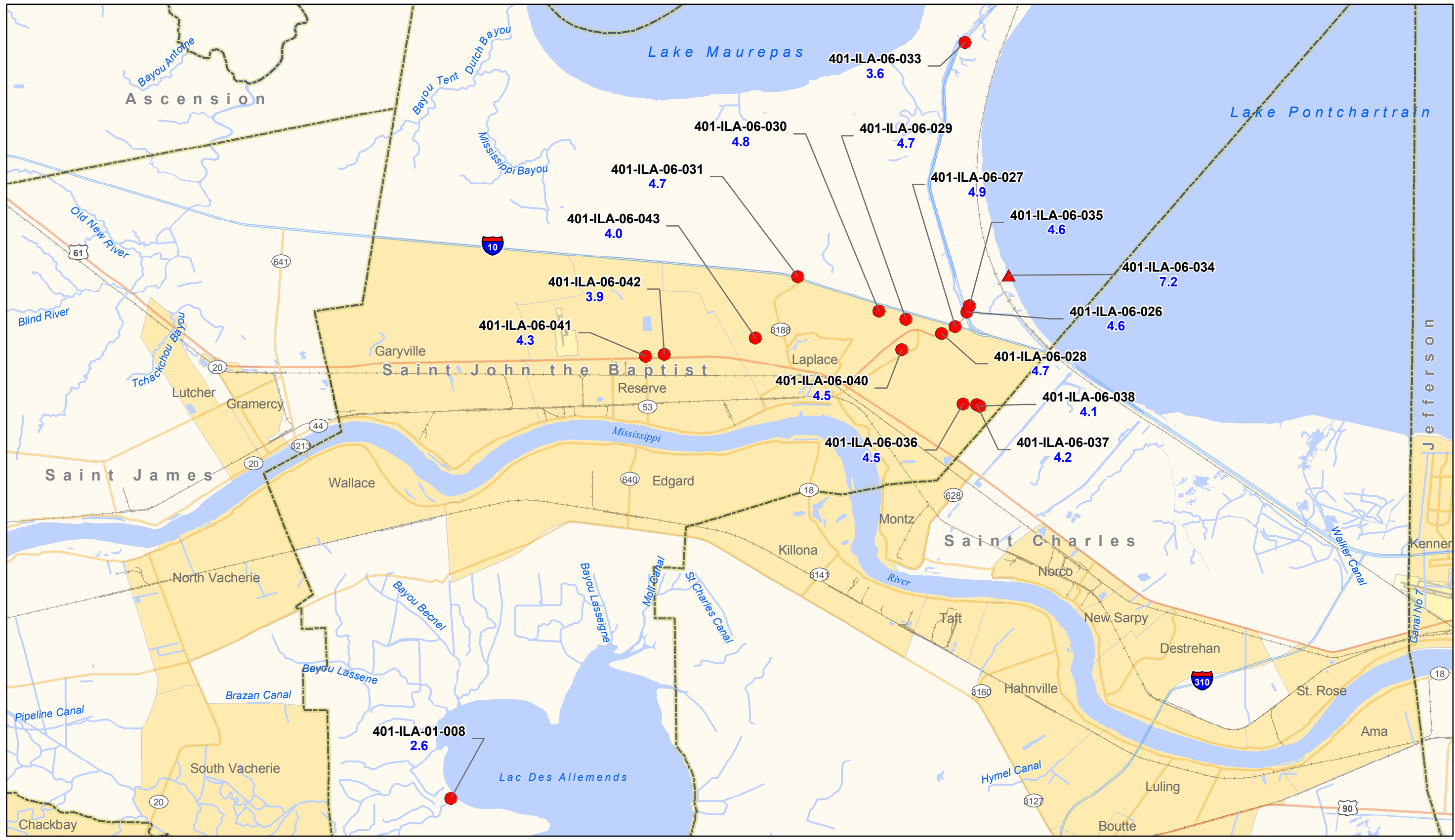
0 1 2 3 4 5
Miles

0 2 4 6 8
Kilometers

FEMA

Draft

Saint James Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- Riverine - Hurricane

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83

County Boundary
State Boundary

N

0 2 4

0 2 4 6 8

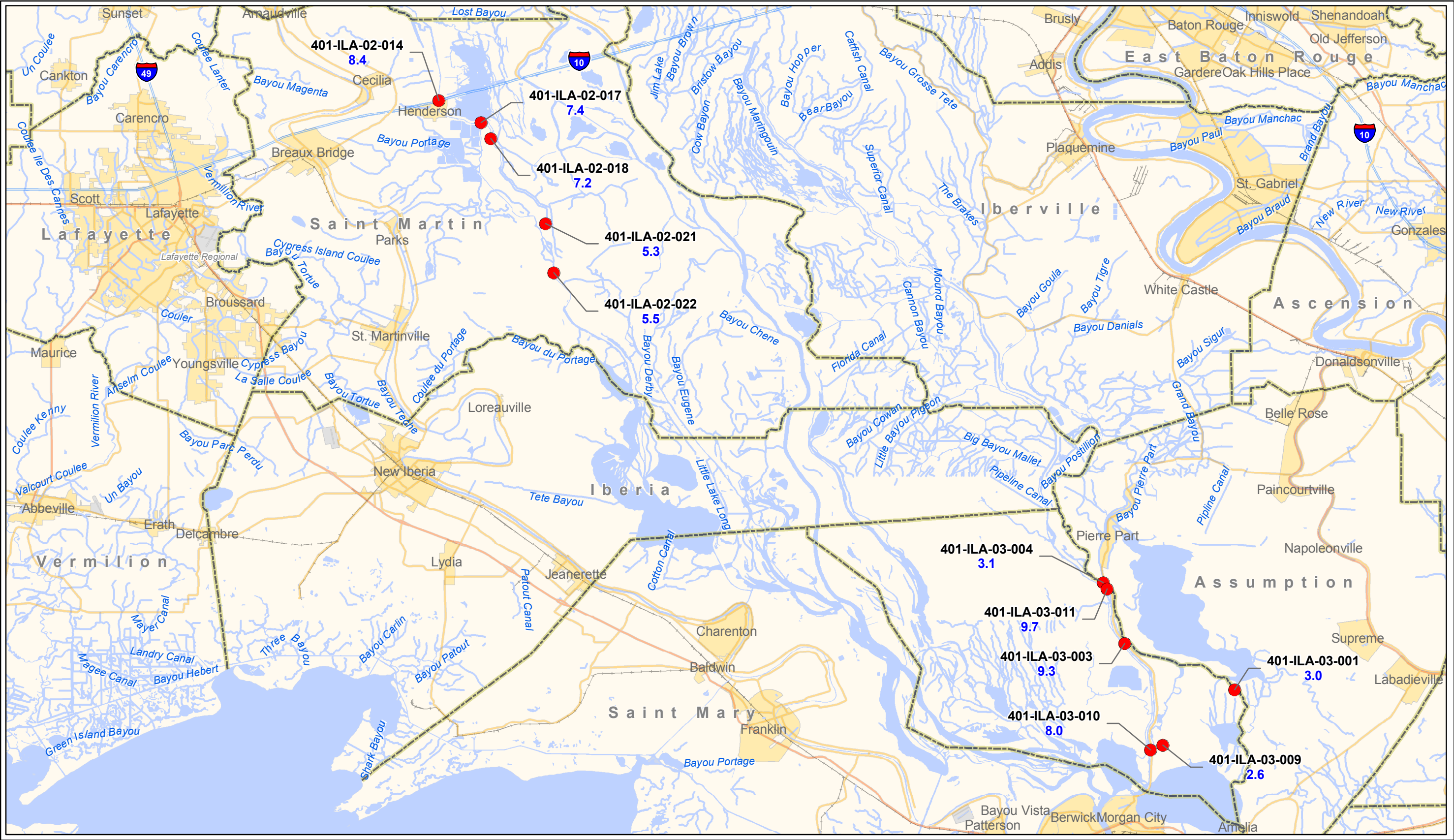
Miles

Kilometers

FEMA

Draft

Saint John the Baptist Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



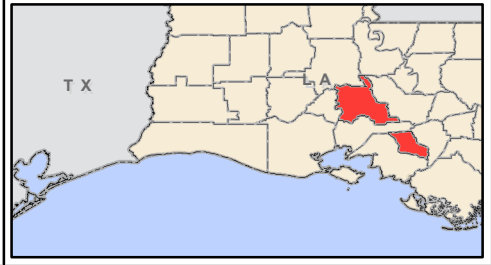
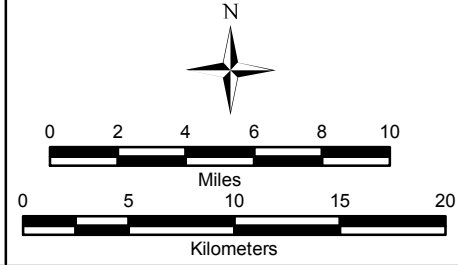
Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- Riverine - Hurricane

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

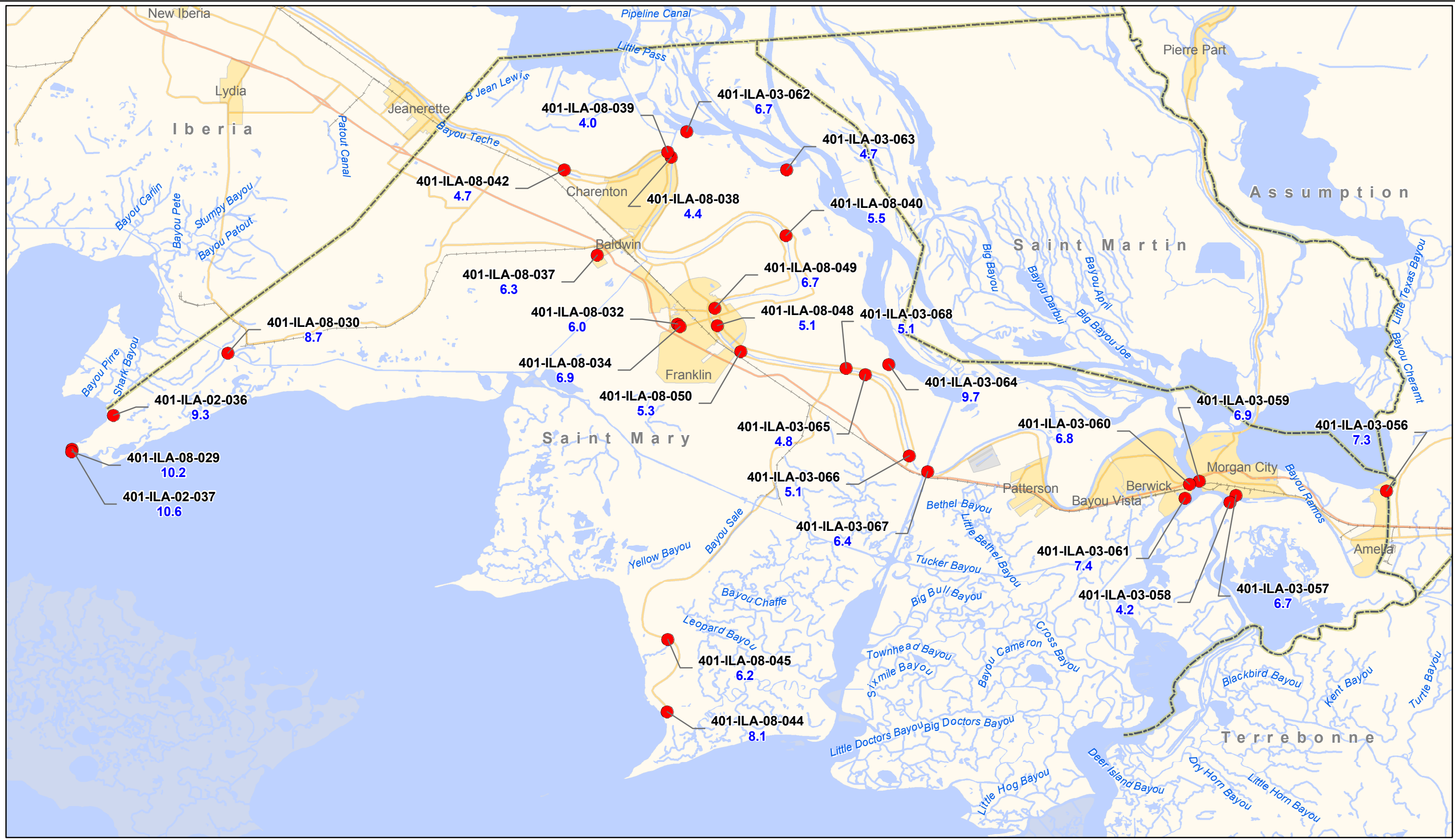
— County Boundary
— State Boundary

VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83



Draft

Saint Martin Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- Riverine - Hurricane

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83

County Boundary
State Boundary

Scale
0 2 4 6 8 Miles
0 2 4 6 8 10 12 Kilometers

FEMA

Draft

Saint Mary Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



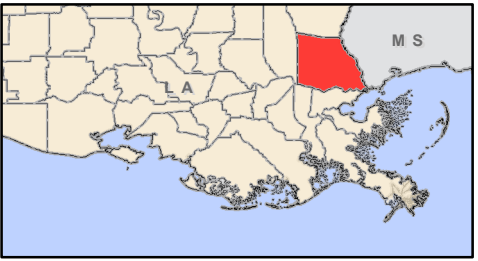
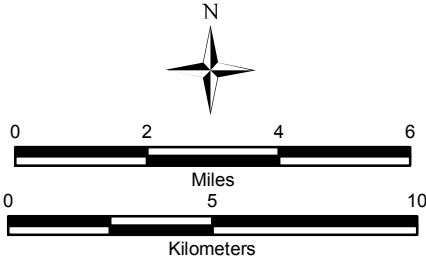
Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- Riverine - Hurricane

- County Boundary
- State Boundary

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

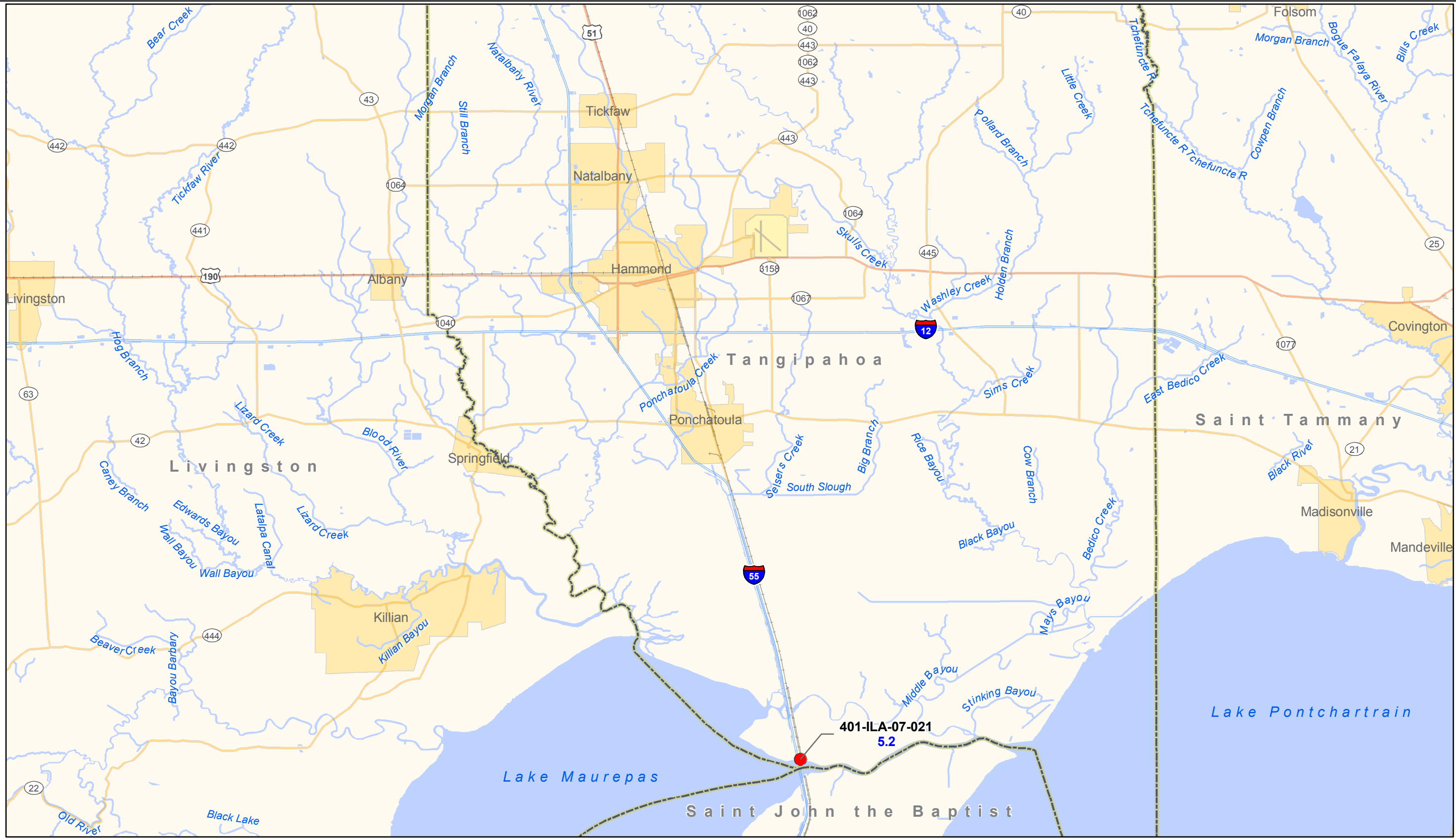
VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83



FEMA

Draft

Saint Tammany Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks



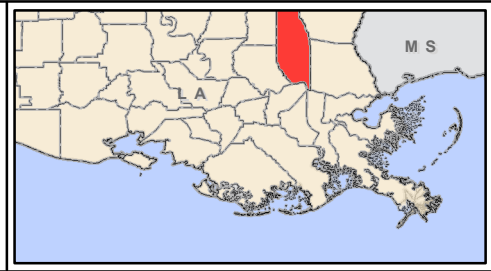
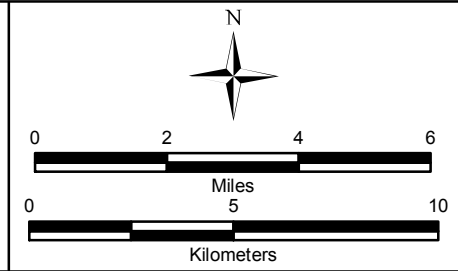
Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- Riverine - Hurricane

401-ILA-03-034 High Water Mark ID
4.6 High Water Mark Elevation NAVD88 (ft)

VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83

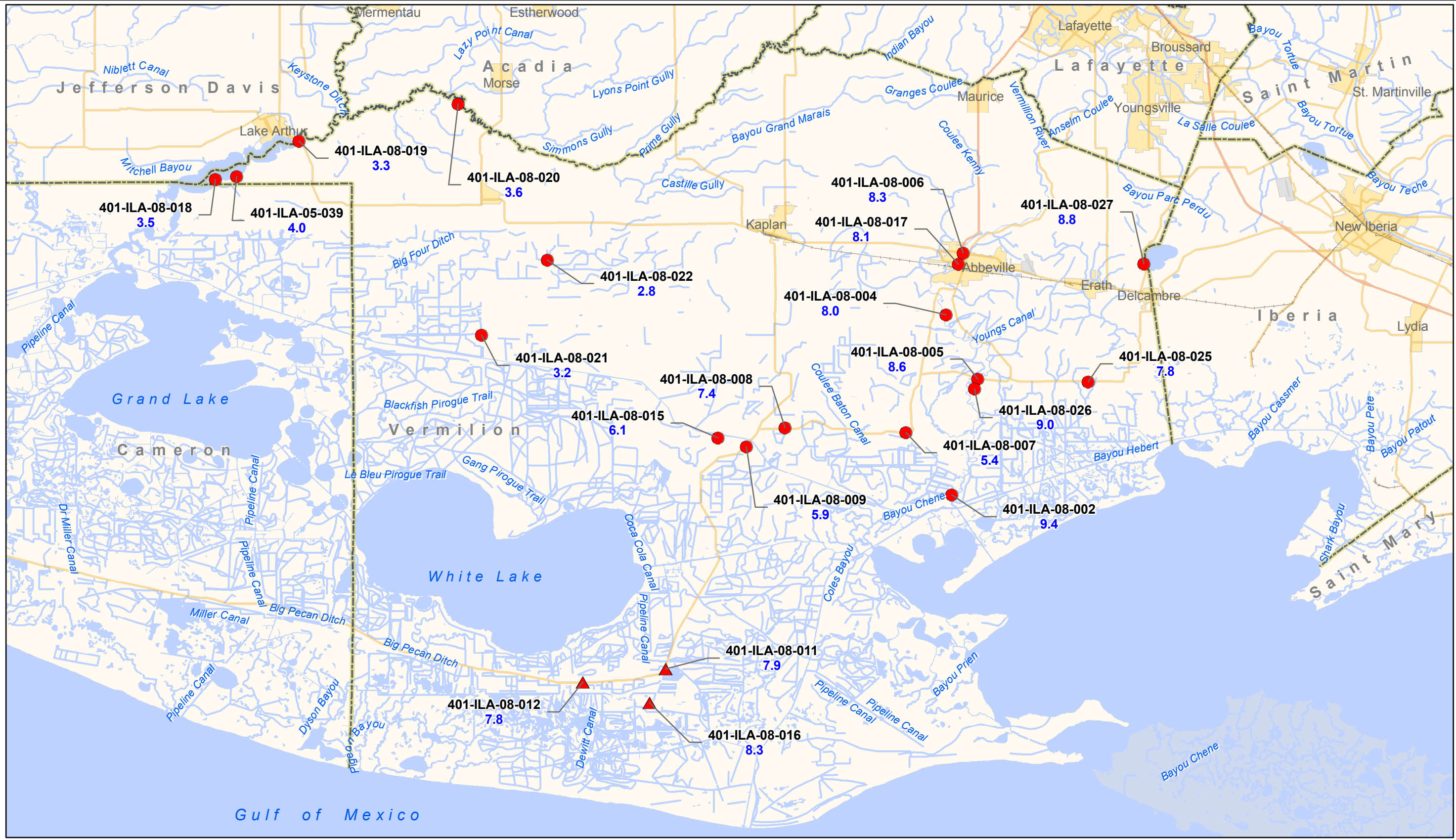
--- County Boundary
--- State Boundary



Tangipahoa Parish

Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks

Draft



Flooding Type

- Coastal - Stillwater Only
- ▲ Coastal - Wave Height
- ◆ Riverine - Hurricane

401-ILA-03-034
High Water Mark ID
4.6

High Water Mark Elevation NAVD88 (ft)

VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: NAD83

County Boundary
State Boundary

Scale
0 2 4 6 8 10 Miles
0 5 10 15 Kilometers

FEMA

Draft

Vermilion Parish
Hurricane Ike September 2008, Louisiana
Surveyed Locations of High Water Marks

Appendix C
HWM Reports (by Parish)

Appendix C
HWM Reports (by Parish)
C1 Acadia



FEMA

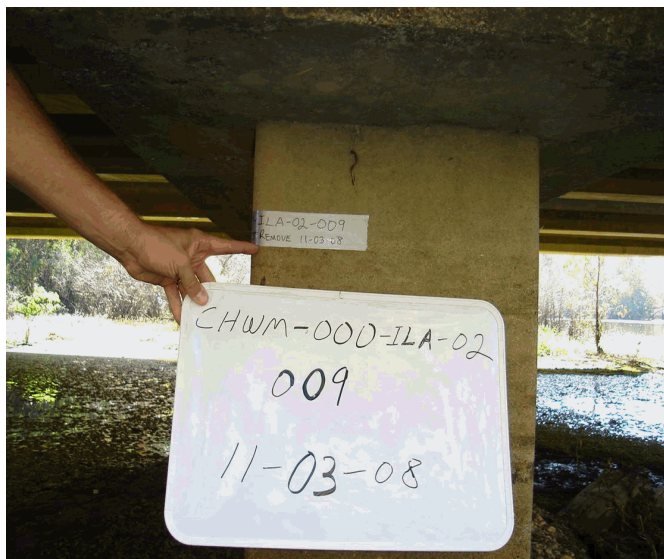
Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-009	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.8	NGVD 29 :	3.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Acadia
		State :	Louisiana
Location of HWM Object :	On HWY 91, ~2 mi north of Gueydan on the North East side of Bayou Queue De Turtue bridge. On the first column.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/15/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0817		
Survey Longitude :	-92.5062	Apx. Bldg Floor Elevation :	N/A



000-ILA-02-009-43.jpg



000-ILA-02-009-44.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-011	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.5	NGVD 29 :	3.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available , Mermentau		
Type of HWM :	Mud Line	Parish :	Acadia
		State :	Louisiana
Location of HWM Object :	Above Hwy 90 bridge East side of bridge, post next to boat launch. Nearest water edge.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/5/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1898		
Survey Longitude :	-92.5898	Apx. Bldg Floor Elevation :	N/A



000-ILA-02-011-51.jpg



000-ILA-02-011-52.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

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Appendix C

HWM Reports (by Parish)

C2 Ascension



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-006	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	4.1	NGVD 29 :	4.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Building support post, piling, column, or beam		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Ascension
		State :	Louisiana
Location of HWM Object :	Sheet pile wall on the east end of the New River pump station, facing south.		

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008		Witness Statement :	Mr. Rodger White pointed out the water mark.

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1906		
Survey Longitude :	-90.7862	Apx. Bldg Floor Elevation :	N/A



000-ILA-01-006-19.jpg



000-ILA-01-006-20.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-012	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	3.8	NGVD 29 :	4.0
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Yellow Garud Pole
HWM Object, Surface :	Other		
HWM Address	No Street Address Available , Serrento		
Type of HWM :	Stain Line	Parish :	Ascension
		State :	Louisiana
Location of HWM Object :	Hwy 3140 to Hwy ExxonMobil Pipeline mark is on the left handside just pass the gate.		

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1735		
Survey Longitude :	-90.7880	Apx. Bldg Floor Elevation :	N/A



000-ILA-01-012-30.jpg



000-ILA-01-012-31.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

DRAFT

Appendix C
HWM Reports (by Parish)
C3 Assumption



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-005	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.1	NGVD 29 :	4.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Boat dock		
HWM Address	2305 Lee Dr. , Pierre Part		
Type of HWM :	Mud Line	Parish :	Assumption
		State :	Louisiana

Name of Flagger/Interviewer :	Emily Dhingra	Zsafia Dobos	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0006		
Survey Longitude :	-91.1932	Apx. Bldg Floor Elevation :	N/A



000-ILA-03-005-16.jpg



000-ILA-03-005-17.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana
ESP Associates, P.A.
P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560
Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-006	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.1	NGVD 29 :	3.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	241 N. Bay Rd.		
Type of HWM :	Mud Line	Parish :	Assumption
		State :	Louisiana

Name of Flagger/Interviewer :	Emily Dhingra	Zsafia Dobos	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9570		
Survey Longitude :	-91.2020	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-007	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	2.9	NGVD 29 :	3.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	830A Shell Beach Rd		
Type of HWM :	Mud Line	Parish :	Assumption
		State :	Louisiana

Name of Flagger/Interviewer :	Emily Dhingra	Zsafia Dobos	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9008		
Survey Longitude :	-91.1861	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-008	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	2.9	NGVD 29 :	3.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	1830 Highway 401		
Type of HWM :	Mud Line	Parish :	Assumption
		State :	Louisiana

Name of Flagger/Interviewer :	Emily Dhingra	Zsafia Dobos	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8664		
Survey Longitude :	-91.1081		

Apx. Bldg Floor Elevation : N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

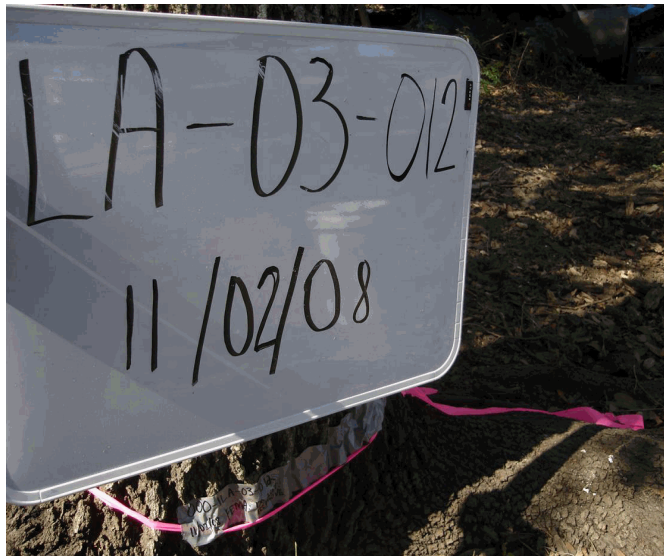
Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

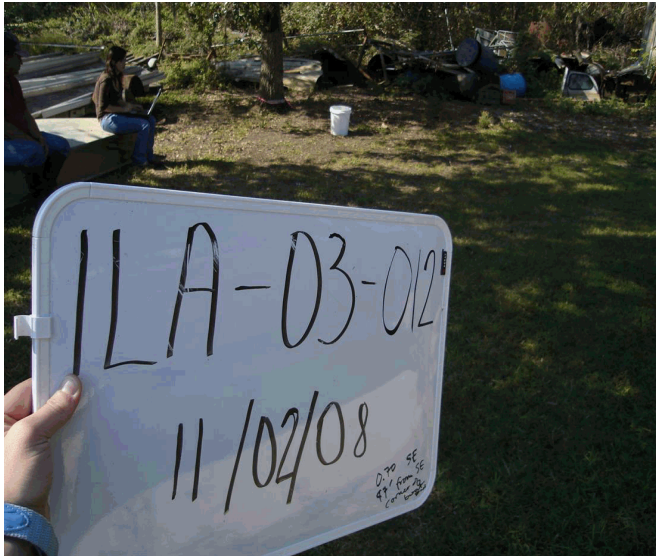
HWM ID :	401-ILA-03-012	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.1	NGVD 29 :	3.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Tree		
HWM Address	245 Mike Street		
Type of HWM :	Mud Line	Parish :	Assumption
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9366		
Survey Longitude :	-91.2213	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C4 Calcasieu



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-005	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.7	NGVD 29 :	8.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Building support post, piling, column, or beam		
HWM Address	1170 Burton Shipyard Road		
Type of HWM :	Mud Line	Parish :	Calcasieu
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/8/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1032		
Survey Longitude :	-93.3361	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

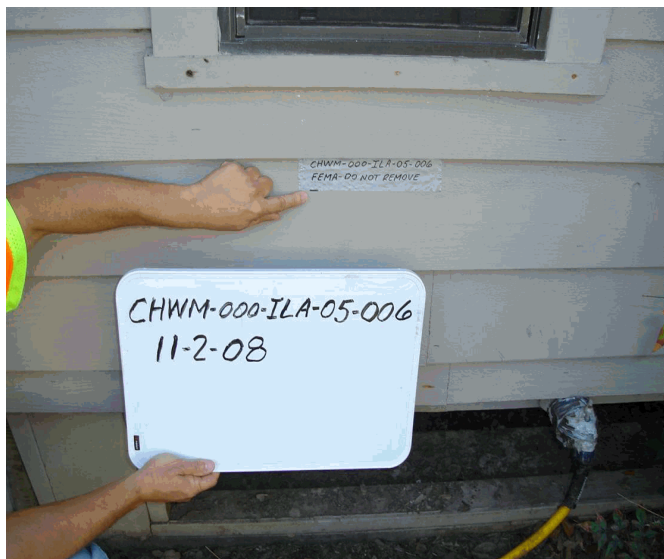
Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-006	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.2	NGVD 29 :	9.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	7274 Moss Lake Ln		
Type of HWM :	Mud Line	Parish :	Calcasieu
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1140		
Survey Longitude :	-93.3417	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-007	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.6	NGVD 29 :	5.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Retaining wall		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Calcasieu
		State :	Louisiana
Location of HWM Object :	HWM on sheet piles along the bridge on Hwy 27 across Intracoastal Waterway between Calcasieu parish and Cameron parish		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
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Date of Flagging/Interview :	11/02/2008
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Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/8/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0659		
Survey Longitude :	-93.3484	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

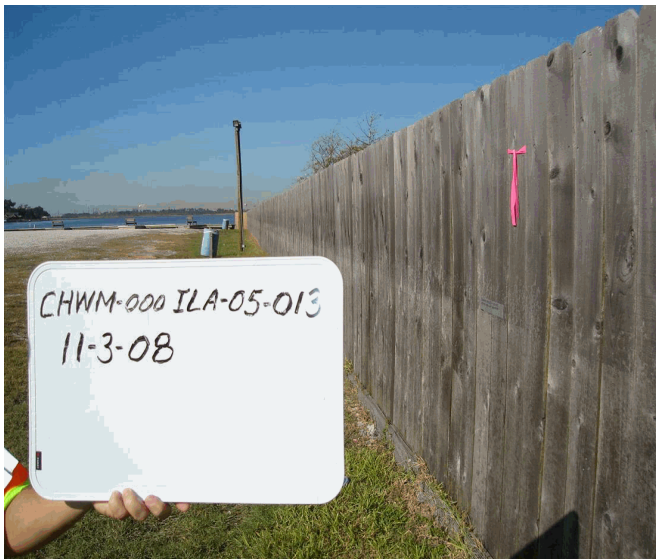
HWM ID :	401-ILA-05-013	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.5	NGVD 29 :	5.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available , Lake Charles		
Type of HWM :	Stain Line	Parish :	Calcasieu
		State :	Louisiana
Location of HWM Object :	HWM located on the fence of a boat launch near the eastern edge of Prien Lake.		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/1/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1910		
Survey Longitude :	-93.2680	Apx. Bldg Floor Elevation :	N/A



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000-ILA-05-013-93.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-014	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.2	NGVD 29 :	9.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	4317 Edgewater Dr. , Lake Charles		
Type of HWM :	Mud Line	Parish :	Calcasieu
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/1/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1689		
Survey Longitude :	-93.2985	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-015	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.3	NGVD 29 :	9.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Calcasieu
Location of HWM Object :	Calcasieu Point Landing	State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/2/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1043		
Survey Longitude :	-93.3063	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-022	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.5	NGVD 29 :	4.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Building support post, piling, column, or beam		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Calcasieu
		State :	Louisiana
Location of HWM Object :	Lorraine Park 7803 Lorraine Road. HWM located on the fish cleaning shed near the boat launch.		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brain Merceron	Flagger Company:	URS Corp.
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Date of Flagging/Interview :	11/04/2008
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Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/4/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1296		
Survey Longitude :	-92.9077	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA

70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-027	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.6	NGVD 29 :	9.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	Louisiana Dept of Wildlife and Fisheries District 5 Bldg 1213 N. Lake Shore Drive, Lake Charles		
Type of HWM :	Stain Line	Parish :	Calcasieu
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C		
Survey Date :	12/1/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	30.2366				
Survey Longitude :	-93.2300				
Apx. Bldg Floor Elevation :	N/A				



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-028	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.4	NGVD 29 :	8.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	1423 Watkins Street , Lake Charles		
Type of HWM :	Stain Line	Parish :	Calcasieu
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/1/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2193		
Survey Longitude :	-93.2233	Apx. Bldg Floor Elevation :	N/A



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000-ILA-05-028-36.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-029	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.3	NGVD 29 :	9.2
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Wooden wall next to the garage door
HWM Object, Surface :	Other		
HWM Address	2111 Barbe Street , Lake Charles		
Type of HWM :	Stain Line	Parish :	Calcasieu
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/1/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2110		
Survey Longitude :	-93.2356	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-030	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.2	NGVD 29 :	9.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	1445 Giovanni Street , Lake Charles		
Type of HWM :	Mud Line	Parish :	Calcasieu
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/1/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2036		
Survey Longitude :	-93.2393	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C5 Cameron



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-008	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.9	NGVD 29 :	8.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available , Hackberry		
Type of HWM :	Stain Line	Parish :	Cameron
		State :	Louisiana
Location of HWM Object :	HWM located on the bridge across Black Lake Bayou on Hwy. 27 south.		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
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Date of Flagging/Interview :	11/02/2008
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Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/8/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0049		
Survey Longitude :	-93.3433	Apx. Bldg Floor Elevation :	N/A



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000-ILA-05-008-83.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-009	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	8.9	NGVD 29 :	8.8
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Other		Short Bell south phone pole
HWM Address	No Street Address Available , Hackberry		
Type of HWM :	Stain Line	Parish :	Cameron
		State :	Louisiana
Location of HWM Object :	HWM located on a short telephone pole of the Arthur Ln approximately 0.2 miles south of intesection with Black Lake Road.		

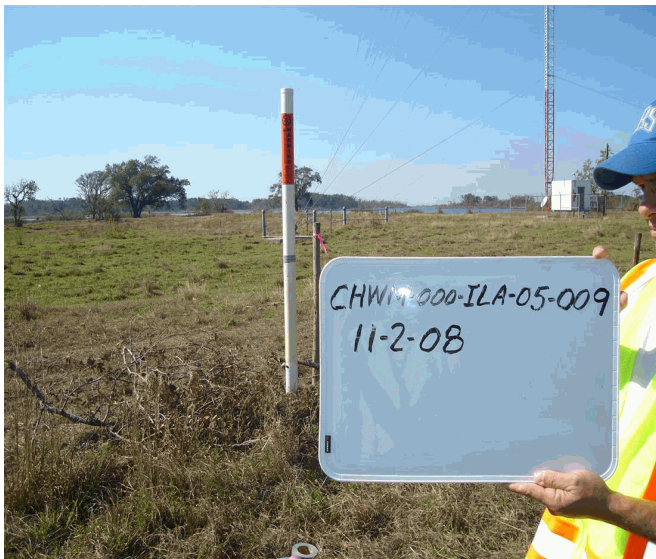
Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
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Date of Flagging/Interview :	11/02/2008
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Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/8/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9907		
Survey Longitude :	-93.4092	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-010	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	9.7	NGVD 29 :	9.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Utility pole		
HWM Address	No Street Address Available		
Type of HWM :	Wrack Line	Parish :	Cameron
		State :	Louisiana
Location of HWM Object :	HWM located on the fence of JS Construction site a few feet south of the Sabine National Wildlife refuge parking lot.		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C		
Survey Date :	12/8/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	29.8904				
Survey Longitude :	-93.4020				
Apx. Bldg Floor Elevation :	N/A				



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-012	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Poor
Survey Ele. (US FT) NAVD88 :	12.6	NGVD 29 :	12.6
Flooding Type :	Coastal - Wave Height		
HWM Object, Surface :	Building support post, piling, column, or beam		
HWM Address	24360 Mallard Street 2436		
Type of HWM :	Other	Parish :	Cameron
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brain Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/7/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7718		
Survey Longitude :	-93.4560	Apx. Bldg Floor Elevation :	N/A



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000-ILA-05-012-91.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-016	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.4	NGVD 29 :	7.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Cameron
		State :	Louisiana
Location of HWM Object :	HWM located on the building next to the bridge on Hwy. 384 N.		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/2/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0108		
Survey Longitude :	-93.2274	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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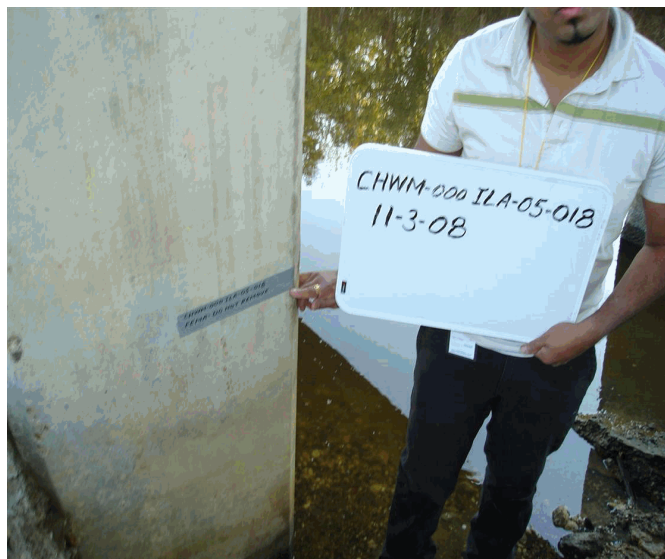
Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-018	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.8	NGVD 29 :	3.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Cameron
		State :	Louisiana
Location of HWM Object :	HWM located on the pier of the bridge across the Intercoastal waterway on Rt. 27 South		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/2/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9382		
Survey Longitude :	-93.0797	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-019	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	6.1	NGVD 29 :	6.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Wrack Line	Parish :	Cameron
		State :	Louisiana
Location of HWM Object :	HWM located along Rt. 27 South just a few miles south of the bridge across the intercoastal water on a private property. HWM located on the right hand side fence pole.		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/1/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8943		
Survey Longitude :	-93.0796	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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70664-1747

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-020	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	8.7	NGVD 29 :	8.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Cameron
		State :	Louisiana
Location of HWM Object :	HWM located on the exterior wall of Caniks Feed & Grocery Store. Between an 8 foot wide door and the small entrance door on the front of the bldg.		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C		
Survey Date :	12/2/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	29.8154				
Survey Longitude :	-93.1143				
	Apx. Bldg Floor Elevation :	N/A			



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-026	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	11.7	NGVD 29 :	11.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Cameron
		State :	Louisiana
Location of HWM Object :	HWM on a gray building within this Chevron Facility just off Hwy 82 on the right.		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/7/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7648		
Survey Longitude :	-93.8810	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-031	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.0	NGVD 29 :	6.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	115 Briar Ln		
Type of HWM :	Seed Line	Parish :	Cameron
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/2/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0093		
Survey Longitude :	-93.1820	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-032	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.6	NGVD 29 :	9.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	329 Big Lake St		
Type of HWM :	Seed Line	Parish :	Cameron
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/2/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9886		
Survey Longitude :	-93.2663	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Contents : Coastal High Water Mark (HWM) Survey Report

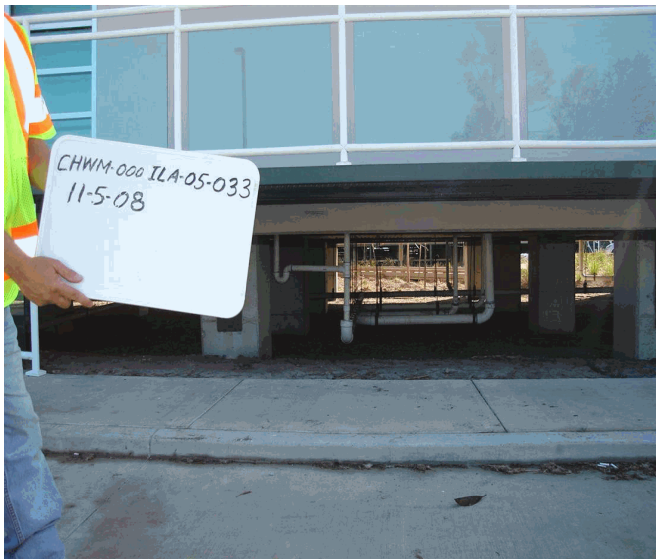
HWM ID :	401-ILA-05-033	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.0	NGVD 29 :	8.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Building support post, piling, column, or beam		
HWM Address	5360 West Creole Highway		
Type of HWM :	Mud Line	Parish :	Cameron
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/2/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8085		
Survey Longitude :	-93.1655	Apx. Bldg Floor Elevation :	N/A



000-ILA-05-033-45.jpg



000-ILA-05-033-46.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-034	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	11.2	NGVD 29 :	11.2
Flooding Type :	Coastal - Wave Height		
HWM Object, Surface :	Exterior Wall		
HWM Address	3482 Trosclair Road		
Type of HWM :	Seed Line	Parish :	Cameron
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/2/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7871		
Survey Longitude :	-93.1314	Apx. Bldg Floor Elevation :	N/A



000-ILA-05-034-47.jpg



000-ILA-05-034-48.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-038	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	8.0	NGVD 29 :	7.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Utility pole		
HWM Address	4477 Grand Chenier Highway		
Type of HWM :	Stain Line	Parish :	Cameron
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/8/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7440		
Survey Longitude :	-92.8778	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-040	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.3	NGVD 29 :	3.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Tree		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Cameron
		State :	Louisiana
Location of HWM Object :	The location is at the border of Cameron/Vermilion parish. At the end of Iowa Ave. along the south-east side of Lake Arthur.		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
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Date of Flagging/Interview :	11/06/2008
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Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/5/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0318		
Survey Longitude :	-92.7513	Apx. Bldg Floor Elevation :	N/A



000-ILA-05-040-63.jpg



000-ILA-05-040-65.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-041	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.0	NGVD 29 :	2.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Sign post		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Cameron
		State :	Louisiana
Location of HWM Object :	HWM located on a "Cameron Parish" Sign post at the border of Cameron Parish and Vermillion Parish		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
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Date of Flagging/Interview :	11/06/2008
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Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/5/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0377		
Survey Longitude :	-92.6718	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-042	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.2	NGVD 29 :	3.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Tree		
HWM Address	RV Trailer Park Myers Landing Road		
Type of HWM :	Stain Line	Parish :	Cameron
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/4/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0224		
Survey Longitude :	-92.7688	Apx. Bldg Floor Elevation :	N/A



000-ILA-05-042-69.jpg



000-ILA-05-042-70.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-043	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	2.3	NGVD 29 :	2.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Tree		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Cameron
		State :	Louisiana
Location of HWM Object :	HWM located on a tree just west of intersection with a ditch.		

Name of Flagger/Interviewer : Saurabh Kulkarni Brian Merceron **Flagger Company:** URS Corp.

Date of Flagging/Interview : 11/06/2008

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/4/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0321		
Survey Longitude :	-92.7926	Apx. Bldg Floor Elevation :	N/A



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000-ILA-05-043-73.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-044	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.4	NGVD 29 :	9.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	Hackberry High School , Hackberry		
Type of HWM :	Seed Line	Parish :	Cameron
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/8/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9837		
Survey Longitude :	-93.3750	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-045	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.7	NGVD 29 :	8.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	Shell Western Road , Hackberry		
Type of HWM :	Seed Line	Parish :	Cameron
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/8/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9839		
Survey Longitude :	-93.4275	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C6 Iberia



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-002	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.7	NGVD 29 :	4.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Electrical box		
HWM Address	Lake Fausse Pointe State Park 5400 Levee Road		
Type of HWM :	Mud Line	Parish :	Iberia
		State :	Louisiana

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0617		
Survey Longitude :	-91.6086	Apx. Bldg Floor Elevation :	N/A



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000-ILA-02-002-17.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-025	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.2	NGVD 29 :	5.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Electrical box		
HWM Address	Lake Fausse State Park 5400 Levee Rd		
Type of HWM :	Mud Line	Parish :	Iberia
		State :	Louisiana

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/15/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0581		
Survey Longitude :	-91.6078	Apx. Bldg Floor Elevation :	N/A



000-ILA-02-025-86.jpg



000-ILA-02-025-87.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-026	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.2	NGVD 29 :	8.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	410 Canal St. Arthur's Enterprises , Delcambre		
Type of HWM :	Stain Line	Parish :	Iberia
		State :	Louisiana

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/11/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9519		
Survey Longitude :	-91.9849	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-027	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.4	NGVD 29 :	6.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	10106 Jefferson Island. Rd.		
Type of HWM :	Personal Account	Parish :	Iberia
		State :	Louisiana

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008		Witness Statement :	Mike Richasd Jr. lead us to the mark.

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/11/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9675		
Survey Longitude :	-91.9781		

Apx. Bldg Floor Elevation : N/A



000-ILA-02-027-90.jpg



000-ILA-02-027-92.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-028	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.2	NGVD 29 :	8.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	No Street Address Available , Delcambre		
Type of HWM :	Stain Line	Parish :	Iberia
		State :	Louisiana
Location of HWM Object :	Metal building "City Barn" across the street from Sea Gold Inc.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew : DWS
Survey Date : 12/11/08
Map Projection Used : Louisiana South 1702
Survey Latitude : 29.9472
Survey Longitude : -91.9840

Company : Pelican Land Surveying, L.L.C
Vertical Datum : NAVD 88 **Horizontal Datum:** NAD 83

Apx. Bldg Floor Elevation : N/A



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000-ILA-02-028-94.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-029	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.5	NGVD 29 :	8.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	N Railroad St & W Church St. "1938 Delcambre Waterworks", Delcambre		
Type of HWM :	Mud Line	Parish :	Iberia
		State :	Louisiana

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew : DBS
Survey Date : 12/11/08
Map Projection Used : Louisiana South 1702
Survey Latitude : 29.9490
Survey Longitude : -91.9886

Company : Pelican Land Surveying, L.L.C.
Vertical Datum : NAVD 88 **Horizontal Datum:** NAD 83

Apx. Bldg Floor Elevation : N/A



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000-ILA-02-029-96.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544
Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-030	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.4	NGVD 29 :	8.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	No Street Address Available		
Type of HWM :	Other	Parish :	Iberia
		State :	Louisiana
Location of HWM Object :	Avery Island entrance gate at Hwy 329. There is a small wooden marker Ike-08 in the east side window.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9146		
Survey Longitude :	-91.9045	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-032	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.2	NGVD 29 :	7.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Steps		
HWM Address	1606 Segura Rd		
Type of HWM :	Mud Line	Parish :	Iberia
		State :	Louisiana

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9345		
Survey Longitude :	-91.8635	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

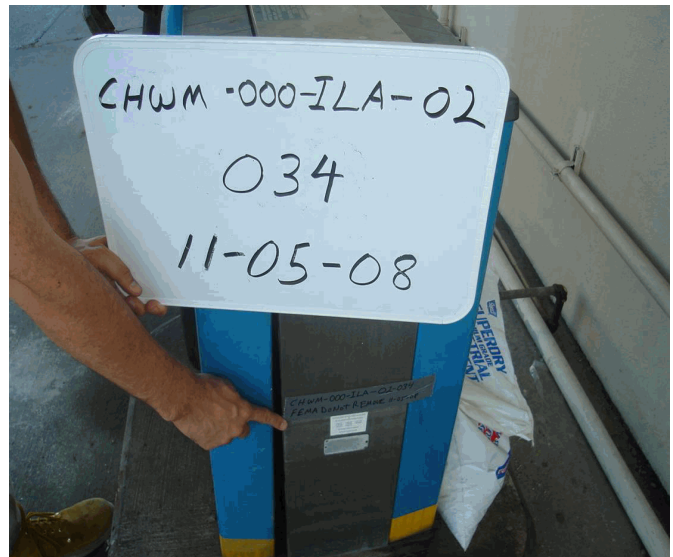
HWM ID :	401-ILA-02-034	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	8.5	NGVD 29 :	8.6
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Other	West side of Diesel Pump #5 nearest Bld.	
HWM Address	Port Quick Stop 4307 S. Lewis St.		
Type of HWM :	Stain Line	Parish :	Iberia
		State :	Louisiana

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/11/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9497		
Survey Longitude :	-91.8359	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-035	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.1	NGVD 29 :	8.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Wrack Line	Parish :	Iberia
		State :	Louisiana
Location of HWM Object :	~ 600 m west of Sterling and Pesson Rd. at fence corner. Flaggers tape on fence post and woven through the fence at the level of the wrack line.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew : DBS
Survey Date : 12/11/08
Map Projection Used : Louisiana South 1702
Survey Latitude : 29.9382
Survey Longitude : -91.8338

Company : Pelican Land Surveying, L.L.C
Vertical Datum : NAVD 88 **Horizontal Datum:** NAD 83

Apx. Bldg Floor Elevation : N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-038	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.9	NGVD 29 :	9.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	9900 Shell Rd		
Type of HWM :	Mud Line	Parish :	Iberia
		State :	Louisiana

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/11/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8265		
Survey Longitude :	-91.8081	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-039	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	5.1	NGVD 29 :	5.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Iberia
		State :	Louisiana
Location of HWM Object :	East bank of Bayou Teche at Hwy 671 bridge. Downstream side of bridge.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9145		
Survey Longitude :	-91.6622	Apx. Bldg Floor Elevation :	N/A



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000-ILA-02-039-130.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-040	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.3	NGVD 29 :	5.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Iberia
		State :	Louisiana
Location of HWM Object :	Hwy 320 south side of Bayou Teche draw bridge.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
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Date of Flagging/Interview :	11/06/2008
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Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/7/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9789		
Survey Longitude :	-91.7539		

Apx. Bldg Floor Elevation :	N/A
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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-041	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.5	NGVD 29 :	5.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	Belle Place		
Type of HWM :	Mud Line	Parish :	Iberia
		State :	Louisiana

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/9/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0111		
Survey Longitude :	-91.7433	Apx. Bldg Floor Elevation :	N/A



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000-ILA-02-041-144.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-042	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.5	NGVD 29 :	4.5
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Large concrete water gate
HWM Object, Surface :	Other		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Iberia
		State :	Louisiana
Location of HWM Object :	Down gravel Rd. along south side of Loreauville canal at large concrete water gate. HWM on concrete wall near chain link.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
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Date of Flagging/Interview :	11/06/2008
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Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/9/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0192		
Survey Longitude :	-91.6808	Apx. Bldg Floor Elevation :	N/A



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000-ILA-02-042-146.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-043	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Teche Bayou	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.1	NGVD 29 :	7.2
Flooding Type :	Riverine - Hurricane		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available , Loreauville		
Type of HWM :	Mud Line	Parish :	Iberia
		State :	Louisiana
Location of HWM Object :	Approx. 400m north of Hwy 86 LA 344, Loreauville draw bridge over bayou Teche east bank. North side of bridge. Across the street from fire dept.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/9/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0569		
Survey Longitude :	-91.7400	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-044	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.3	NGVD 29 :	5.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available , New Iberia		
Type of HWM :	Mud Line	Parish :	Iberia
		State :	Louisiana
Location of HWM Object :	New Iberia 80 m East of Bridge St. and Burke St., draw bridge over bayou Teche west bank.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/9/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0060		
Survey Longitude :	-91.8170	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-045	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.0	NGVD 29 :	5.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Iberia
		State :	Louisiana
Location of HWM Object :	Morbihan Hwy 344 draw bridge over bayou Teche, north bank. HWM is under bridge located on the round central concrete track that the bridge rotates on.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew : DBS
Survey Date : 12/9/08
Map Projection Used : Louisiana South 1702
Survey Latitude : 30.0161
Survey Longitude : -91.7739

Company : Pelican Land Surveying, L.L.C
Vertical Datum : NAVD 88 **Horizontal Datum:** NAD 83

Apx. Bldg Floor Elevation : N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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70664-1747

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Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C7 Iberville



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-007	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	5.9	NGVD 29 :	6.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Boat dock		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Iberville
		State :	Louisiana
Location of HWM Object :	Jack Millers boat landing at junction LA Hwy 75 and LA Hwy 3066		

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008		Witness Statement :	Water was up past asphalt and concrete on backside of sheet pile wall.

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/15/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2193		
Survey Longitude :	-91.3177	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-018	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.2	NGVD 29 :	3.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Iberville
		State :	Louisiana
Location of HWM Object :	Hwy LA 1 To Rocky Canal Rd cross railroad Tracks keep going for few miles, look to your left for wooden Bridge. Located between White Castle and Donaldsonville.		

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1348		
Survey Longitude :	-91.0932	Apx. Bldg Floor Elevation :	N/A



000-ILA-01-018-44.jpg



000-ILA-01-018-45.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-019	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	4.3	NGVD 29 :	4.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Sign post		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Iberville
		State :	Louisiana
Location of HWM Object :	Boat Dock with no ramp. Hwy LA 993 and New Camp Rd, off Hwy 404		

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1034		
Survey Longitude :	-91.1984	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-020	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.8	NGVD 29 :	10.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	35019 Alligator Rd		
Type of HWM :	Stain Line	Parish :	Iberville
		State :	Louisiana

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008		Witness Statement :	
				Keith Delhommer stated, the water was 8 feet above level. Alligator is controlled and does not flow into Bayou Manshack without opening a vaule.

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.3214		
Survey Longitude :	-91.0209	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-021	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gluf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	3.3	NGVD 29 :	3.4
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Other		Pole on water line
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Iberville
		State :	Louisiana
Location of HWM Object :	Hwy 444 at Chuto Bridge on the south side of bridge		

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1264		
Survey Longitude :	-91.2761	Apx. Bldg Floor Elevation :	N/A



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000-ILA-01-021-49.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-022	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	5.1	NGVD 29 :	5.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Sign post		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Iberville
		State :	Louisiana
Location of HWM Object :	Boat deck on the west bank of South Bayou Sorrell Pontou Bridge.		

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1502		
Survey Longitude :	-91.3278	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

DRAFT

Appendix C

HWM Reports (by Parish)

C8 Jefferson



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-020	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.2	NGVD 29 :	5.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	4932 Kenal Rd. , Lafitte		
Type of HWM :	Mud Line	Parish :	Jefferson
		State :	Louisiana

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6533		
Survey Longitude :	-90.1063	Apx. Bldg Floor Elevation :	N/A



000-ILA-04-020-80.jpg



000-ILA-04-020-81.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

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Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-022	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.7	NGVD 29 :	5.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	7777 West Bank Expressway		
Type of HWM :	Seed Line	Parish :	Jefferson
		State :	Louisiana

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8851		
Survey Longitude :	-90.1623	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-023	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.8	NGVD 29 :	5.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Building support post, piling, column, or beam		
HWM Address	5050 Williams Blvd. , Kenner		
Type of HWM :	Mud Line	Parish :	Jefferson
		State :	Louisiana

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0420		
Survey Longitude :	-90.2354	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-025	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.3	NGVD 29 :	5.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Ground		
HWM Address	No Street Address Available , Metairie		
Type of HWM :	Wrack Line	Parish :	Jefferson
		State :	Louisiana
Location of HWM Object :	North end of Bonnabel Blvd. Bonnabel Boat Launch		

Name of Flagger/Interviewer : Albert Collongues George Chandler **Flagger Company:** URS Corp.

Date of Flagging/Interview : 11/07/2008

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0214		
Survey Longitude :	-90.1432	Apx. Bldg Floor Elevation :	N/A



000-ILA-04-025-102.jpg



000-ILA-04-025-103.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

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Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-001	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.9	NGVD 29 :	4.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	198 Landry Ln. , Grand Isle		
Type of HWM :	Mud Line	Parish :	Jefferson
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Ehler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.2377		
Survey Longitude :	-89.9923	Apx. Bldg Floor Elevation :	N/A



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000-ILA-06-001-89.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

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P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-002	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.9	NGVD 29 :	4.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	158 Sand Dollar Ct.		
Type of HWM :	Seed Line	Parish :	Jefferson
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.2626		
Survey Longitude :	-89.9621	Apx. Bldg Floor Elevation :	N/A



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000-ILA-06-002-93.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana
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P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560
Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-004	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.7	NGVD 29 :	4.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall		
HWM Address	2734 Highway 1 , Grand Isle		
Type of HWM :	Mud Line	Parish :	Jefferson
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Ehler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.2256		
Survey Longitude :	-90.0070	Apx. Bldg Floor Elevation :	N/A



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000-ILA-06-004-95.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-005	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.1	NGVD 29 :	5.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	143 Bienville , Grand Isle		
Type of HWM :	Mud Line	Parish :	Jefferson
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.2165		
Survey Longitude :	-90.0254	Apx. Bldg Floor Elevation :	N/A



000-ILA-06-005-1.jpg



000-ILA-06-005-2.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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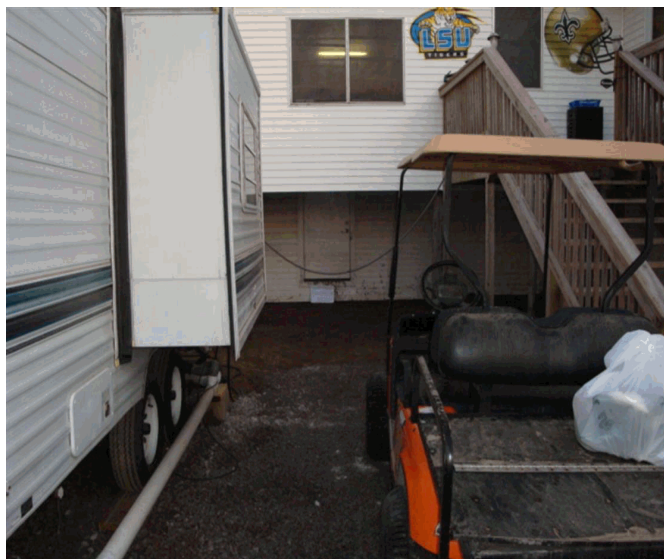
Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-006	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.1	NGVD 29 :	6.0
Flooding Type :	Coastal - Wave Height		
HWM Object, Surface :	Exterior Wall		
HWM Address	2012 LA Highway 1 , Grand Isle		
Type of HWM :	Mud Line	Parish :	Jefferson
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.2037		
Survey Longitude :	-90.0398	Apx. Bldg Floor Elevation :	N/A



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000-ILA-06-006-4.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

DRAFT

Appendix C
HWM Reports (by Parish)
C9 Jefferson Davis



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-010	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.3	NGVD 29 :	3.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available , Lake Arthur		
Type of HWM :	Mud Line	Parish :	Jefferson Davis
		State :	Louisiana
Location of HWM Object :	North side of bridge over Lake Arthur on Hwy 14. South side post close to the water line.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/5/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0727		
Survey Longitude :	-92.6594	Apx. Bldg Floor Elevation :	N/A



000-ILA-02-010-46.jpg



000-ILA-02-010-47.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

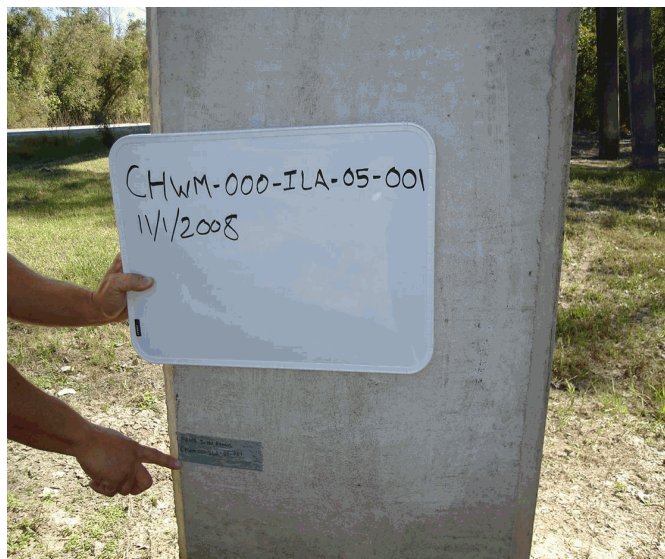
Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-001	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.0	NGVD 29 :	3.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available , Lake Arthur		
Type of HWM :	Mud Line	Parish : Jefferson Davis	State : Louisiana
Location of HWM Object :	Heading south on Rt 14 (Calcasieu Avenue./ Broussard St). The mark is located on the left side of bridge over Mermentau River.		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
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Date of Flagging/Interview :	11/01/2008
-------------------------------------	------------

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C		
Survey Date :	12/5/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	30.0733				
Survey Longitude :	-92.6607	Apx. Bldg Floor Elevation :	N/A		



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000-ILA-05-001-34.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

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70664-1747

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-002	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.8	NGVD 29 :	3.8
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Other		Light Pole
HWM Address	Lake Arthur Park, Arthur Avenue Water front end , Lake Arthur		
Type of HWM :	Mud Line	Parish :	Jefferson Davis
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/5/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0752		
Survey Longitude :	-92.6771	Apx. Bldg Floor Elevation :	N/A



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000-ILA-05-002-58.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-003	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.3	NGVD 29 :	3.3
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Other	Phone Box next to power pole	
HWM Address			
Type of HWM :	Mud Line	Parish :	Jefferson Davis
Location of HWM Object :		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/5/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0570		
Survey Longitude :	-92.7194	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
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Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-004	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.6	NGVD 29 :	3.5
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Concrete Tank
HWM Object, Surface :	Other		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Jefferson Davis
		State :	Louisiana
Location of HWM Object :	Off Hwy 14 to the south-east of Hayes over Bayou Misere.		

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C		
Survey Date :	12/4/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	30.0694				
Survey Longitude :	-92.8842				
		Apx. Bldg Floor Elevation :	N/A		



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-05-023	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.5	NGVD 29 :	3.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Tree		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Jefferson Davis
Location of HWM Object :	To the north of W. Niblett Rd.	State :	Louisiana

Name of Flagger/Interviewer : Saurabh Kulkarni Brian Merceron **Flagger Company:** URS Corp.

Date of Flagging/Interview : 11/04/2008

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/4/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1376		
Survey Longitude :	-92.8864	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C10 Lafayette



FEMA

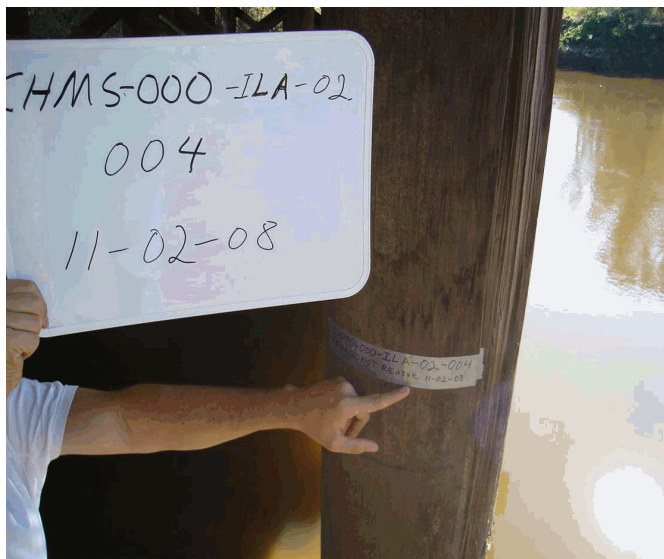
Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-004	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	8.0	NGVD 29 :	8.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Lafayette
		State :	Louisiana
Location of HWM Object :	Hy 353, Prairie Rd under west side of bridge on 1st pole. St Martin and Lafayette parish line on Vermillion River.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/7/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2192		
Survey Longitude :	-91.9559	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C11 Lafourche



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-008	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	7.6	NGVD 29 :	7.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	1024 Rappelett St.		
Type of HWM :	Wrack Line	Parish :	Lafourche
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.1555		
Survey Longitude :	-90.1834	Apx. Bldg Floor Elevation :	N/A



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000-ILA-06-008-8.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-009	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.3	NGVD 29 :	8.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	274 N Theriot Road		
Type of HWM :	Mud Line	Parish :	Lafourche
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.1254		
Survey Longitude :	-90.1969	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana
ESP Associates, P.A.
P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560
Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

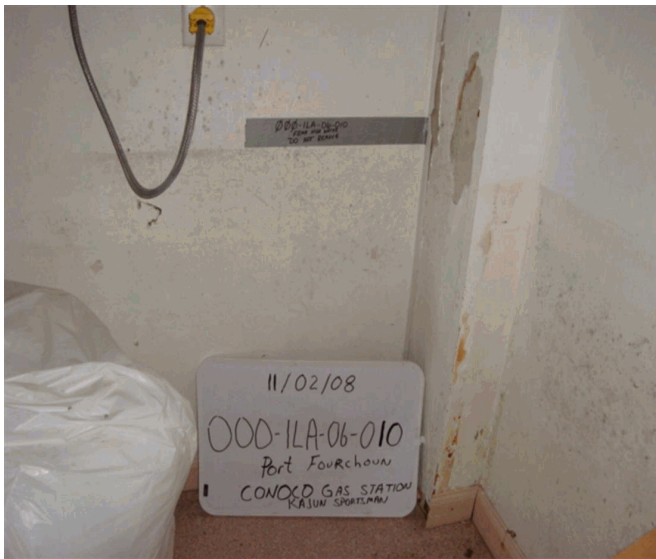
HWM ID :	401-ILA-06-010	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.0	NGVD 29 :	7.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	27900 Highway One		
Type of HWM :	Mud Line	Parish :	Lafourche
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.1577		
Survey Longitude :	-90.1791	Apx. Bldg Floor Elevation :	N/A



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000-ILA-06-010-12.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-011	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	7.0	NGVD 29 :	6.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	BBY Marina Road Oar House		
Type of HWM :	Mud Line	Parish :	Lafourche
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.2112		
Survey Longitude :	-90.2198	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-013	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	6.7	NGVD 29 :	6.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Lafourche
		State :	Louisiana
Location of HWM Object :	marker located next to door entrance of abandoned building at Epic Divers and Marine, Leeville Dock.		

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.2359		
Survey Longitude :	-90.2104	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-014	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.8	NGVD 29 :	5.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Window		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Lafourche
		State :	Louisiana
Location of HWM Object :	Ova Da Lake Bait Tackle shack on corner of Layus Trailer Park and Hwy 1. Across from Griffin's Ice and Washateria. Closest address is 24208 Highway 1.		

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.2567		
Survey Longitude :	-90.2139	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-016	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.2	NGVD 29 :	6.3
Flooding Type :	Coastal - Wave Height		
HWM Object, Surface :	Exterior Wall		
HWM Address	21410 Hwy One		
Type of HWM :	Seed Line	Parish :	Lafourche
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.3416		
Survey Longitude :	-90.2469	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-017	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.4	NGVD 29 :	4.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	555 East 3rd Street		
Type of HWM :	Seed Line	Parish :	Lafourche
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.5892		
Survey Longitude :	-90.3702	Apx. Bldg Floor Elevation :	N/A



000-ILA-06-017-26.jpg



000-ILA-06-017-27.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-018	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	4.4	NGVD 29 :	4.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	106 Mercer Road , Larose		
Type of HWM :	Personal Account	Parish :	Lafourche
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008		Witness Statement :	
				W.K. Mercer stayed during storm and marked highwater mark on the brick columns on the house.

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.5827		
Survey Longitude :	-90.3748	Apx. Bldg Floor Elevation :	N/A



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000-ILA-06-018-32.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

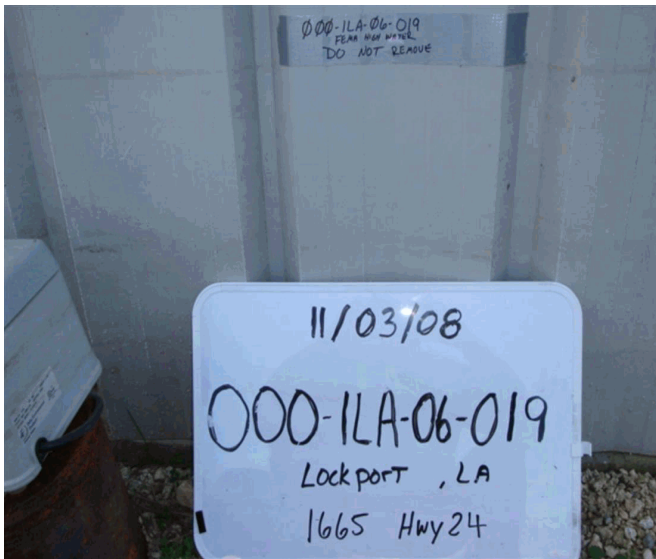
HWM ID :	401-ILA-06-019	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.3	NGVD 29 :	4.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	1665 Hwy 24 , Larose		
Type of HWM :	Mud Line	Parish :	Lafourche
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/18/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.5574		
Survey Longitude :	-90.3890	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-020	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.9	NGVD 29 :	3.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	733 Bourg Larose HWY , Lafourche		
Type of HWM :	Stain Line	Parish :	Lafourche
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.5527		
Survey Longitude :	-90.5346	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C12 Livingston



FEMA

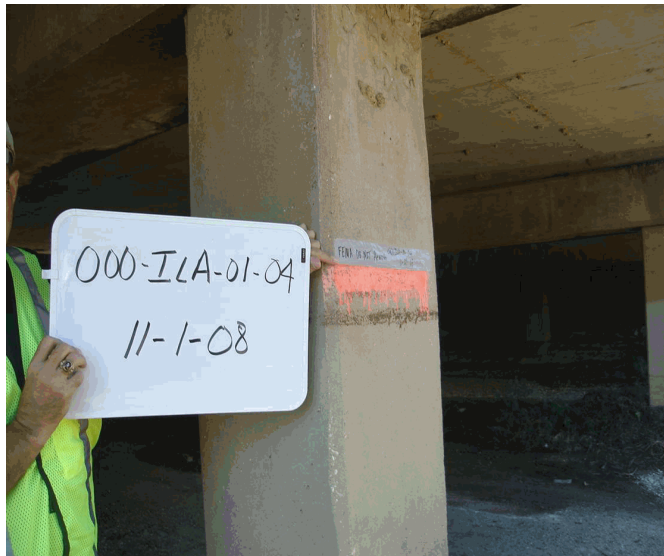
Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-004	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Colyell Creek	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	7.2	NGVD 29 :	7.4
Flooding Type :	Riverine - Hurricane		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	17510 Highway 16 , Port Vincent		
Type of HWM :	Mud Line	Parish :	Livingston
		State :	Louisiana

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008		Witness Statement :	Local resident provide confirmation of water height.

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.3268		
Survey Longitude :	-90.8233	Apx. Bldg Floor Elevation :	N/A



000-ILA-01-004-15.jpg



000-ILA-01-004-16.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : 1560
Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-005	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	4.4	NGVD 29 :	4.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	River Bend Road		
Type of HWM :	Mud Line	Parish :	Livingston
		State :	Louisiana

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2749		
Survey Longitude :	-90.7788	Apx. Bldg Floor Elevation :	N/A



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000-ILA-01-005-7.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : 1560
Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-024	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	3.3	NGVD 29 :	3.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Sign post		
HWM Address	No Street Address Available , Springfield		
Type of HWM :	Stain Line	Parish :	Livingston
		State :	Louisiana
Location of HWM Object :	First caution sign on the left after McCarroll Rd. curve to the left		

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.4335		
Survey Longitude :	-90.5472	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-026	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.0	NGVD 29 :	4.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Electrical box		
HWM Address	33214 River Gate Circle , Killian		
Type of HWM :	Stain Line	Parish :	Livingston
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.3766		
Survey Longitude :	-90.5372	Apx. Bldg Floor Elevation :	N/A



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000-ILA-07-026-65.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : 1560
Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-028	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.6	NGVD 29 :	4.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	24267 Hwy. 22		
Type of HWM :	Stain Line	Parish :	Livingston
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2618		
Survey Longitude :	-90.7128	Apx. Bldg Floor Elevation :	N/A



000-ILA-07-028-68.jpg



000-ILA-07-028-69.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

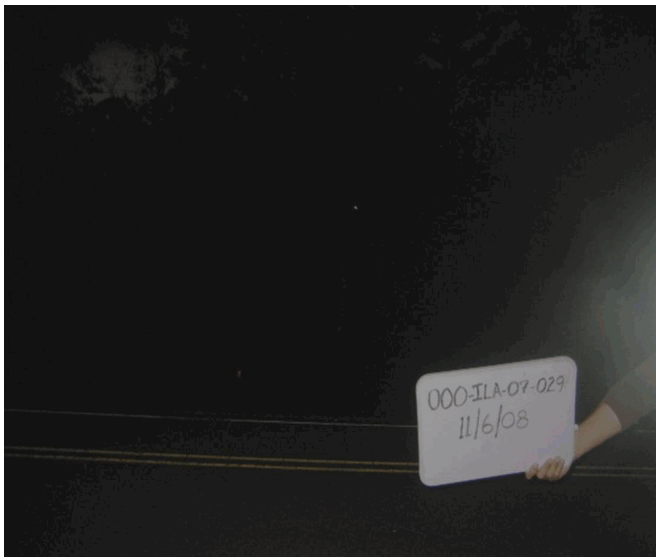
HWM ID :	401-ILA-07-029	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.0	NGVD 29 :	4.1
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Other		Electrical cover next to electrical pole
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Livingston
		State :	Louisiana
Location of HWM Object :	Electrical box in front of woods. Across from 22300 Hwy. 22		

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.		
Survey Date :	11/21/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	30.2838				
Survey Longitude :	-90.7085				
		Apx. Bldg Floor Elevation :	N/A		



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

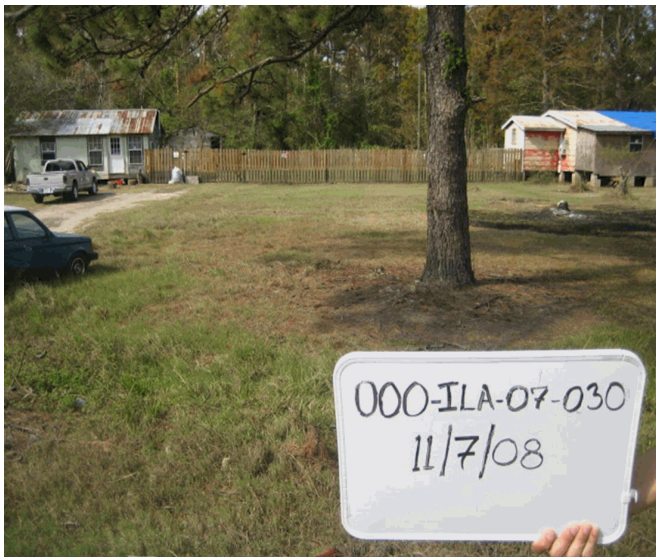
HWM ID :	401-ILA-07-030	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.5	NGVD 29 :	4.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	21883 Hwy. 22		
Type of HWM :	Stain Line	Parish :	Livingston
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2732		
Survey Longitude :	-90.7105	Apx. Bldg Floor Elevation :	N/A



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000-ILA-07-030-73.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-031	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.4	NGVD 29 :	4.6
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Orange fiberoptic cable sign
HWM Object, Surface :	Other		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Livingston
Location of HWM Object :	Orange fiberoptic cable sign.	State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2668		
Survey Longitude :	-90.7289	Apx. Bldg Floor Elevation :	N/A



000-ILA-07-031-74.jpg



000-ILA-07-031-75.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-032	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.4	NGVD 29 :	4.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	20243 Hwy. 22		
Type of HWM :	Stain Line	Parish :	Livingston
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2754		
Survey Longitude :	-90.7387	Apx. Bldg Floor Elevation :	N/A



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000-ILA-07-032-77.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-033	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.7	NGVD 29 :	3.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	19179 Hwy. 22		
Type of HWM :	Stain Line	Parish :	Livingston
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2610		
Survey Longitude :	-90.7637	Apx. Bldg Floor Elevation :	N/A



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000-ILA-07-033-79.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-034	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.5	NGVD 29 :	4.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	26454 Black Lake Club Rd.		
Type of HWM :	Stain Line	Parish :	Livingston
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2639		
Survey Longitude :	-90.6419	Apx. Bldg Floor Elevation :	N/A



000-ILA-07-034-80.jpg



000-ILA-07-034-81.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C13 Plaquemines



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-001	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.7	NGVD 29 :	4.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Plaquemines
		State :	Louisiana
Location of HWM Object :	Myrtle Grove Marina, southwest corner of Southern most boat shed.		

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6355		
Survey Longitude :	-89.9527	Apx. Bldg Floor Elevation :	N/A



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000-ILA-04-001-35.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-002	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.5	NGVD 29 :	7.8
Flooding Type :	Coastal - Wave Height		
HWM Object, Surface :	Fence		
HWM Address	151 Pomme D or Rd.		
Type of HWM :	Wrack Line	Parish :	Plaquemines
		State :	Louisiana

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.3540		
Survey Longitude :	-89.5359	Apx. Bldg Floor Elevation :	N/A



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000-ILA-04-002-29.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-003	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	6.4	NGVD 29 :	6.6
Flooding Type :	Coastal - Wave Height		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Wrack Line	Parish :	Plaquemines
		State :	Louisiana
Location of HWM Object :	DGS Road, DGS Gate 2		

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.2212		
Survey Longitude :	-89.3943	Apx. Bldg Floor Elevation :	N/A



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000-ILA-04-003-31.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-004	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	4.1	NGVD 29 :	4.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Wrack Line	Parish :	Plaquemines
		State :	Louisiana
Location of HWM Object :	Just south of 14780 Hwy 23. Turn right at West bound levee. Travel West on southern most levee a mile to gate.		

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6990		
Survey Longitude :	-89.9913	Apx. Bldg Floor Elevation :	N/A



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000-ILA-04-004-44.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-005	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.6	NGVD 29 :	3.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Wrack Line	Parish :	Plaquemines
Location of HWM Object :	Ironton Field on Ironton Rd.	State :	Louisiana

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6481		
Survey Longitude :	-89.9629	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-006	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.3	NGVD 29 :	4.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Wrack Line	Parish :	Plaquemines
		State :	Louisiana
Location of HWM Object :	100' south of mile marker 44 on Hwy 23 (Belle Chasse Hwy.)		

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6023		
Survey Longitude :	-89.8784	Apx. Bldg Floor Elevation :	N/A



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000-ILA-04-006-49.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-008	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.2	NGVD 29 :	6.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Ground		
HWM Address	31592 Belle Chase Hwy.		
Type of HWM :	Wrack Line	Parish :	Plaquemines
		State :	Louisiana

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.4169		
Survey Longitude :	-89.6167	Apx. Bldg Floor Elevation :	N/A



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000-ILA-04-008-54.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-010	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	10.9	NGVD 29 :	11.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Building support post, piling,column, or beam		
HWM Address	142 Bass Rd.		
Type of HWM :	Mud Line	Parish :	Plaquemines
		State :	Louisiana

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.5861		
Survey Longitude :	-89.7972	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-011	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.1	NGVD 29 :	8.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	189 Harlem Rd.		
Type of HWM :	Mud Line	Parish :	Plaquemines
		State :	Louisiana

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6359		
Survey Longitude :	-89.9056		

Apx. Bldg Floor Elevation : N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-012	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.4	NGVD 29 :	8.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Ground		
HWM Address	No Street Address Available		
Type of HWM :	Wrack Line	Parish :	Plaquemines
		State :	Louisiana
Location of HWM Object :	South of Belle Chasse ferry landing. Belair pump station, east side levee bank.		

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7426		
Survey Longitude :	-89.9872	Apx. Bldg Floor Elevation :	N/A



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000-ILA-04-012-64.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-013	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.2	NGVD 29 :	8.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Plaquemines
		State :	Louisiana
Location of HWM Object :	Roadway at Shayot Canal, just east of W. Shayot Rd, mark is on a mobile home.		

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.		
Survey Date :	11/20/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	29.6484				
Survey Longitude :	-89.9357				
Apx. Bldg Floor Elevation :	N/A				



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000-ILA-04-013-66.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-014	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.0	NGVD 29 :	9.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	1 Dean Drive , Poydras		
Type of HWM :	Mud Line	Parish :	Plaquemines
		State :	Louisiana

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8603		
Survey Longitude :	-89.9073	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-019	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.2	NGVD 29 :	5.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	2015 Concord Rd. , Belle Chasse		
Type of HWM :	Stain Line	Parish :	Plaquemines
		State :	Louisiana

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8363		
Survey Longitude :	-90.0456	Apx. Bldg Floor Elevation :	N/A



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000-ILA-04-019-79.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C14 Saint Bernard



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-016	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	9.4	NGVD 29 :	9.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Building support post, piling, column, or beam		
HWM Address	7601 F Hopedale Hwy. (Hwy. 624)		
Type of HWM :	Mud Line	Parish :	St. Bernard
		State :	Louisiana

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8199		
Survey Longitude :	-89.6112	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana
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Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-04-017	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.8	NGVD 29 :	9.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	300 Florissant		
Type of HWM :	Mud Line	Parish :	St. Bernard
		State :	Louisiana

Name of Flagger/Interviewer :	Albert Collongues	George Chandler	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8408		
Survey Longitude :	-89.7561	Apx. Bldg Floor Elevation :	N/A



000-ILA-04-017-73.jpg



000-ILA-04-017-74.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C15 Saint Charles



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-021	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	3.4	NGVD 29 :	3.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	3607 Bayou Gauche Road , Bayou Gauche		
Type of HWM :	Mud Line	Parish :	St. Charles
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7891		
Survey Longitude :	-90.4204	Apx. Bldg Floor Elevation :	N/A



000-ILA-06-021-41.jpg



000-ILA-06-021-42.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-022	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.5	NGVD 29 :	3.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	4137 Bayou Gauche Road , Bayou Gauche		
Type of HWM :	Mud Line	Parish :	St. Charles
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7824		
Survey Longitude :	-90.4048	Apx. Bldg Floor Elevation :	N/A



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000-ILA-06-022-44.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-024	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	2.7	NGVD 29 :	3.0
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Building support post, piling, column, or beam		
HWM Address	130 Griffin Lane		
Type of HWM :	Mud Line	Parish :	St. Charles
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8737		
Survey Longitude :	-90.4489	Apx. Bldg Floor Elevation :	N/A



000-ILA-06-024-47.jpg



000-ILA-06-024-48.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-025	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	2.7	NGVD 29 :	3.0
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Wooden phone post
HWM Object, Surface :	Other		
HWM Address	Nedd Lane		
Type of HWM :	Mud Line	Parish :	St. Charles
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/19/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8625		
Survey Longitude :	-90.4545	Apx. Bldg Floor Elevation :	N/A



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000-ILA-06-025-50.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

DRAFT

Appendix C
HWM Reports (by Parish)
C16 Saint James



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-001	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	3.7	NGVD 29 :	3.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	39180 Hwy 61		
Type of HWM :	Stain Line	Parish :	St. James
		State :	Louisiana

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008		Witness Statement :	Fishing Club had marked flood level at St. James Fishing Club.

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1018		
Survey Longitude :	-90.7349	Apx. Bldg Floor Elevation :	N/A



000-ILA-01-01-8.jpg



000-ILA-01-01-9.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

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Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-002	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	3.3	NGVD 29 :	3.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	St. James
		State :	Louisiana
Location of HWM Object :	From, LA 3125 go north on LA 642 into dirt road radio tower. Gate is on left side of road. High water mark is flagged with pink tape on gate post.		

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008		Witness Statement :	Locals living in area confirmed the HWM.

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0691		
Survey Longitude :	-90.7499	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-013	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	3.4	NGVD 29 :	3.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Sign post		
HWM Address	No Street Address Available , Lutcher		
Type of HWM :	Stain Line	Parish :	St. James
		State :	Louisiana
Location of HWM Object :	LA 3125 and King Ave at Lutcher Elementart School.		

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0566		
Survey Longitude :	-90.7116	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-014	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	3.3	NGVD 29 :	3.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Utility pole		
HWM Address	No Street Address Available , Lutchier		
Type of HWM :	Stain Line	Parish :	St. James
		State :	Louisiana
Location of HWM Object :	At LA 3125 and King Ave 2nd utility Pole from LA 3125 down King Ave.		

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.		
Survey Date :	11/21/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	30.0561				
Survey Longitude :	-90.7110				
Apx. Bldg Floor Elevation :	N/A				



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-015	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	2.5	NGVD 29 :	2.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Retaining wall		
HWM Address	No Street Address Available , South Vacherie		
Type of HWM :	Stain Line	Parish :	St. James
		State :	Louisiana
Location of HWM Object :	South Spruce Pump and Gate Station. Endside of concrete wing wall on the pumps.		

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008		Witness Statement :	Wayne Breaud show us the mark.

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9224		
Survey Longitude :	-90.6720	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-016	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	2.4	NGVD 29 :	2.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Boat dock		
HWM Address	No Street Address Available , South Vacherie		
Type of HWM :	Stain Line	Parish :	St. James
		State :	Louisiana
Location of HWM Object :	Red Falgoust St. boat deck		

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9539		
Survey Longitude :	-90.6920	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-017	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	2.2	NGVD 29 :	2.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Boat dock		
HWM Address	No Street Address Available , South Vacherie		
Type of HWM :	Stain Line	Parish :	St. James
		State :	Louisiana
Location of HWM Object :	LA 20 to Bayou Chevert Boat Deck		

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9114		
Survey Longitude :	-90.7288	Apx. Bldg Floor Elevation :	N/A



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000-ILA-01-017-41.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C

HWM Reports (by Parish)

C17 Saint John the Baptist



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-01-008	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	2.6	NGVD 29 :	2.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Building support post, piling, column, or beam		
HWM Address	184 Rue St Martin		
Type of HWM :	Stain Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jim LeBlanc	Madeline Woodberry	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008		Witness Statement :	Tim Oucion show us the mark.

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9199		
Survey Longitude :	-90.6221	Apx. Bldg Floor Elevation :	N/A



000-ILA-01-008-21.jpg



000-ILA-01-008-22.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-026	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.6	NGVD 29 :	4.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	St. John The Baptist
		State :	Louisiana
Location of HWM Object :	Driving south on Hwy 51(Airline Dr.) mark is located on Hwy I-55 bridge north-east column, north of Shell gas station,		

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0936		
Survey Longitude :	-90.4379	Apx. Bldg Floor Elevation :	N/A



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000-ILA-06-026-52.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-027	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	4.9	NGVD 29 :	5.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available , Laplace		
Type of HWM :	Stain Line	Parish :	St. John The Baptist
		State :	Louisiana
Location of HWM Object :	On the column of Hwy I-10 overpass on US-51		

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0884		
Survey Longitude :	-90.4420	Apx. Bldg Floor Elevation :	N/A



000-ILA-06-027-53.jpg



000-ILA-06-027-54.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-028	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.7	NGVD 29 :	4.8
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Sign post		
HWM Address	4288 US 51 , Laplace		
Type of HWM :	Mud Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0859		
Survey Longitude :	-90.4469	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-029	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.7	NGVD 29 :	4.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Electrical box		
HWM Address	Woodland Dr and Indigo pkwy intersection , Laplace		
Type of HWM :	Mud Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0910		
Survey Longitude :	-90.4597	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-030	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.8	NGVD 29 :	4.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Utility pole		
HWM Address	700 Woodland Drive , Laplace		
Type of HWM :	Stain Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0939		
Survey Longitude :	-90.4692	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-031	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.7	NGVD 29 :	4.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	I-10 West and Airline Hwy overpass		
Type of HWM :	Stain Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1062		
Survey Longitude :	-90.4983	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-033	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	3.6	NGVD 29 :	3.6
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Buried fiber optic pole
HWM Object, Surface :	Other		
HWM Address	Old HWY 51		
Type of HWM :	Mud Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1899		
Survey Longitude :	-90.4385	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-034	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	7.3	NGVD 29 :	7.3
Flooding Type :	Coastal - Wave Height		
HWM Object, Surface :	Building support post, piling, column, or beam		
HWM Address	Peavine Road near the Peavine Boat Launch		
Type of HWM :	Stain Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1067		
Survey Longitude :	-90.4229	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-035	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.6	NGVD 29 :	4.6
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Sign post		
HWM Address	110 Frenier Road		
Type of HWM :	Stain Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0958		
Survey Longitude :	-90.4370	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-036	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.5	NGVD 29 :	4.7
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Mailbox
HWM Object, Surface :	Other		
HWM Address	333 Somerset Street , Laplace		
Type of HWM :	Stain Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0608		
Survey Longitude :	-90.4393	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-037	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.2	NGVD 29 :	4.4
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Mailbox post
HWM Object, Surface :	Other		
HWM Address	203 Warwick Street , Laplace		
Type of HWM :	Stain Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0606		
Survey Longitude :	-90.4344	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-038	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.1	NGVD 29 :	4.3
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Mailbox
HWM Object, Surface :	Other		
HWM Address	208 Buckingham Street , Laplace		
Type of HWM :	Stain Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0600		
Survey Longitude :	-90.4333		

Apx. Bldg Floor Elevation : N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-040	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.5	NGVD 29 :	4.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	120 Belle Grove Drive , Laplace		
Type of HWM :	Stain Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0802		
Survey Longitude :	-90.4611	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-041	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.3	NGVD 29 :	4.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Sign post		
HWM Address	3556 W Airline Hwy , Reserve		
Type of HWM :	Stain Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0779		
Survey Longitude :	-90.5525	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-042	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.9	NGVD 29 :	4.1
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Yellow trashcan support
HWM Object, Surface :	Other		
HWM Address	No Street Address Available , Reserve		
Type of HWM :	Mud Line	Parish :	St. John The Baptist
		State :	Louisiana
Location of HWM Object :	at Reserve Boat Launch on right. Across from Lasseigne Rentals.		

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/21/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0785		
Survey Longitude :	-90.5459	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-06-043	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.0	NGVD 29 :	4.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Electrical box		
HWM Address	504 Gardenia Street , Laplace		
Type of HWM :	Mud Line	Parish :	St. John The Baptist
		State :	Louisiana

Name of Flagger/Interviewer :	Jordan Montz	Will Elhert	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/20/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0844		
Survey Longitude :	-90.5134	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

DRAFT

Appendix C

HWM Reports (by Parish)

C18 Saint Martin



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-014	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.4	NGVD 29 :	8.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	St. Martin
		State :	Louisiana
Location of HWM Object :	East of Henderson under West Boud In. of Hwy 10 on Henderson Levee Rd.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/9/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.3243		
Survey Longitude :	-91.7900	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-017	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	7.4	NGVD 29 :	7.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Tree		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	St. Martin
		State :	Louisiana
Location of HWM Object :	Sout of Henderson west side of levee, unnamed boat launch, shell/gravel side road.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/9/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.3053		
Survey Longitude :	-91.7536	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

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70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

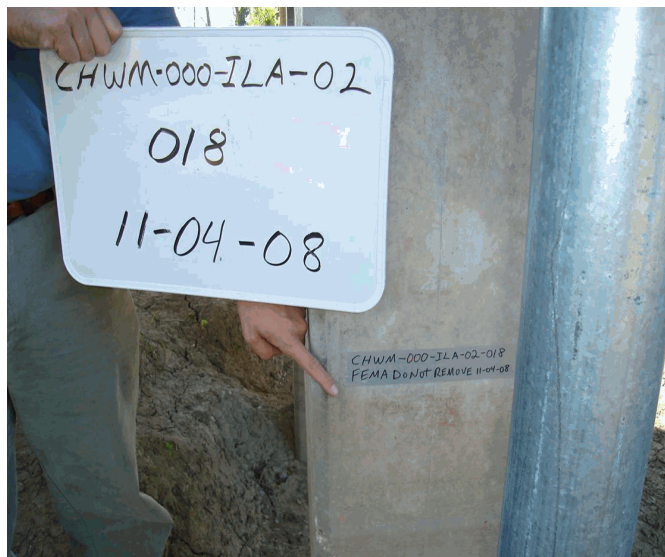
Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-018	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.2	NGVD 29 :	7.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	St. Martin
		State :	Louisiana
Location of HWM Object :	South of Hendrson, west side of levee, under east side of bridge to "St. Martin Land Co.".		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/9/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2914		
Survey Longitude :	-91.7452	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

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Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-021	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	5.3	NGVD 29 :	5.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	St. Martin
		State :	Louisiana
Location of HWM Object :	Bayou Berard Canal east of Catahoula 1/4 mile west of the intersection of Bayou Mercier Rd. and Henderson Levee Rd. and Hwy 96 near "Red Levee bar".		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew : DWS
Survey Date : 12/9/08
Map Projection Used : Louisiana South 1702
Survey Latitude : 30.2180
Survey Longitude : -91.6979

Company : Pelican Land Surveying, L.L.C
Vertical Datum : NAVD 88 **Horizontal Datum:** NAD 83

Apx. Bldg Floor Elevation : N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
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Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-022	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.5	NGVD 29 :	5.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Sign post		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	St. Martin
		State :	Louisiana
Location of HWM Object :	South of Cathoula West off of Henderson Levee Rd. at Shell ethylene pipeline sign southern post 2 m from waters edge.		

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/9/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1758		
Survey Longitude :	-91.6908	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

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70664-1747

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-001	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.0	NGVD 29 :	3.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	2111 Four Mile Bayou		
Type of HWM :	Mud Line	Parish :	St. Martin
		State :	Louisiana

Name of Flagger/Interviewer :	Emily Dhingra	Zsafia Dobos	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8158		
Survey Longitude :	-91.1033		

Apx. Bldg Floor Elevation : N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

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Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-003	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.3	NGVD 29 :	9.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	St. Martin
		State :	Louisiana
Location of HWM Object :	Over the levee located along Hwy 70. Turn left at sign for Milagro Exploration W Lake Verret Veret Field. Mark is located in the yard behind the levee.		

Name of Flagger/Interviewer :	Emily Dhingra	Zsofia Dobos	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8557		
Survey Longitude :	-91.1980		

Apx. Bldg Floor Elevation : N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-004	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.1	NGVD 29 :	3.3
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Wall on side of boat launch
HWM Object, Surface :	Other		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	St. Martin
		State :	Louisiana
Location of HWM Object :	Boat launch at the Mobile station at the intersection of Hwy 70 and Hwy 991.		

Name of Flagger/Interviewer :	Emily Dhingra	Zsafia Dobos	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.		
Survey Date :	11/16/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	29.9083				
Survey Longitude :	-91.2165				
		Apx. Bldg Floor Elevation :	N/A		



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-009	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	2.6	NGVD 29 :	2.8
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Other	Bulkhead	
HWM Address	1005 Woodview Ct.		
Type of HWM :	Mud Line	Parish :	St. Martin
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7679		
Survey Longitude :	-91.1653		

Apx. Bldg Floor Elevation : N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-010	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.0	NGVD 29 :	8.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Utility pole		
HWM Address	No Street Address Available		
Type of HWM :	Personal Account	Parish :	St. Martin
		State :	Louisiana
Location of HWM Object :	3195 Hwy 70 North, located within the Larry Dorion, INC.		

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008		Witness Statement :	Larry Doring SR. is the owner of the dock. He showed us the mark.

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7640		
Survey Longitude :	-91.1758	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

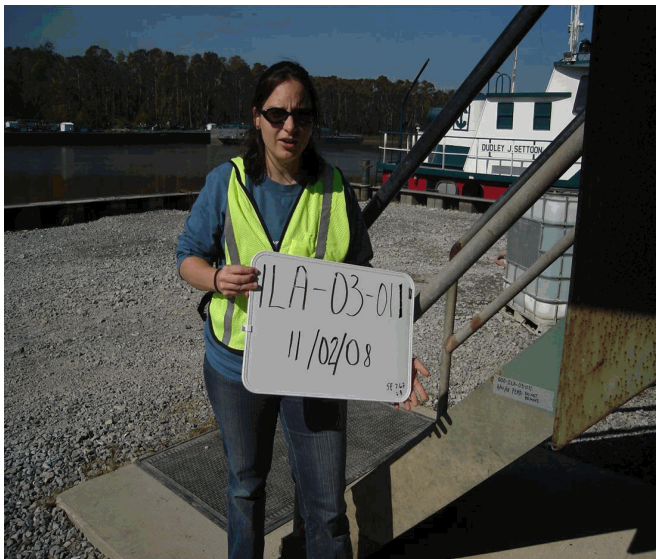
HWM ID :	401-ILA-03-011	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.7	NGVD 29 :	9.9
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Other		Metal stairs
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	St. Martin
		State :	Louisiana
Location of HWM Object :	Settoon Inc. dock on the west side of the levee off Hwy 70. South of the Belle River bridge at the intersection of Hwy 70 and Hwy 997.		

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9027		
Survey Longitude :	-91.2134	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C19 Saint Mary



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-036	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	9.3	NGVD 29 :	9.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	Cypremort Point state park 306 Beach Ln		
Type of HWM :	Mud Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/9/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7342		
Survey Longitude :	-91.8523	Apx. Bldg Floor Elevation :	N/A



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000-ILA-02-036-132.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-02-037	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	10.6	NGVD 29 :	10.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	Point Ln and Bayview Ln		
Type of HWM :	Stain Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	John Bell	Fernando Cundin	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/11/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7143		
Survey Longitude :	-91.8769	Apx. Bldg Floor Elevation :	N/A



000-ILA-02-037-133.jpg



000-ILA-02-037-134.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

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70664-1747

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-056	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	7.3	NGVD 29 :	7.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	3640 Lake Paloude Rd. , Amelia		
Type of HWM :	Mud Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6896		
Survey Longitude :	-91.0997	Apx. Bldg Floor Elevation :	N/A



000-ILA-03-056-161.jpg



000-ILA-03-056-162.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-057	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.7	NGVD 29 :	7.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	1700 Youngs Rd , Morgan City		
Type of HWM :	Mud Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6870		
Survey Longitude :	-91.1887	Apx. Bldg Floor Elevation :	N/A



000-ILA-03-057-163.jpg



000-ILA-03-057-164.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-058	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.2	NGVD 29 :	4.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	St. Mary
		State :	Louisiana
Location of HWM Object :	Take the ferry across the Intercoastal Waterway to Avoca. When you get across the levee, turn right and go to the house.		

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C		
Survey Date :	12/10/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	29.6828				
Survey Longitude :	-91.1923	Apx. Bldg Floor Elevation :	N/A		



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-059	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.9	NGVD 29 :	7.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Seawall		
HWM Address	No Street Address Available , Morgan City		
Type of HWM :	Mud Line	Parish :	St. Mary
		State :	Louisiana
Location of HWM Object :	West side(next to the water) of Morgan City flood wall at the junction of Freret St. and Front St.		

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6954		
Survey Longitude :	-91.2104	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-060	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.8	NGVD 29 :	7.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Seawall		
HWM Address	3200 Bellview Front, Crappell's Fish Market , Berwick		
Type of HWM :	Mud Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6934		
Survey Longitude :	-91.2162	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-061	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.4	NGVD 29 :	7.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	No Street Address Available , Berwick		
Type of HWM :	Mud Line	Parish :	St. Mary
		State :	Louisiana
Location of HWM Object :	Shipyards called Trinity Fabrication LLC is between the levee and the river where the mark is. 2289 River Road house is located opposite the levee.		

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6854		
Survey Longitude :	-91.2188	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-062	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.7	NGVD 29 :	6.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Ground		
HWM Address	No Street Address Available		
Type of HWM :	Other	Parish :	St. Mary
		State :	Louisiana
Location of HWM Object :	Shell line is located at the boat launch at the north end of Charenton Beach Rd.		

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C		
Survey Date :	12/10/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	29.9021				
Survey Longitude :	-91.5135	Apx. Bldg Floor Elevation :	N/A		



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-063	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.7	NGVD 29 :	4.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Ground		
HWM Address	No Street Address Available		
Type of HWM :	Other	Parish :	St. Mary
		State :	Louisiana
Location of HWM Object :	North end of Martin Ridge Rd,		

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8795		
Survey Longitude :	-91.4544	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-064	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	9.7	NGVD 29 :	10.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Electrical box		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	St. Mary
		State :	Louisiana
Location of HWM Object :	Junction of Lake Rd, and Watchafalaya- Basin- Spillway. Attakapas Island WMA boat launch located over the levee.		

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7644		
Survey Longitude :	-91.3940	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-065	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.8	NGVD 29 :	5.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	130 Williard Ln		
Type of HWM :	Mud Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7585		
Survey Longitude :	-91.4078	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

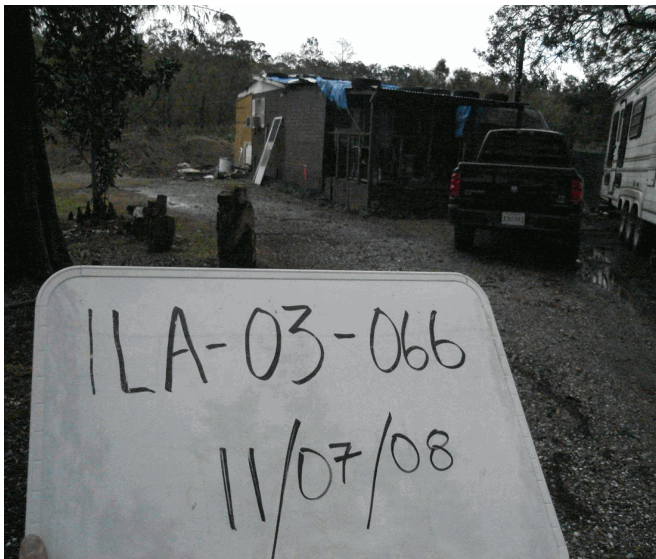
HWM ID :	401-ILA-03-066	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.1	NGVD 29 :	5.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	189 Breaux Ln		
Type of HWM :	Mud Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7104		
Survey Longitude :	-91.3819	Apx. Bldg Floor Elevation :	N/A



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000-ILA-03-066-192.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

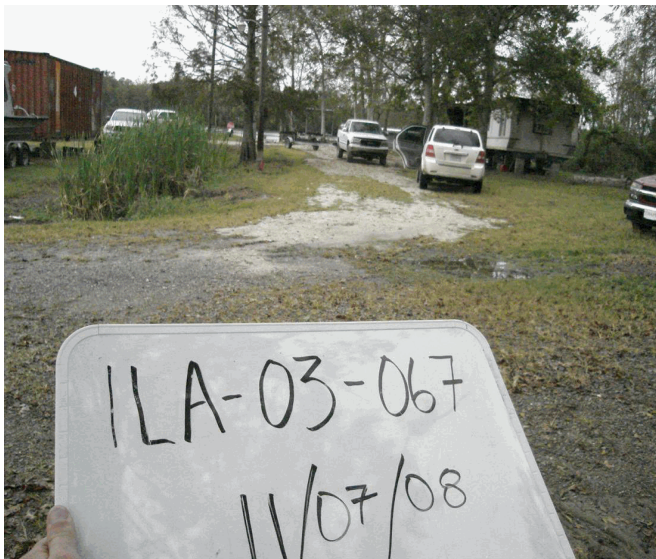
HWM ID :	401-ILA-03-067	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.4	NGVD 29 :	6.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Utility pole		
HWM Address	5505 Levee Road		
Type of HWM :	Stain Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008		Witness Statement :	Spring flood was higher

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7010		
Survey Longitude :	-91.3711	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-068	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.1	NGVD 29 :	5.4
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Swimming pool
HWM Object, Surface :	Other		
HWM Address	448 Verdunville Rd		
Type of HWM :	Mud Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7622		
Survey Longitude :	-91.4193	Apx. Bldg Floor Elevation :	N/A



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000-ILA-03-068-196.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-029	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	10.2	NGVD 29 :	10.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	St. Mary
		State :	Louisiana
Location of HWM Object :	Near the end of Bayview Drive on the left.		

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/11/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7127		
Survey Longitude :	-91.8771	Apx. Bldg Floor Elevation :	N/A



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000-ILA-08-029-59.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-030	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	8.7	NGVD 29 :	8.8
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Other		Metal barrier just downstream of the bridge
HWM Address	No Street Address Available		
Type of HWM :	Wash Line	Parish :	St. Mary
		State :	Louisiana
Location of HWM Object :	South end of the bridge along LA Hwy 319, just south of LA Hwy 83.		

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/11/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7711		
Survey Longitude :	-91.7848	Apx. Bldg Floor Elevation :	N/A



000-ILA-08-030-61.jpg



000-ILA-08-030-62.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-032	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.0	NGVD 29 :	6.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	103 Canal Dr. , Franklin		
Type of HWM :	Stain Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7882		
Survey Longitude :	-91.5190	Apx. Bldg Floor Elevation :	N/A



000-ILA-08-032-67.jpg



000-ILA-08-032-68.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-034	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.9	NGVD 29 :	7.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	1616 Willow Street, Franklin		
Type of HWM :	Stain Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7867		
Survey Longitude :	-91.5173	Apx. Bldg Floor Elevation :	N/A



000-ILA-08-034-72.jpg



000-ILA-08-034-73.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-037	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	6.3	NGVD 29 :	6.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	107 Jolivet Street , Baldwin		
Type of HWM :	Stain Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8291		
Survey Longitude :	-91.5664	Apx. Bldg Floor Elevation :	N/A



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000-ILA-08-037-79.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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838 South Post Oak Road Sulphur, LA
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Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-038	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	4.4	NGVD 29 :	4.5
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Other	PVC pipe	
HWM Address	No Street Address Available , Charenton		
Type of HWM :	Mud Line	Parish :	St. Mary
		State :	Louisiana
Location of HWM Object :	Bridge crossing Teche River		

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/8/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8870		
Survey Longitude :	-91.5227	Apx. Bldg Floor Elevation :	N/A



000-ILA-08-038-80.jpg



000-ILA-08-038-81.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

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Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-039	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.0	NGVD 29 :	4.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	St. Mary
		State :	Louisiana
Location of HWM Object :	LA Hwy 87 bridge crossing Teche Bayou.		

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8900		
Survey Longitude :	-91.5246	Apx. Bldg Floor Elevation :	N/A



000-ILA-08-039-82.jpg



000-ILA-08-039-83.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-040	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	5.5	NGVD 29 :	5.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	St. Mary
		State :	Louisiana
Location of HWM Object :	LA Hwy 323 bridge crossing Bayou Teche.		

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
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Date of Flagging/Interview :	11/06/2008
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Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8407		
Survey Longitude :	-91.4548	Apx. Bldg Floor Elevation :	N/A



000-ILA-08-040-84.jpg



000-ILA-08-040-85.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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70664-1747

Registration Number : Louisiana Firm License #544

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-042	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.7	NGVD 29 :	4.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	St. Mary
Location of HWM Object :	LA Hwy 670 bridge crossing.	State :	Louisiana

Name of Flagger/Interviewer : Ben Kaiser Rajendra Rachamalla **Flagger Company:** URS Corp.

Date of Flagging/Interview : 11/06/2008

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8795		
Survey Longitude :	-91.5858	Apx. Bldg Floor Elevation :	N/A



000-ILA-08-042-88.jpg



000-ILA-08-042-89.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-044	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.1	NGVD 29 :	8.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Wrack Line	Parish :	St. Mary
		State :	Louisiana
Location of HWM Object :	LA Hwy 317 - Swift Energy Operating facility		

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.5590		
Survey Longitude :	-91.5251	Apx. Bldg Floor Elevation :	N/A



000-ILA-08-044-92.jpg



000-ILA-08-044-95.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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70664-1747

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-045	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.2	NGVD 29 :	6.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	6972 LA Hwy 317		
Type of HWM :	Stain Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6017		
Survey Longitude :	-91.5247	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-048	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.1	NGVD 29 :	5.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	402 Eastwood Drive , Franklin		
Type of HWM :	Stain Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7874		
Survey Longitude :	-91.4953	Apx. Bldg Floor Elevation :	N/A



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000-ILA-08-048-103.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

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70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-049	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	6.7	NGVD 29 :	6.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	415 Beth Drive , Franklin		
Type of HWM :	Stain Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7976		
Survey Longitude :	-91.4968	Apx. Bldg Floor Elevation :	N/A



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000-ILA-08-049-105.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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70664-1747

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-050	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.3	NGVD 29 :	5.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	10824 LA Hwy 182		
Type of HWM :	Stain Line	Parish :	St. Mary
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/07/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7720		
Survey Longitude :	-91.4814	Apx. Bldg Floor Elevation :	N/A



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000-ILA-08-050-107.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C20 Saint Tammany



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-001	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.6	NGVD 29 :	6.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	St. Tammany
		State :	Louisiana
Location of HWM Object :	Fairview State Park located at steam engine pavillion.		

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	10/31/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.4083		
Survey Longitude :	-90.1420	Apx. Bldg Floor Elevation :	N/A



000-ILA-07-001-1.jpg



000-ILA-07-001-2.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-002	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.3	NGVD 29 :	6.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	St. Tammany
		State :	Louisiana
Location of HWM Object :	Fountainbleu State Park - on outside of the south facing wall of wood fence surrounding the swimming pool by the cabins.		

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	10/31/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.		
Survey Date :	11/22/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	30.3449				
Survey Longitude :	-90.0534	Apx. Bldg Floor Elevation :	N/A		



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-004	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.6	NGVD 29 :	6.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	98 Laurel St , Mandeville		
Type of HWM :	Mud Line	Parish :	St. Tammany
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.3657		
Survey Longitude :	-90.0959	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-005	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.7	NGVD 29 :	6.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	1919 Lakeshore Dr. , Mandeville		
Type of HWM :	Mud Line	Parish :	St. Tammany
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.3526		
Survey Longitude :	-90.0673	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-006	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.7	NGVD 29 :	4.7
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Barrier post
HWM Object, Surface :	Other		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	St. Tammany
		State :	Louisiana
Location of HWM Object :	Lemieux St., Big Branch Marsh National Wildlife Refuge, Cane Bayou Access.		

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.3291		
Survey Longitude :	-90.0044	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-007	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.5	NGVD 29 :	5.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Electrical box		
HWM Address	57390 Lake Rd.		
Type of HWM :	Mud Line	Parish :	St. Tammany
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/23/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2651		
Survey Longitude :	-89.9565	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-008	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.6	NGVD 29 :	4.6
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Telephone fiber optic cover
HWM Object, Surface :	Other		
HWM Address	No Street Address Available , Lacombe		
Type of HWM :	Mud Line	Parish :	St. Tammany
		State :	Louisiana
Location of HWM Object :	End of Lacombe Harbor Blvd. before the Cul-de-Sac on telephone fiber optic cover next to ditch.		

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/23/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2912		
Survey Longitude :	-89.9279	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-009	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.9	NGVD 29 :	5.0
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Wooden parking barrier post
HWM Object, Surface :	Other		
HWM Address	No Street Address Available , Lacombe		
Type of HWM :	Stain Line	Parish :	St. Tammany
		State :	Louisiana
Location of HWM Object :	Barrier post in front of the Handicapped Parking spot in the parking lot for the Big Branch Marsh Boyscout trail		

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/23/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2841		
Survey Longitude :	-89.9170	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-012	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.3	NGVD 29 :	4.3
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Other		Light pole
HWM Address	No Street Address Available , Slidell		
Type of HWM :	Stain Line	Parish :	St. Tammany
		State :	Louisiana
Location of HWM Object :	Heritage Park light pole at the west end of the park.		

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/23/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2795		
Survey Longitude :	-89.7844	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-013	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.2	NGVD 29 :	5.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Building support post, piling, column, or beam		
HWM Address	3110 Lookout Pl , Slidell		
Type of HWM :	Mud Line	Parish :	St. Tammany
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/23/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2611		
Survey Longitude :	-89.8033	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-014	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.1	NGVD 29 :	5.2
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Concrete wall surrounding driveway
HWM Object, Surface :	Other		
HWM Address	429 Carr Dr. , Eden Isle		
Type of HWM :	Stain Line	Parish :	St. Tammany
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/23/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2346		
Survey Longitude :	-89.8553	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-016	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	4.8	NGVD 29 :	4.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Retaining wall		
HWM Address	30 Treasure Isle Rd.		
Type of HWM :	Stain Line	Parish :	St. Tammany
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/23/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1853		
Survey Longitude :	-89.7572	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-017	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.5	NGVD 29 :	6.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	St. Tammany
		State :	Louisiana
Location of HWM Object :	End of Woodridge Blvd. turnaround on pumping station fence.		

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.3943		
Survey Longitude :	-90.1203	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-018	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.6	NGVD 29 :	6.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	806 Water St. , Madisonville		
Type of HWM :	Stain Line	Parish :	St. Tammany
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.4027		
Survey Longitude :	-90.1561	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-019	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.6	NGVD 29 :	6.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available , Madisonville		
Type of HWM :	Mud Line	Parish :	St. Tammany
		State :	Louisiana
Location of HWM Object :	Fence surrounding the southern part of the Maritime Museum along River Lane		

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.3977		
Survey Longitude :	-90.1562	Apx. Bldg Floor Elevation :	N/A



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000-ILA-07-019-49.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C21 Tangipahoa



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-07-021	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.2	NGVD 29 :	5.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	30160 Hwy 51 South		
Type of HWM :	Stain Line	Parish :	Tangipahoa
		State :	Louisiana

Name of Flagger/Interviewer :	Angelique Cella	Shawn Ledig	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/22/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.2897		
Survey Longitude :	-90.4014	Apx. Bldg Floor Elevation :	N/A



000-ILA-07-021-52.jpg



000-ILA-07-021-53.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

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Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C22 Terrebonne



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-015	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.3	NGVD 29 :	5.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	407 Woodside Dr.		
Type of HWM :	Wrack Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.5853		
Survey Longitude :	-90.6774	Apx. Bldg Floor Elevation :	N/A



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000-ILA-03-015-40.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-016	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.0	NGVD 29 :	5.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available , Houma		
Type of HWM :	Wrack Line	Parish :	Terrebonne
		State :	Louisiana
Location of HWM Object :	East Woodlawn Ranch Rd. at the south entrance to the Houma-Terrebonne Airport		

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
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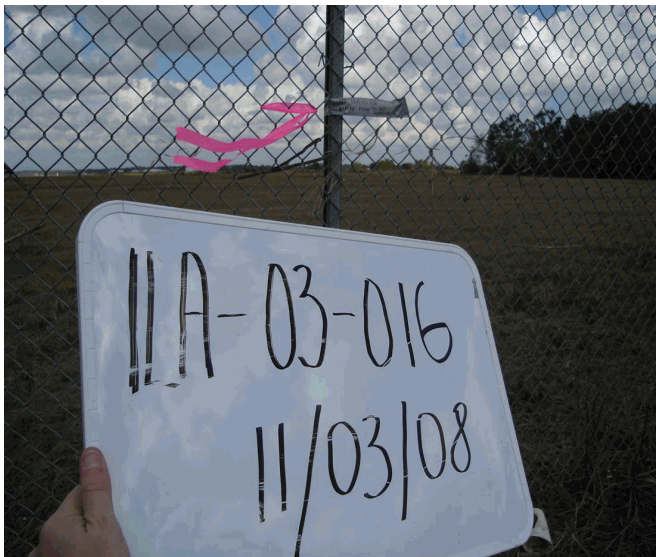
Date of Flagging/Interview :	11/03/2008
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Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.5545		
Survey Longitude :	-90.6592		

Apx. Bldg Floor Elevation : N/A



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000-ILA-03-016-43.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-020	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.0	NGVD 29 :	6.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Wrack Line	Parish :	Terrebonne
		State :	Louisiana
Location of HWM Object :	Fence on Grand Calliou Rd (Hwy LA 57) on the corner of Ashland Landfill Rd at the Terrebonne Parsh Criminal Justice Complex.		

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.		
Survey Date :	11/16/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	29.5191				
Survey Longitude :	-90.6753	Apx. Bldg Floor Elevation :	N/A		



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000-ILA-03-020-57.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-022	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.4	NGVD 29 :	6.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	103 Justin Ave.		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.4822		
Survey Longitude :	-90.6983	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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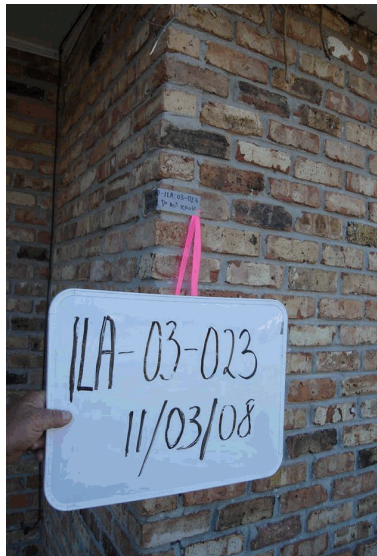
Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-023	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.1	NGVD 29 :	7.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	6438 Shrimpers Row , Dulac		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.4254		
Survey Longitude :	-90.7020	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-024	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.0	NGVD 29 :	7.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	7424 Shrimpers Row , Dulac		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.3946		
Survey Longitude :	-90.7120	Apx. Bldg Floor Elevation :	N/A



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000-ILA-03-024-66.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-025	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.9	NGVD 29 :	7.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	8345 Shrimpers Row , Dulac		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.3689		
Survey Longitude :	-90.7231	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-026	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.6	NGVD 29 :	7.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	8137 Hwy 56		
Type of HWM :	Wrack Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.2532		
Survey Longitude :	-90.6600	Apx. Bldg Floor Elevation :	N/A



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000-ILA-03-026-75.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-027	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.7	NGVD 29 :	7.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	7709 Hwy 56		
Type of HWM :	Wrack Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.2770		
Survey Longitude :	-90.6440	Apx. Bldg Floor Elevation :	N/A



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000-ILA-03-027-77.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-028	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.3	NGVD 29 :	7.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	7322 Breakwater Dr.		
Type of HWM :	Wrack Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.3047		
Survey Longitude :	-90.6480	Apx. Bldg Floor Elevation :	N/A



000-ILA-03-028-79.jpg



000-ILA-03-028-80.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-029	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.9	NGVD 29 :	7.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	6318 Tave Dr.		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.3838		
Survey Longitude :	-90.6197	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-030	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.3	NGVD 29 :	3.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Utility pole		
HWM Address	1182 Hwy 55, Montegut		
Type of HWM :	Personal Account	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008		Witness Statement :	Flood came from over the levee on the east side.

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.4737		
Survey Longitude :	-90.5575		

Apx. Bldg Floor Elevation : N/A



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000-ILA-03-030-87.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-031	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.9	NGVD 29 :	4.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	133 Price St. , Montegut		
Type of HWM :	Seed Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.4740		
Survey Longitude :	-90.5532	Apx. Bldg Floor Elevation :	N/A



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000-ILA-03-031-90.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-032	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.9	NGVD 29 :	5.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available , Montegut		
Type of HWM :	Wrack Line	Parish :	Terrebonne
		State :	Louisiana
Location of HWM Object :	On Cross St. heading north, the HWM is on the fence at the red, metal pressbox on the left (east) at the track.		

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.4804		
Survey Longitude :	-90.5517		

Apx. Bldg Floor Elevation : N/A



000-ILA-03-032-94.jpg



000-ILA-03-032-95.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-033	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	8.0	NGVD 29 :	8.1
Flooding Type :	Coastal - Wave Height		
HWM Object, Surface :	Ground		
HWM Address	No Street Address Available		
Type of HWM :	Wrack Line	Parish :	Terrebonne
		State :	Louisiana
Location of HWM Object :	On the east side of the road on HWY 55 just south of the Madison canal bridge.		

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.3857		
Survey Longitude :	-90.5882	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

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Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-034	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	4.6	NGVD 29 :	4.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Utility pole		
HWM Address	169 Hwy 665		
Type of HWM :	Personal Account	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008		Witness Statement :	Mike Aucion, local officer placed this nail at the height of the water on 9/13/08.

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.4992		
Survey Longitude :	-90.5512	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-035	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.8	NGVD 29 :	7.9
Flooding Type :	Coastal - Wave Height		
HWM Object, Surface :	Fence		
HWM Address	407 Island Rd		
Type of HWM :	Wrack Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.3985		
Survey Longitude :	-90.4884	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-037	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.5	NGVD 29 :	7.6
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	407 Island Rd.		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.3986		
Survey Longitude :	-90.4888	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-040	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.1	NGVD 29 :	7.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	3493 Hwy 665		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.4394		
Survey Longitude :	-90.4611	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-041	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.1	NGVD 29 :	5.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Wrack Line	Parish :	Terrebonne
		State :	Louisiana
Location of HWM Object :	Pointe Aux Chenes School across from St. Charles Catholic Church.		

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.4905		
Survey Longitude :	-90.5198	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-042	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.5	NGVD 29 :	5.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	311 S. Central St.		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008		Witness Statement :	
				Mud line clearly visible on back sliding door, but owner reported water was almost 10 inches higher.

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.5133		
Survey Longitude :	-90.5960	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-043	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.5	NGVD 29 :	5.4
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Transferred to middle column of overhang
HWM Object, Surface :	Other		
HWM Address	305 RoseMary St.		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.5161		
Survey Longitude :	-90.5978	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-044	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.7	NGVD 29 :	4.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Tree		
HWM Address	331 Hidalgo Dr.		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.5370		
Survey Longitude :	-90.7144	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana
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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-045	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.9	NGVD 29 :	4.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	225 Crozier Dr.		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.5447		
Survey Longitude :	-90.7234	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

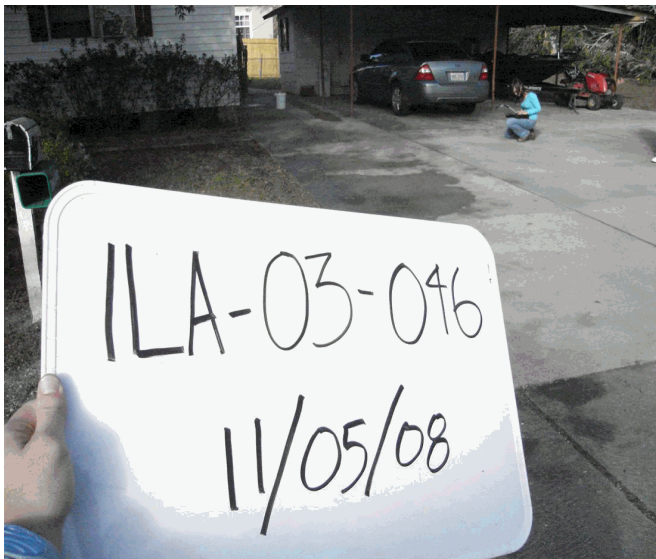
HWM ID :	401-ILA-03-046	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.9	NGVD 29 :	4.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	255 Acorn st.		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6050		
Survey Longitude :	-90.7050	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-048	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.0	NGVD 29 :	4.2
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Other		Flood levee, sheet piling
HWM Address	No Street Address Available , Houma		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana
Location of HWM Object :	The mark is located at the junction of Concord Road and Concord Bypass Rd. on the levee.		

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	MJ	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.5692		
Survey Longitude :	-90.7252	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-049	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	5.9	NGVD 29 :	6.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Sign post		
HWM Address	1674 Doctor Beatrous Road		
Type of HWM :	Stain Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.4282		
Survey Longitude :	-90.7644	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-050	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.7	NGVD 29 :	5.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	1803 Doctor Beatrous Road		
Type of HWM :	Seed Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008		Witness Statement :	The water level was confirmed by the house owner.

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.4169		
Survey Longitude :	-90.7760	Apx. Bldg Floor Elevation :	N/A



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000-ILA-03-050-150.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

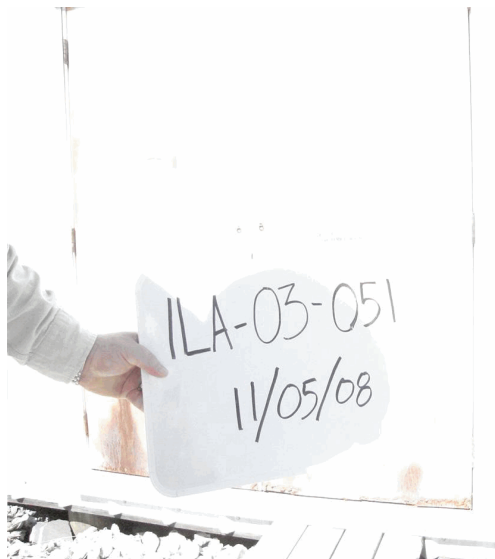
Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-051	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	6.9	NGVD 29 :	7.0
Flooding Type :	Coastal - Wave Height	Description of HWM Object	Exterior door
HWM Object, Surface :	Other		
HWM Address	3362 Highway 15		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JG	Company :	ESP Associates, P.A.
Survey Date :	11/16/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.3340		
Survey Longitude :	-90.8483	Apx. Bldg Floor Elevation :	N/A



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000-ILA-03-051-152.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-052	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	5.7	NGVD 29 :	5.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	3382 Highway 315		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
--------------------------------------	--------------	---------------	-------------------------	-----------

Date of Flagging/Interview :	11/05/2008
-------------------------------------	------------

Witness Statement :

The water came around the levee located next to the house and flooded the area.

Survey Crew :	JG
Survey Date :	11/16/08
Map Projection Used :	Louisiana South 1702
Survey Latitude :	29.3360
Survey Longitude :	-90.8424

Company : ESP Associates, P.A.

Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
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Apx. Bldg Floor Elevation :	N/A
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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

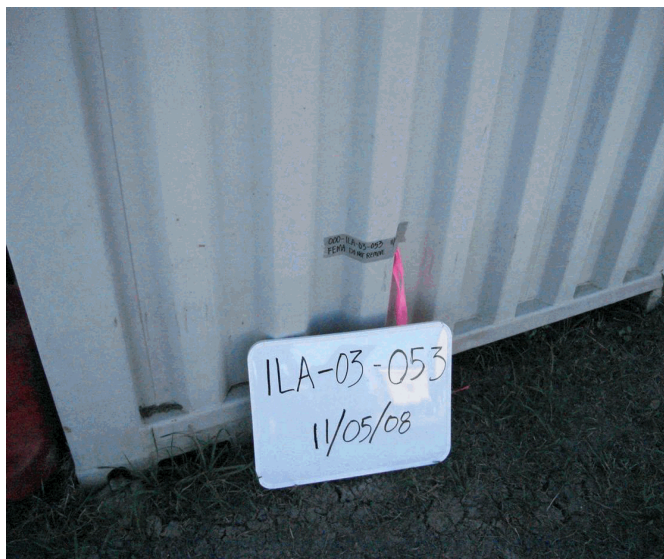
Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-053	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.8	NGVD 29 :	4.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	5905 Highway 182		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsafia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6163		
Survey Longitude :	-90.9022	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection (HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-03-054	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.9	NGVD 29 :	4.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	5059 Barral Racers Ct.		
Type of HWM :	Mud Line	Parish :	Terrebonne
		State :	Louisiana

Name of Flagger/Interviewer :	Zsofia Dobos	Emily Dhingra	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008		Witness Statement :	Water level was confirmed by the owner.

Survey Crew :	JC	Company :	ESP Associates, P.A.
Survey Date :	11/17/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6245		
Survey Longitude :	-90.9111	Apx. Bldg Floor Elevation :	N/A



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000-ILA-03-054-158.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

John Avery, Jr. - PLS, Louisiana

ESP Associates, P.A.

P.O. Box 7030 Charlotte, NC 28241

Registration Number : 1560

Phone Number : (704)-583-4949

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001

Appendix C
HWM Reports (by Parish)
C23 Vermilion



FEMA

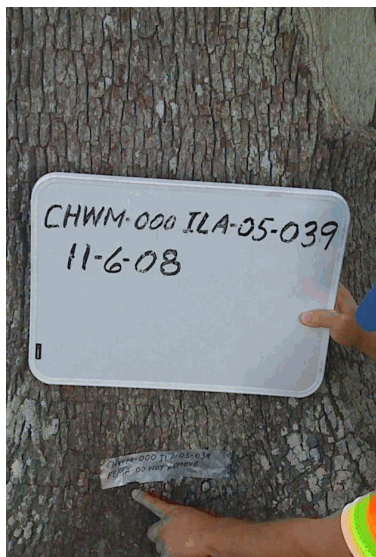
Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

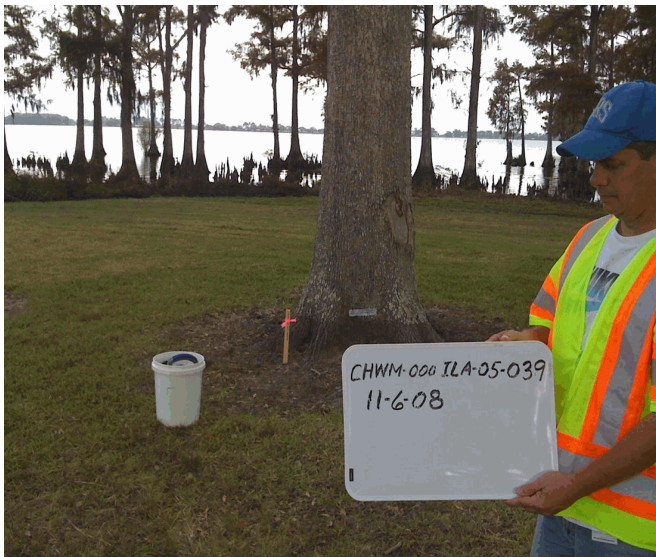
HWM ID :	401-ILA-05-039	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	4.0	NGVD 29 :	4.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Tree		
HWM Address	44518 Lakeside drive		
Type of HWM :	Stain Line	Parish :	Vermilion
		State :	Louisiana

Name of Flagger/Interviewer :	Saurabh Kulkarni	Brian Merceron	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/06/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/5/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0435		
Survey Longitude :	-92.7060	Apx. Bldg Floor Elevation :	N/A



000-ILA-05-039-61.jpg



000-ILA-05-039-62.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-002	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Poor
Survey Ele. (US FT) NAVD88 :	9.4	NGVD 29 :	9.5
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Vermilion
		State :	Louisiana
Location of HWM Object :	It is a US Army Corps Facility at the end of Highway 333		

Name of Flagger/Interviewer : Ben Kaiser Rajendra Rachamalla **Flagger Company:** URS Corp.

Date of Flagging/Interview : 11/01/2008

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.7939		
Survey Longitude :	-92.1449	Apx. Bldg Floor Elevation :	N/A



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000-ILA-08-002-6.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-004	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Poor
Survey Ele. (US FT) NAVD88 :	8.0	NGVD 29 :	8.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Personal account		
HWM Address	10486 Jean Rd		
Type of HWM :	Personal Account	Parish :	Vermilion
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/01/2008		Witness Statement :	Aimee Brussard pointed out the mark

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/11/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9350		
Survey Longitude :	-92.1494	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-005	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.6	NGVD 29 :	8.7
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Wooden cross
HWM Object, Surface :	Other		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Vermilion
		State :	Louisiana
Location of HWM Object :	Banker Cemetary - corner of LA HWY 690 and Live Oak Rd.		

Name of Flagger/Interviewer : Ben Kaiser Rajendra Rachamalla **Flagger Company:** URS Corp.

Date of Flagging/Interview : 11/01/2008

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/12/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8847		
Survey Longitude :	-92.1245	Apx. Bldg Floor Elevation :	N/A



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000-ILA-08-005-9.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-006	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.3	NGVD 29 :	8.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available , Abbeville		
Type of HWM :	Mud Line	Parish : Vermilion	State : Louisiana
Location of HWM Object :	W Summers Drive bridge crossing Bayou Vermillion River.		

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C		
Survey Date :	12/11/08	Vertical Datum :	NAVD 88	Horizontal Datum:	NAD 83
Map Projection Used :	Louisiana South 1702				
Survey Latitude :	29.9835				
Survey Longitude :	-92.1360	Apx. Bldg Floor Elevation :	N/A		



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000-ILA-08-006-12.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

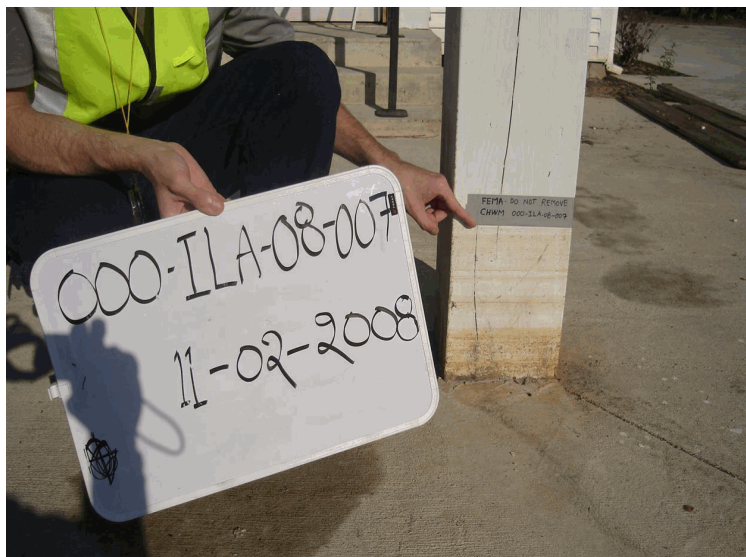
Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-007	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.4	NGVD 29 :	5.4
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Building support post, piling, column, or beam		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Vermilion
		State :	Louisiana
Location of HWM Object :	Small white church on LA Hwy 82, just west of the junction with LA Hwy 333		

Name of Flagger/Interviewer : Ben Kaiser Rajendra Rachamalla **Flagger Company:** URS Corp.

Date of Flagging/Interview : 11/02/2008

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/11/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8428		
Survey Longitude :	-92.1810	Apx. Bldg Floor Elevation :	N/A



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000-ILA-08-007-14.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

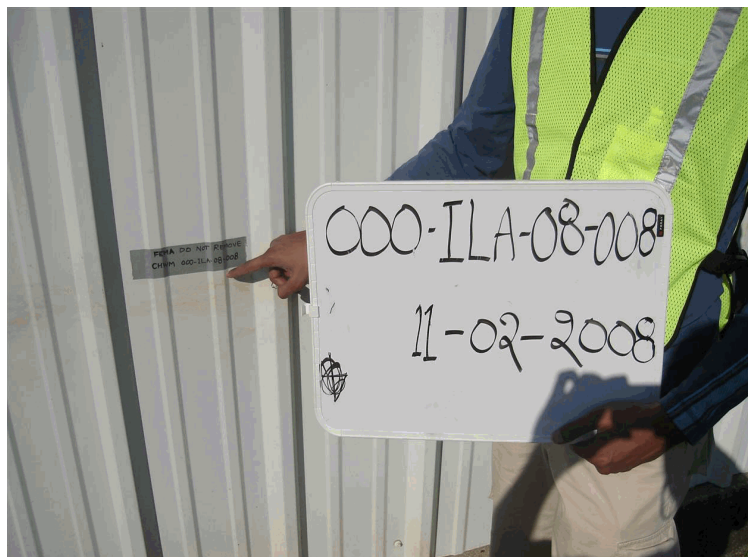
Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-008	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.4	NGVD 29 :	7.2
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	18160 West LA Hwy 82		
Type of HWM :	Stain Line	Parish :	Vermilion
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/12/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8464		
Survey Longitude :	-92.2756	Apx. Bldg Floor Elevation :	N/A



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000-ILA-08-008-16.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-009	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	5.9	NGVD 29 :	5.7
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Back porch
HWM Object, Surface :	Other		
HWM Address	19904 Pine Island Rd.		
Type of HWM :	Stain Line	Parish :	Vermilion
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/12/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8316		
Survey Longitude :	-92.3061	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

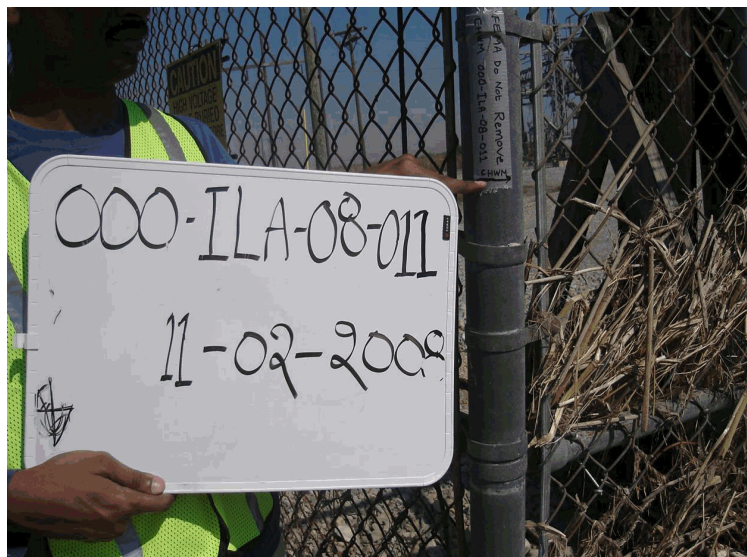
Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-011	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.9	NGVD 29 :	7.9
Flooding Type :	Coastal - Wave Height		
HWM Object, Surface :	Fence		
HWM Address	23720 Marina Rd		
Type of HWM :	Wrack Line	Parish :	Vermilion
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/8/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6573		
Survey Longitude :	-92.3693	Apx. Bldg Floor Elevation :	N/A



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000-ILA-08-011-22.jpg

Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

Darren Sargent & David W. Sargent - PLS, Louisiana

Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-012	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.8	NGVD 29 :	7.8
Flooding Type :	Coastal - Wave Height		
HWM Object, Surface :	Fence		
HWM Address	27624 W La Highway 82		
Type of HWM :	Wrack Line	Parish :	Vermilion
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/8/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6468		
Survey Longitude :	-92.4342	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Pelican Land Surveying, L.L.C.

838 South Post Oak Road Sulphur, LA
70664-1747

Registration Number : Louisiana Firm License #544

Phone Number : (337)-533-8116

Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



FEMA

Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-015	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Poor
Survey Ele. (US FT) NAVD88 :	6.1	NGVD 29 :	5.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Personal account		
HWM Address	21227 Pine Island Rd		
Type of HWM :	Personal Account	Parish :	Vermilion
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008		Witness Statement :	Jonathan Gaspard confirmed the water height.

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/12/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8386		
Survey Longitude :	-92.3282	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-016	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.3	NGVD 29 :	8.3
Flooding Type :	Coastal - Wave Height		
HWM Object, Surface :	Fence		
HWM Address	No Street Address Available		
Type of HWM :	Wrack Line	Parish :	Vermilion
		State :	Louisiana
Location of HWM Object :			

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/02/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/23/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.6308		
Survey Longitude :	-92.3820	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-017	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	8.1	NGVD 29 :	8.1
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	Deck in back of restaurant
HWM Object, Surface :	Other		
HWM Address	503 W Port Street , Abbeville		
Type of HWM :	Mud Line	Parish :	Vermilion
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/12/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9749		
Survey Longitude :	-92.1395	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-018	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Poor
Survey Ele. (US FT) NAVD88 :	3.5	NGVD 29 :	3.4
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Personal account		
HWM Address	No Street Address Available		
Type of HWM :	Personal Account	Parish :	Vermilion
		State :	Louisiana
Location of HWM Object :	HWM is at the back of a trailer near the end of Lakeside Drive. The building is white with red trim.		

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008		Witness Statement :	
			This location is not the residence of the witness. He purchased the place about three years ago.	

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/5/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0413		
Survey Longitude :	-92.7226	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-019	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	3.3	NGVD 29 :	3.3
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Bridge support or skirt		
HWM Address	No Street Address Available		
Type of HWM :	Wash Line	Parish :	Vermilion
		State :	Louisiana
Location of HWM Object :	LA Hwy 14 crossing of Mermentau River.		

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/5/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.0713		
Survey Longitude :	-92.6571	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-020	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.6	NGVD 29 :	3.6
Flooding Type :	Coastal - Stillwater Only	Description of HWM Object	
HWM Object, Surface :	Other		Metal pipe
HWM Address	No Street Address Available		
Type of HWM :	Mud Line	Parish :	Vermilion
		State :	Louisiana
Location of HWM Object :	Go to the end of Tetoe Rd and you can see an old shed near the trees by the bayou. HWM is behind the shed.		

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/15/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	30.1004		
Survey Longitude :	-92.5321	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-021	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	3.2	NGVD 29 :	3.1
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	No Street Address Available		
Type of HWM :	Seed Line	Parish :	Vermilion
		State :	Louisiana
Location of HWM Object :	At White Lake Conservation Area. Here there is a bridge on right side which leads to small green building.		

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/03/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/12/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9192		
Survey Longitude :	-92.5138	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-022	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	2.8	NGVD 29 :	2.7
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Culvert headwall		
HWM Address	No Street Address Available		
Type of HWM :	Stain Line	Parish :	Vermilion
		State :	Louisiana
Location of HWM Object :	At the intersection of LA Hwy 3143 and LA Hwy 711		

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
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Date of Flagging/Interview :	11/03/2008
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Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/10/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9782		
Survey Longitude :	-92.4621	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-025	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	7.8	NGVD 29 :	7.9
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	3911 LA Hwy 330		
Type of HWM :	Mud Line	Parish :	Vermilion
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/12/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8825		
Survey Longitude :	-92.0378	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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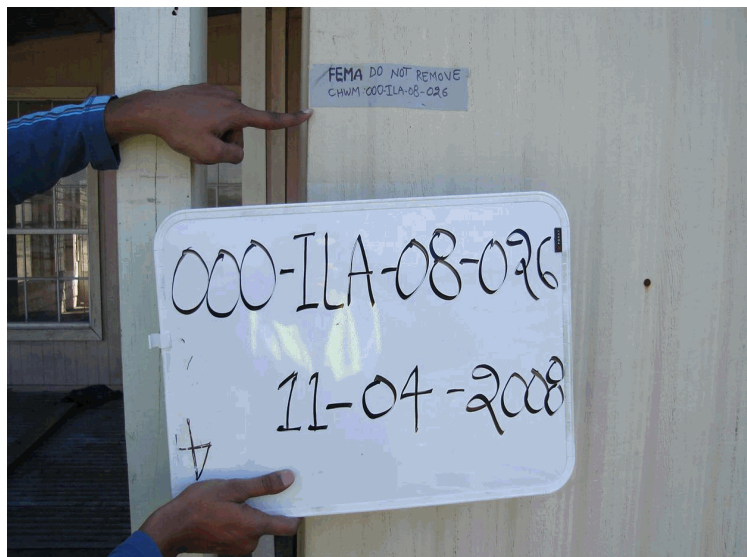
Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-026	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Fair
Survey Ele. (US FT) NAVD88 :	9.0	NGVD 29 :	9.0
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Exterior Wall		
HWM Address	18835 Live Oak Rd.		
Type of HWM :	Stain Line	Parish :	Vermilion
		State :	Louisiana

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/04/2008			

Survey Crew :	DWS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/12/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.8770		
Survey Longitude :	-92.1269	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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70664-1747

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Project : Louisiana Hurricane Ike Coastal HWM Data Collection

HMTAP Task Order(s): HSFEHQ-09-J-0001



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Project : Louisiana Hurricane Ike Coastal HWM Data Collection
(HMTAP Task Order # HSFEHQ-09-J-0001)

Contents : Coastal High Water Mark (HWM) Survey Report

HWM ID :	401-ILA-08-027	Date of Flood Event :	Sept 2008
Name of Storm Event :	Hurricane Ike, LA Coastal	Date of Peak :	N/A
Disaster Number :	FEMA-1792-DR-Louisiana	Source of Date of Peak :	N/A
Flood Source	Gulf of Mexico	HWM Quality :	Good
Survey Ele. (US FT) NAVD88 :	8.8	NGVD 29 :	8.8
Flooding Type :	Coastal - Stillwater Only		
HWM Object, Surface :	Interior Wall Transferred to Exterior		
HWM Address	No Street Address Available		
Type of HWM :	Seed Line	Parish :	Vermilion
		State :	Louisiana
Location of HWM Object :	Located on the western shore of Lake Peigneur, on Lake Breeze road.		

Name of Flagger/Interviewer :	Ben Kaiser	Rajendra Rachamalla	Flagger Company:	URS Corp.
Date of Flagging/Interview :	11/05/2008			

Survey Crew :	DBS	Company :	Pelican Land Surveying, L.L.C
Survey Date :	12/11/08	Vertical Datum :	NAVD 88
Map Projection Used :	Louisiana South 1702	Horizontal Datum:	NAD 83
Survey Latitude :	29.9751		
Survey Longitude :	-91.9940	Apx. Bldg Floor Elevation :	N/A



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Survey Certification : High water mark survey is certified to 0.25 feet vertically and 10 feet horizontally with a 95% accuracy level

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HMTAP Task Order(s): HSFEHQ-09-J-0001