

Emergency Response for Hurricane Ike: Accelerating the Opening of Shipping Channels

Quickly reopening the waterways of major ports after a natural disaster is crucial to the national economy. One way to accelerate this process is to be prepared to utilize local resources, such as local private hydrographic survey contracting firms, to survey the sea bottom as soon as it is safe to do so. For example, prior to the landfall of Hurricane Ike in September 2008, a plan of action was developed by the United States Army Corps of Engineers (USACE), NOAA, and other agencies. This plan organized a hydrographic survey response team before the storm hit the Texas coastline. The response team utilized local resources, and included NOAA and USACE resources and multiple hydrographic survey federal contractors, including X, X, X, and X. This approach resulted in the ability to deploy 17 survey vessels in the initial survey response, with survey teams and subcontractors arranged before Ike made landfall. Planning and preparation included acquiring special entry permits on roads under police control, arranging alternative communications, crew safety, and hurricane survival planning.

Comment [LMW1]: Larry: I have an email off to Terra about all contractors associated with this. (my understanding was that none of the subs were to be mentioned by name). 12/14/09: Rebecca – since the project could not be accomplished without all of the subcontractors – seems best to mention them by name as well.

Within hours after Hurricane Ike struck Galveston, Texas, the USACE determined where surveys were required and assigned priorities to each vessel. This massive undertaking was conducted in a very short time, under very adverse survey conditions, and with very minimal on shore facilities. Despite difficult working conditions, the ports needed to be opened as quickly as possible. To facilitate this process, sidescan sonar data was monitored real time and transferred electronically to hydrographic survey contractors offices' TerraSond's Alaskan to map significant bottom features. In addition, the data was processed overnight, allowing the USACE to develop a strategy for the next day's field work.

Comment [LMW2]: Larry: TerraSond processed the sidescan data in the their Alaska office. 12/14/09: Rebecca – was all the data processed by TerraSond, or did the other primary contractors process the data they collected?

Within three days, the survey crews had assessed the majority of the waterways and contract efforts were scaled back to two vessels. Ike hit the Texas coast on September 13th and two days after landfall at Galveston, the Houston Ship Channel and Sabine-Neches Waterway, two of the most important waterways, were opened to shallow draft vessels. Two days later, only four days after landfall, many of the other channels had been opened for deep draft vessels, and on Sept. 23rd the Houston Ship Channel opened to normal vessel traffic.

Comment [LMW3]: The USACE determined the effort to survey each area, most of the effort was expended in the first three days. The importance of Houston Ship Channel and Sabine-Neches Waterway required that significant assets were assigned to their survey and salvage clearance.

Before Ike's landfall the survey teams were determined and subcontractors arranged. Planning and preparation included acquiring special entry permits on roads under police control, arranging alternative communications, crew safety and hurricane survival planning. The difficulty with determining the water level in the waterways was noted early in planning. Water level is very critical to the survey results and with the difficulty in recovering tide stations damaged or destroyed by "Ike" the determination of water level would be difficult to accomplish in a short period of time. Sidescan sonar data was to be monitored real time and transferred electronically to TerraSond's Alaskan office to map significant bottom features. This data was to be processed overnight allowing the USACE to develop a strategy for the next day's field work.

Comment [rla4]: I am confused here – need to clarify if these two waterways were done first so could open up in two days, even though the majority of the survey work went on for three days.

Comment [rla5]: Moved to earlier in the document.

Hurricane Ike
Sept 12, 2008 – ~~need a photo credit here~~ [NASA Photo from website](#)

Utilizing local private hydrographic survey resources through federal

contracting, ~~This contracted approach~~ resulted in quick completion of emergency response surveys,

Comment [LMW6]: Larry: The photo of ike on the 12 was taken from a NASA article on the internet. I was looking for a forecast track map of Ike a few days before land fall but could not find one. 12/14/09: Rebecca – I suspect we could get one from the NOAA Weather Service. I can follow up on this.

09_1214_Chap4sidebar_IkeResponse

and allowed salvage crews to clear the waterways. As a result, waterways were opened to normal ship traffic in a very short timeframe.

