

## **MANAGING STORM IMPACTS AT PORT HOUSTON SHIP BERTHS**

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### **Introduction**

Port Houston operates nine public facilities along the Houston Ship Channel. These nine facilities handle around 15% of all waterborne cargo in the Houston area. When a large storm impacts the Houston area, these public facilities, and the surrounding navigation channels are affected. The presence of shoaled sediment and storm related debris causes local, state and national economic impacts due to the loss of use of public docks by arriving and departing ships.

### **Objectives**

This presentation will familiarize the audience with basic information about Port Houston and the Houston Ship Channel. There will be information presented regarding how large storms affect the public facilities along the ship channel and how storm impacts are managed by the Port Houston team. Additionally, information will be presented showing how the impacts to navigation can continue years after a large storm.

### **Storm Events**

Port Houston manages 9 public facilities along the Houston Ship Channel. The Houston area experiences a major storm event every few years. To maintain the maximum economic benefits of the public facilities, the Port Houston team must react quickly to remediate any impacts to public docks caused by large storms.

Often, large storms are declared emergencies and will require coordination between FEMA and Port Houston to seek reimbursement for storm related impacts. There are practices that are implemented to help in recovering the maximum amount of reimbursement for any storm related work done. These practices include regular hydrographic surveys, extensive documentation and regular communication with FEMA.

Port Houston uses a combination of contracting methods to accomplish and post storm recovery efforts. Most of the time, Port Houston will leverage its ability to be incorporated into a nearby U.S. Army Corps of Engineers' dredging contract. When that option is not available, Port Houston will release a contract through its own internal procurement options.

Port Houston is the owner of all submerged lands within the waters of Harris county. Working with FEMA, it has been preliminarily determined that that private facilities with berthing areas that are located in Harris county are eligible for reimbursement of the cost of removing storm related shoaled

material and debris. Port Houston has initiated a program that allows private terminals to request reimbursement for such expenses through the existing Port Houston FEMA claim for Harvey related damages.

### **Continuing Impacts**

In addition to immediate impacts, large storms can have continuing impacts to the system well after the storm subsides. In the initial push to restore the local navigation system, the financial and physical assets can be strained. Dredge material placement areas must all be utilized to remove the storm related shoaling. A year or more later, the system is left with very little capacity to accommodate normal operations and maintenance.

There is mounting evidence that may be hinting at a silent, slow moving issue. Within the last year, Barbours Cut and Bayport ship channels have experienced higher than expected shoaling rates. This unexpected shoaling has resulted in draft restrictions at both channels which are causing millions of dollars of combined financial impacts every month to Port Houston and the other companies with facilities located on these channels. There are people proposing a hypothesis that this increased shoaling is a delayed impact from sediments deposited in the shallower areas surrounding the ship channels after the three major storms Houston experienced from 2015-2017.

The combination of an overly stressed system, potentially ongoing storm related shoaling, and all supplementary storm funding have been expended to address initial impacts, leaves our local navigation system in jeopardy of experiencing ongoing financial losses. Port Houston along with several other local and federal entities are working on how to move forward and develop new systems of controlling sedimentation while also building more resiliency into our system.