



PORT OF HOUSTON AUTHORITY

AAPA Hurricane Workshop

Recovery and Continuity of OPS
Marcus Woodring, Port of Houston Authority



HOUSTON CHRONICLE

★ chron.com

MONDAY, OCTOBER 4, 2010

★★★

VOL. 109 • NO. 356 • \$1.00

A TOWERING MESS ON SHIP CHANNEL



JAMES NEELSEN / CHRONICLE

EXPECT DELAYS: CenterPoint Energy expects to have this tower cleared from the Ship Channel by Wednesday. But the head of the Houston Ship Pilots said it could take three days after that to get things back to normal.

BOTTLENECK: Economic effects of mishap will be felt quickly in 75% of Port's terminals

By **ZAIN SHAUK**
HOUSTON CHRONICLE

A set of barges crashed into an electrical tower Sunday in the Port of Houston, prompting the U.S. Coast Guard to shut down most of the nation's second-largest maritime shipping complex, possibly until Wednesday.

A towing vessel pushing three barges of scrap metal through the Houston Ship Channel about 6 a.m. hit a 300-foot-tall electrical tower, which carries lines across the artery, said Petty Officer Richard Brahm, a spokesman for the Coast Guard. No injuries were reported.

The crash happened at the narrowest point in the waterway, leaving three-fourths of the port's terminals inaccessible.

"Maybe if it was wider we could have got boats around



CHRONICLE

it, but it's not, so it's a logistical problem," Brahm said. "It's a bad place for it to happen."

There was no risk of electricity-related injuries or effects to the power grid, which is owned by Houston-based CenterPoint Energy, because lines in the area were deactivated prior to the crash for maintenance work, said Penny Tbdd, a spokeswoman for the company.

PORT 0

Resilience/Recovery

“Resilience involves preparation before, mitigation during, response immediately following, and recovery after an adverse event. Another key aspect...relative to ports involves understanding the interdependencies that exist between assets and critical infrastructure sectors (e.g. energy and water) necessary for the operation of the port system as a whole.” – GAO Report



“The Houston Method”

The Four Phases

- “Hunker Down” (**Preparation**)
- Emergency Response / Search and Rescue (**Mitigation**)
- “Assess the Mess” (**Response**)
- Prioritize and “Go to Work” (**Recovery**)



“Hunker Down”



Port of Houston Statistics

- **8 PHA terminals (of ~150 on Upper HSC)**
- **>8,000 annual vessels arrivals**
- **2nd largest petrochemical complex in world (2011)**
- **12th largest port in the world (2010)**
- **1st in U.S. foreign trade by volume (2010)**
- **2nd in U.S. foreign trade by cargo value (2010)**
- **“Most Irreplaceable Port” (2012)**



Port of Houston Economics - Texas

TEXAS ECONOMIC IMPACTS

- **\$178.5 billion**
in economic impact
- **\$4.5 billion**
in state and local taxes

JOB IMPACT

- **1,026,820**
Total Related Jobs



\$489M a day/\$20M an hour

Port of Houston Economics - Nationwide

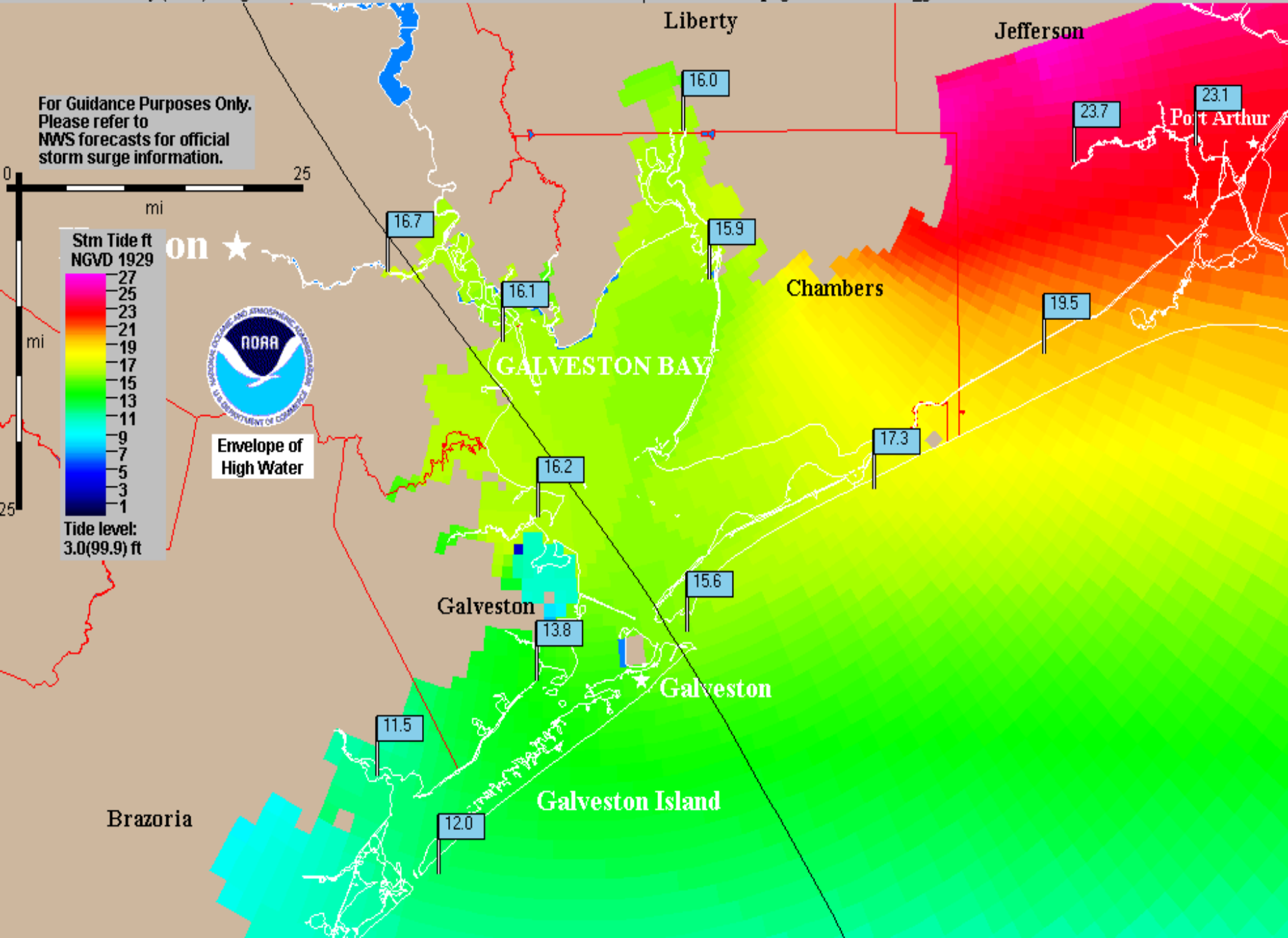
UNITED STATES ECONOMIC IMPACTS

- **\$499 billion**
in U.S. economic impact
- **\$52.1 billion**
in U.S. taxes

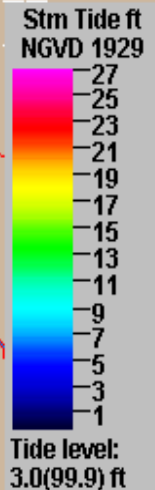
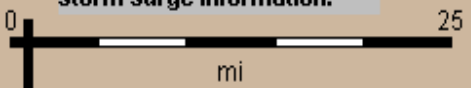
JOB IMPACT

- **2.1 million**
Total Related Jobs





For Guidance Purposes Only.
Please refer to
NWS forecasts for official
storm surge information.



Envelope of
High Water

on ★

Galveston

Galveston

Galveston Island

Brazoria

Liberty

Jefferson

Chambers

Port Arthur

GALVESTON BAY



HOUSTON

Baytown

La Porte

**League
City**

Alvin

**Texas
City**

Galveston

**Houston-Galveston
Study Area
Mean Sea Level**



HOUSTON

Baytown

La Porte

League City

Alvin

Texas City

Galveston

**Hurricane Carly
Surge: 4.8 Feet**



HOUSTON

Baytown

La Porte

League
City

Alvin

Texas
City

Galveston

Hurricane Carly
Surge: 10.6 Feet



HOUSTON

Baytown

La Porte

League
City

Alvin

Texas
City

Galveston

**Hurricane Carly
Surge: 17.9 Feet**

Emergency Response (skip)



“Assess the Mess”





SECTOR HOUSTON - GALVESTON
BOAT OPERATIONS & MAINTENANCE
WORK - NEWPORT - HOUSTON TEXAS

2008 9 13









Before



After





Tanks in marsh

28 10:19AM



CMA CGM

tex

tex

CGM

ECMO 200010 5
2261

DMU 219137
2261

Prioritize and “Go to Work”



Considerations

- **Is the waterway ready? – ACOE survey and then USCG COTP decision**







Considerations

- **Is the waterway ready? – ACOE survey and then USCG COTP decision**
- **Is the facility ready to receive? – Facility operator and USCG**





A photograph of an industrial facility, likely a port or refinery, with a prominent sign that reads "KINDER MORGAN GALENA PARK TERMINAL SHIP DOCK 1". The scene includes a blue control building, yellow safety railings, large pipes, and a body of water in the foreground. The sky is overcast.

KINDER MORGAN
GALENA PARK TERMINAL
SHIP DOCK 1



tex

CAPITAL

tex

CAPITAL

TRAC LEASE, INC.

UTHZ 201681

TRAC CHASSIS POOL

FRWA 2-0



Considerations

- **Is the waterway ready? – ACOE survey and then USCG COTP decision**
- **Is the facility ready to receive? – Facility operator and USCG**
- **Who goes first?? – Port Coordination Team**

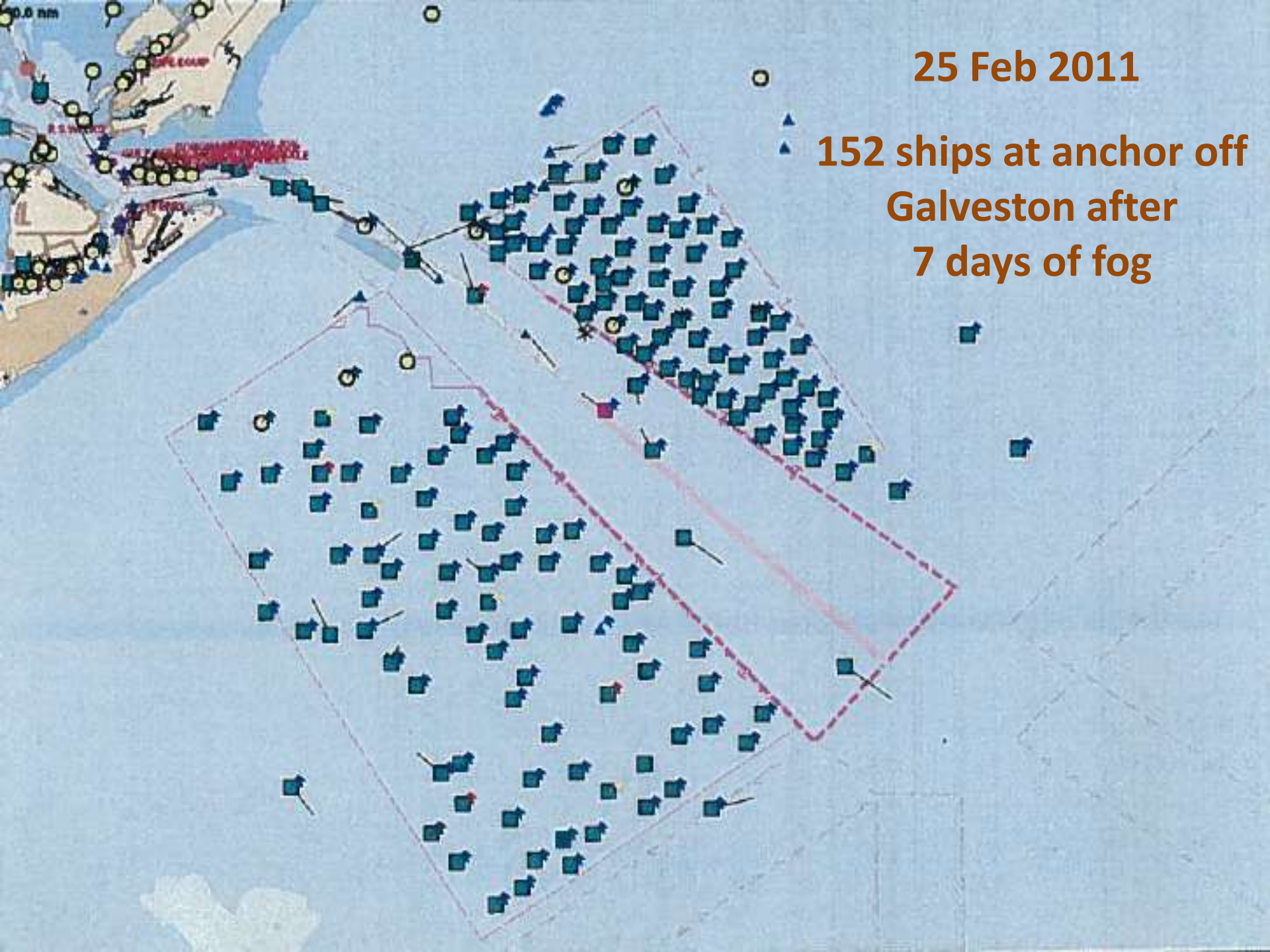




Ships in the queue off Galveston after IKE

25 Feb 2011

152 ships at anchor off
Galveston after
7 days of fog



Port Coordination Team (PCT) Goals

- 1) **Communicate, communicate, communicate**
- 2) **Coordinate port-wide assessment of waterways**
- 3) **Coordinate port-wide assessment of facility readiness**
- 4) **Move traffic with a purpose – “Ensures port reopening and prioritization of maritime traffic optimizes timely supply of critical commodities to facilities”**
- 5) **Facilities “most in need” receive first ships**



How does it work??



Representatives on PCT

Port of Houston Authority
Port of Galveston
Offshore Port
West Gulf Maritime Assoc.
Galveston-Texas City Pilots
Oil Terminals
Non-VTS Users
Galveston RR Bridge
NOAA Navigation Services
MTSRU Representative
Dredging

Port of Texas City
Port of Freeport
Gulf Intracoastal Canal Assn.
Houston Pilots Assoc.
Oil Refiners
Chemical Carriers
Chemical Facilities
Harbor Tugs
USCG COTP
NOAA NWS
CBP

-
- Scheduled conference calls led by USCG VTS
 - Information exchanged between and among reps



How are PCT reps chosen?

Experience is a jewel and it has need to be so, for it is often purchased at an infinite price.

- Wm. Shakespeare





Port Coordination Team

Port of Texas City

Offshore Port

Port of Houston

Port of Galveston

Houston Pilots

American Waterways Operators

Oil Terminals

Port of Freeport

Harbor Tugs

Oil Refineries

West Gulf Maritime

Non-VTS Users

Galveston-TX City Pilots

Chemical Carriers



PCT Call Agenda/Sequence

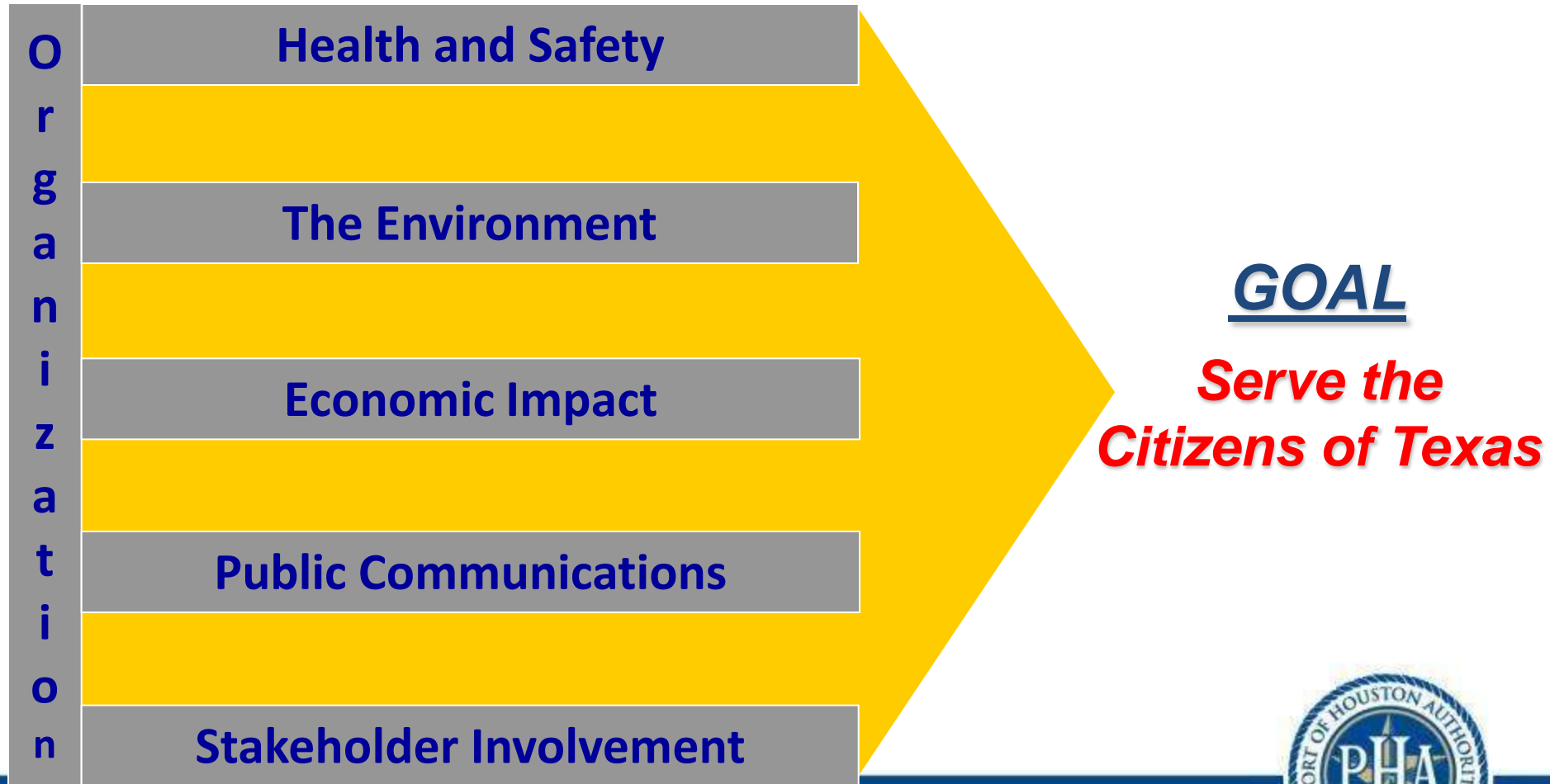
ACOE waterway restoration call held first

- **Roll Call of Participants - VTS**
- **Weather - NWS**
- **State of the Waterway - USCG**
- **Requirements of Industry – Hear from all**
- **Pilot/Towing Industry/USCG Coordination**
- **The Way Ahead/Intentions – COTP**
- **Issues for COTP resolution recapped**



Best Response Model

Key Business Drivers



How did PCT do?

- **Economic Impact:**
 - Hurricane IKE cost maritime industry > \$2B
 - HSC reopened to 12ft draft within 45hrs and to deep draft vessels (38ft) within 96hrs
- **Stakeholder Involvement:**
 - Port Coordination Team managed re-opening
 - Facilities readiness addressed via PCT
 - Active participation with industry plus GICA , ACOE and NOAA



Questions or Comments???

Captain Marcus Woodring, CEM, TEM

Managing Director

Health, Safety, Security and Environmental (HSSE)

Port of Houston Authority

Houston, Texas

Tel: 713-670-3612

mwoodring@poha.com

“Protect and Secure – People and Commerce”

