

# THE NUANCES OF WIDESPREAD HURRICANE FLOODING DRAMAS



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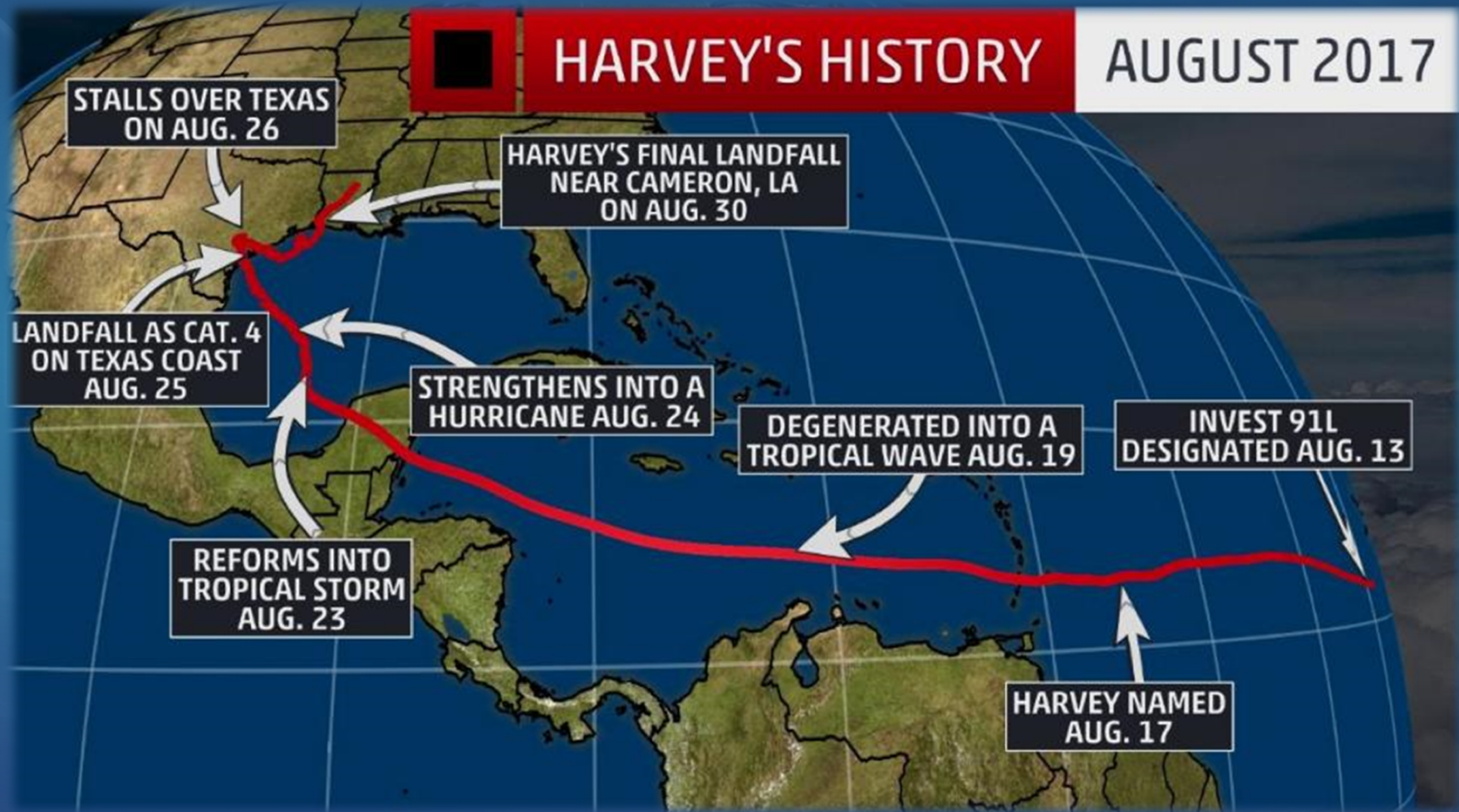
EMS Director

Public Health Authority



EAGLES 2018

# HURRICANE HARVEY





# EAST HOUSTON REGIONAL MEDICAL CENTER

- 120 Bed Hospital
- 16 Bed ICU
- 50,000 Annual ED Visits
- Closes/Evacuates Friday
- HFD Ambus
- Will NOT Reopen



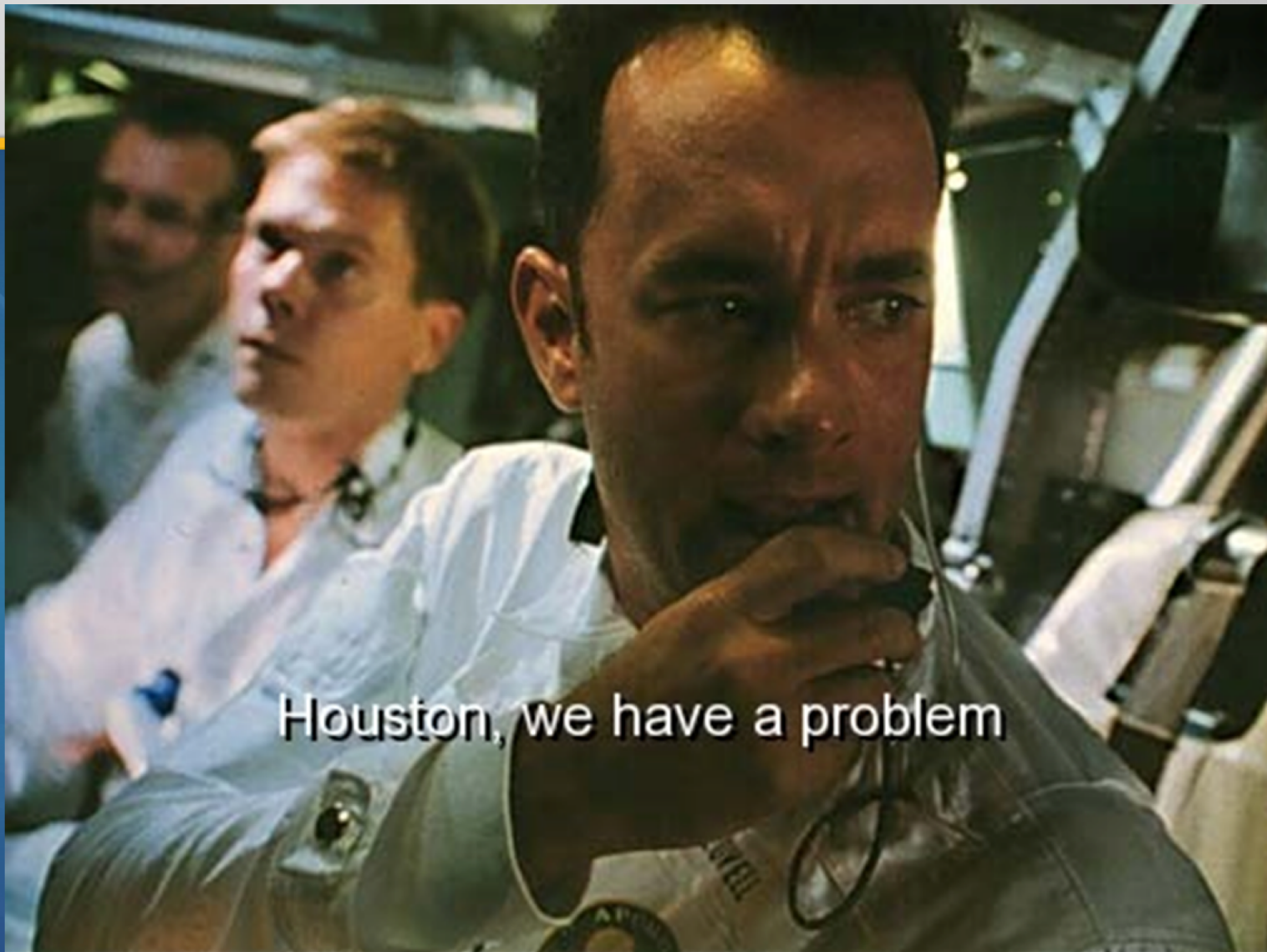
# 58 INCHES OF RAIN





# 4'10" OF RAIN





Houston, we have a problem

QuotesPics.com



# GENERAL DWIGHT D. EISENHOWER



## **THE PLAN (some highlights):**

- **Never Use the George R. Brown as a Shelter Again.**
- **Health and Medical Will Be Run by The Health Dept.**
- **Medical Staff Will Be Supplied by The Medical Reserve Corp.**



# THE REALITY

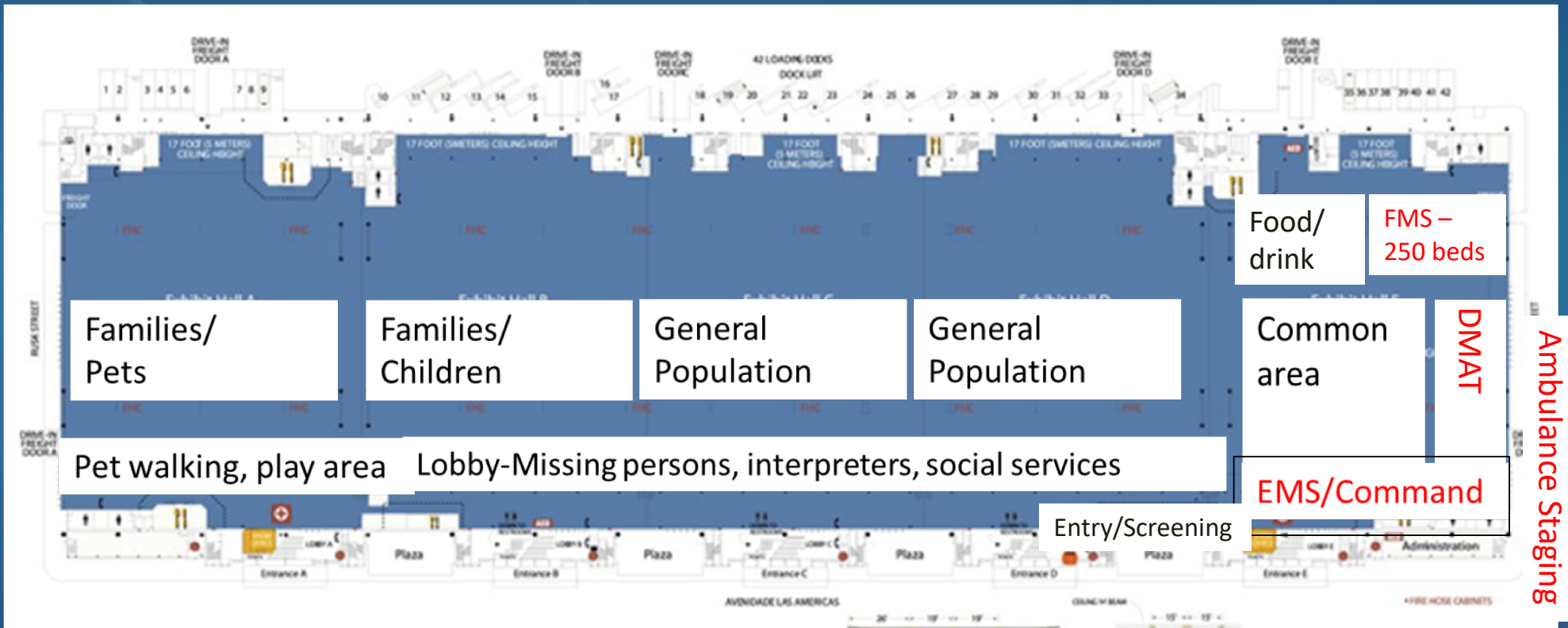
- A Closed Mall Opened As A Shelter Saturday Aug. 26<sup>th</sup> — Fills Rapidly
- 3 Other Locations Opened as Shelters, Fill Just As Rapidly
- Sunday — George R. Brown is Opened As A Shelter
  - ▶ >300 waiting outside at daybreak

# GEORGE R. BROWN CONVENTION CENTER





# GEORGE R. BROWN CONVENTION CENTER



## **“MEDICAL” GROWS WITH THE SHELTER**

- Medical Coverage started Sunday Afternoon with a few ARC Vols., Houston Fire Dept EMS Crews, and an HFD Medical Director on site 24/7.
- By Late Monday, a Full-Blown Medical Clinic is Operational, Staffed by a Combination of Medical Volunteers and HFD Personnel.
- Goal: Provide Quality Care and Protect the Already Overwhelmed Hospital System

# **“MEDICAL” GROWS WITH THE SHELTER**

- **Volunteer Physicians, Nurses and the Medical Reserve Corp.**
- **Baylor College of Medicine Agrees to Faculty Providing Clinical Care (Liability Protection) at GRB.**
  - ▶ **Psychiatric Care**
  - ▶ **Internal Medicine - ESRD**
- **Coordinated Efforts with HFD Medical Director on Site**



# PHARMACY

- Many Shelterees Left Home Without Their Medications
- Many Shelterees Showed Up With Lots of Medications.
- Texas State Board of Pharmacy
- Volunteer Pharmacist/Evacuee with Valid Pharmacist I.D.

# DIALYSIS

- No Power, No Transportation....No Dialysis
- Texas ESRD Network
- Friends and Family Network
  - ▶ Dr. Jeff Kalina
- Houston Health Dept. w/ CMOC

# SPECIAL MEDICAL CONSIDERATIONS

- Acute Injuries/Illnesses
- Hemodialysis
- Chronic O<sub>2</sub>
- Behavioral Health
- Nursing/Long-term Care Needs
- Withdrawal Symptoms





# KUSH (K2, SPICE, etc.)

- Source of problems/patients for HFD/HHD and DMAT
- Short Acting, Respiratory Suppressing, Emesis Inducing
- \$2
- Available All Around the GRB
- HPD Focusing on More Serious Issues and Limited Staff



# THE FEDS ARE COMING!!!

- National Disaster Medical System Teams Set To Arrive by Late Tuesday, Aug 29<sup>th</sup>
- Transition Plan Included Maintaining Volunteer/City Run Medical Station for 24 Hours to Allow Organized Stand-Up of NDMS Resources.
- DMAT Became Operational Wednesday Morning, Took Over Medical Station Ops at 19:00
- HFD Medical Direction Maintained Oversight of All Medical Ops



# NDMS/DMAT TEAMS

- Initial Orders to Support Shelter Medical Operations at GRB
- Initial Census: About 2500 Evacuees
  - ▶ Grew to 10,000 within 12 Hours



# HFD MAINTAINED OVERALL MEDICAL CONTROL



## ■ HFD EMS Supervisor = Transportation Officer

- ▶ Determined patient destination based on Situational Awareness of Hospital Closures, Diversion Requests, and Capability of Hospitals.
- ▶ 1<sup>st</sup> – FEMA Ambulance Strike Team
- ▶ Next – Texas State Asset Ambulance Strike Team
- ▶ Last – HFD Ambulance



# HFD MAINTAINED OVERALL MEDICAL CONTROL

- An HFD Medical Director On-Site 24/7 for two weeks
  - ▶ Approved All Transports and Destination Decisions from GRB
  - ▶ Liaison Between:
    - Local Hospitals and GRB Shelter Ops
    - OEM and EOC
    - HFD/Strike Teams and DMAT
    - “Put Out Fires”
    - Assisted with Response to All Medical Calls Within GRB

# MEDICAL AREA IN GRB

EMS Command

Pharmacy Trailer

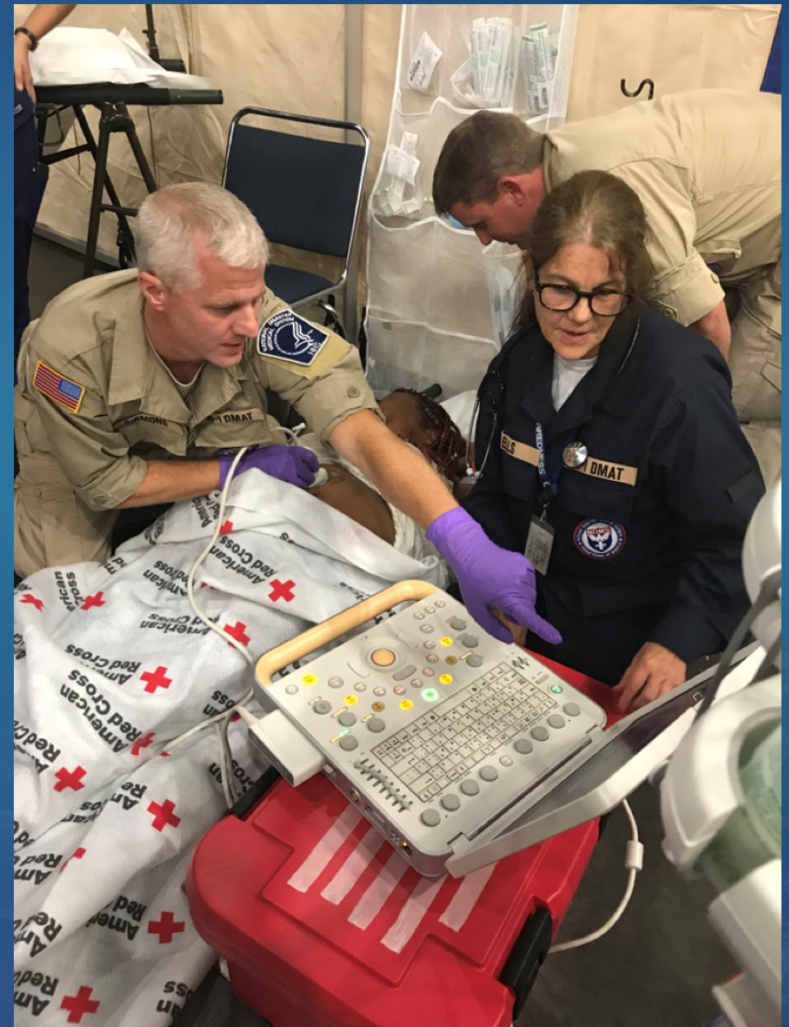
DMAT/FMS





# DMAT: DISASTER MEDICAL ASSISTANCE TEAM

- NDMS
- Scalable, Versatile
- Physicians, NP's/PA's , RN's, RT's, PM's, Pharmacists, Logistics, IT, Comm, Admin. Specialists





# FMS: FEDERAL MEDICAL SHELTER

- 250 Portable Beds Staffed by USPHS
- Designed for Long Term Care Type Patients
- Assisted with Isolation (bed bugs, etc.)
- Grouping of LTC Patients Needing Oxygen – Consolidation of Oxygen Requiring Patients to One Area.

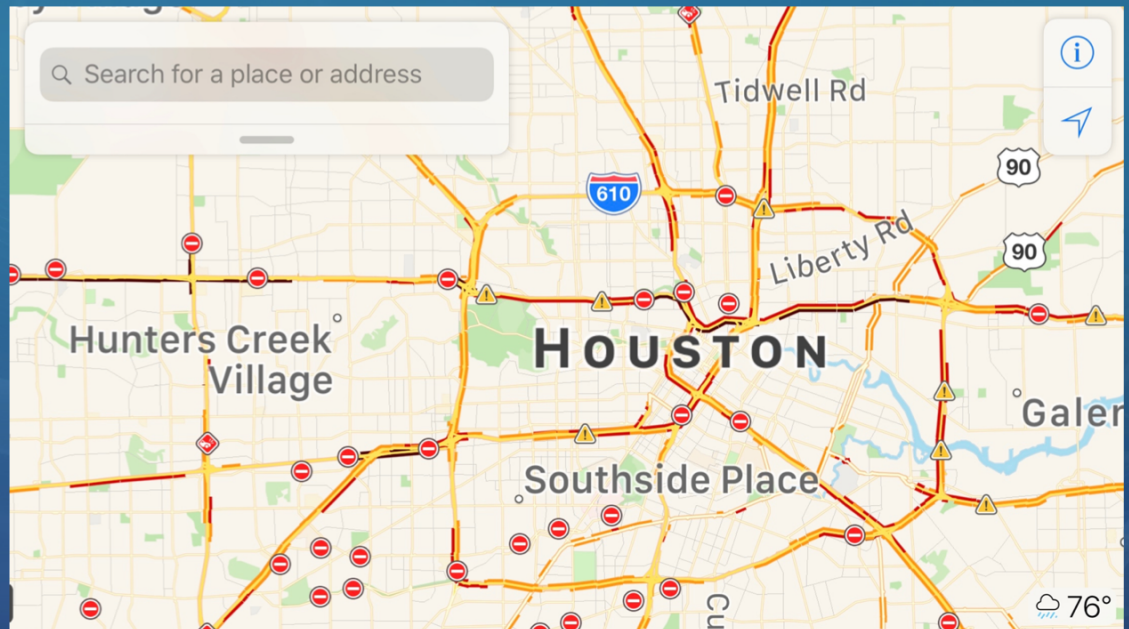


## THROUGHOUT THE SHELTER...

- American Red Cross Nurses Were Stationed in Each Hall
- Houston Health Dept. Nurses “Cruised” Hall to Look for Persons With Medical Needs, Behavioral Needs

# ACROSS THE CITY/REGION

- Worked with Gov. Relations to Get 1135 Waiver
  - Allows HHS Sec. to Waive/Modify Certain CMS & CHIP Requirements to Ensure Sufficient Health Care Needs are Met





# ACROSS THE CITY/REGION

## ■ Catastrophic Medical Operations Center

### ▶ Coordinated Hospital/Healthcare Center Evacuations

- 24 Hospitals
- 20 Nursing Homes
- 1,544 Patients

### ▶ Ambulance Strike Teams

- FEMA
- Texas



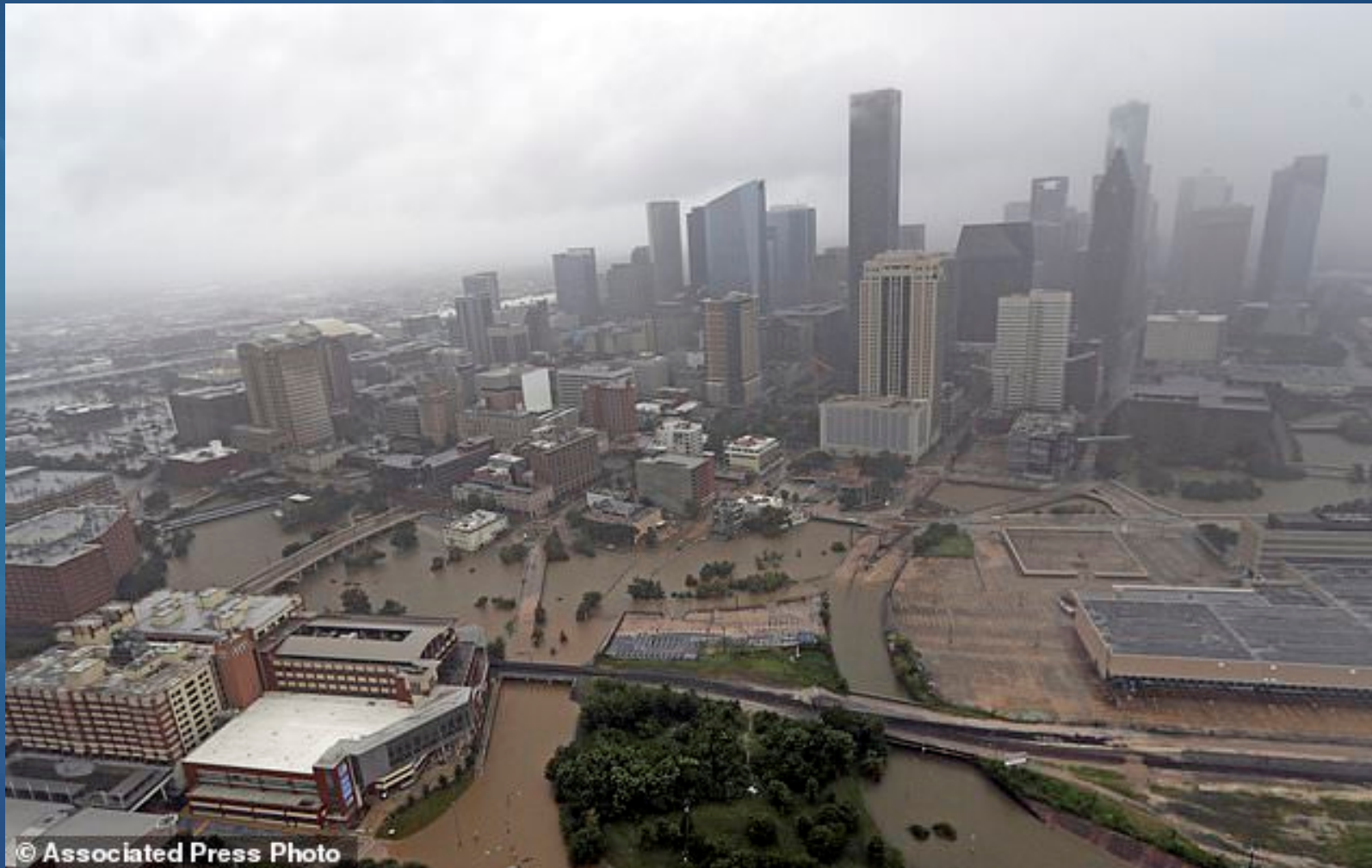
# ACROSS THE REGION

- Multiple Other Shelter Ops
- Greenspoint Mall
- Multiple Churches
- Reliant Center





# DOWNTOWN HOUSTON (4<sup>TH</sup> LARGEST CITY)



## QUESTIONS?

