

Hurricane Ike Response

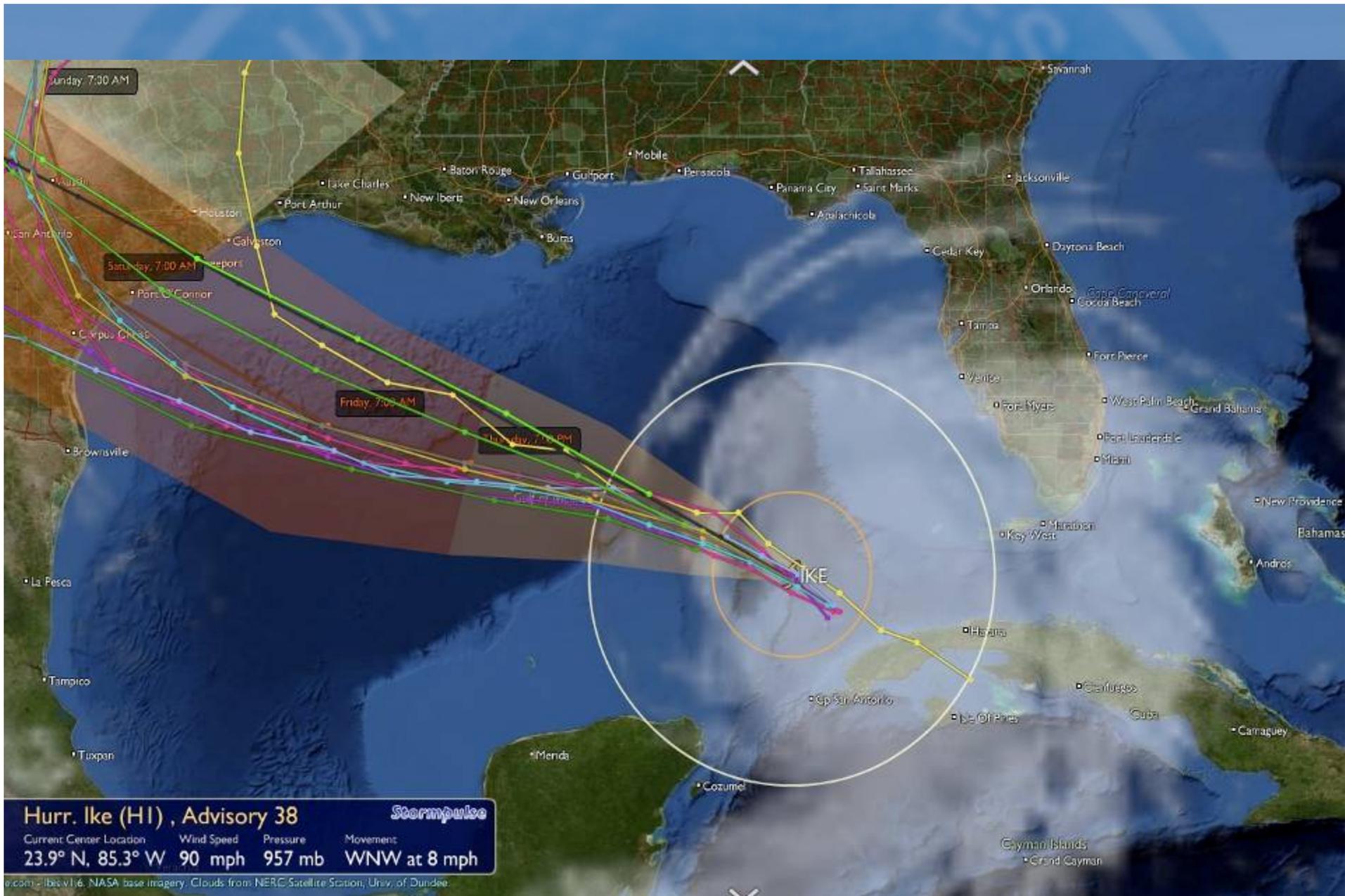


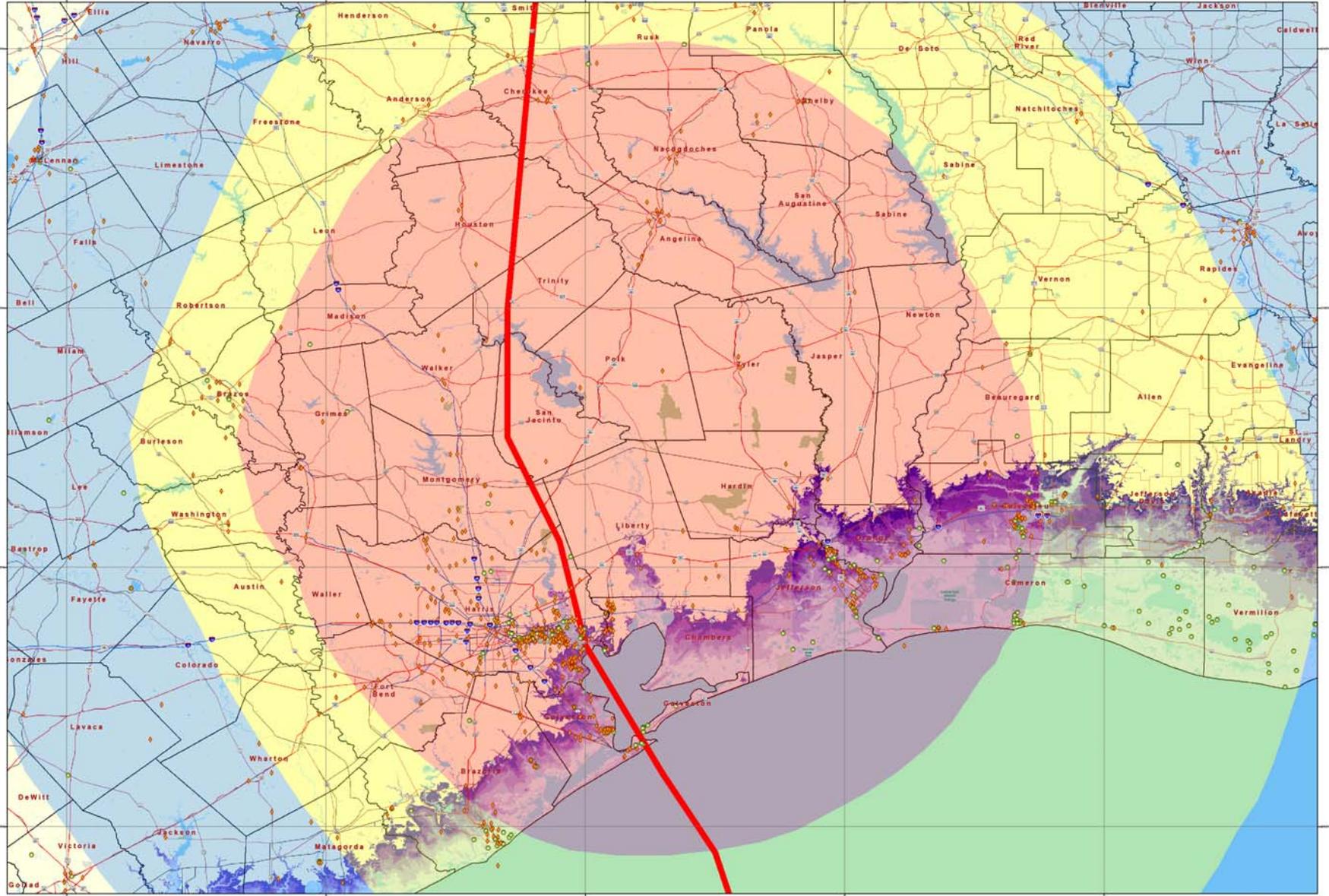
United States
Environmental Protection Agency
Region 6

Timeline

- 9/9/2008 EPA begins preparation activities.
- Between 9/9/2008 and landfall EPA designates Command and General Staff establishes pre-landfall planning cycle and begins discussions with TCEQ.
- 9/11/2008 EPA begins discussions with USCG.







- RCRA TSD or LQG Facility
- RMP Facility
- FRP Facility
- Water Treatment Plant
- Waste Water Treatment Plant
- Hurricane Ike Predicted Path 8am 09/13/08

Legend

- ESTIMATED Storm Surge**
- 0 - 5 Feet
 - 5 - 10 Feet
 - 10 - 15 Feet
 - 15 - 20 Feet
 - 20 - 25 Feet

- Minimum Wind Speed**
- 39 mph
 - 58 mph
 - 74 mph

Hurricane Ike Planning Map

Projected Path and Wind Speed as of
09/13/2008 6am thru 8am.
Source: Hurrevac 2000



Map Created 9/13/2008 @ EPA Region 6 ERT

EMERGENCY RESPONSE PLAN

FOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGIONS 6 AND 7

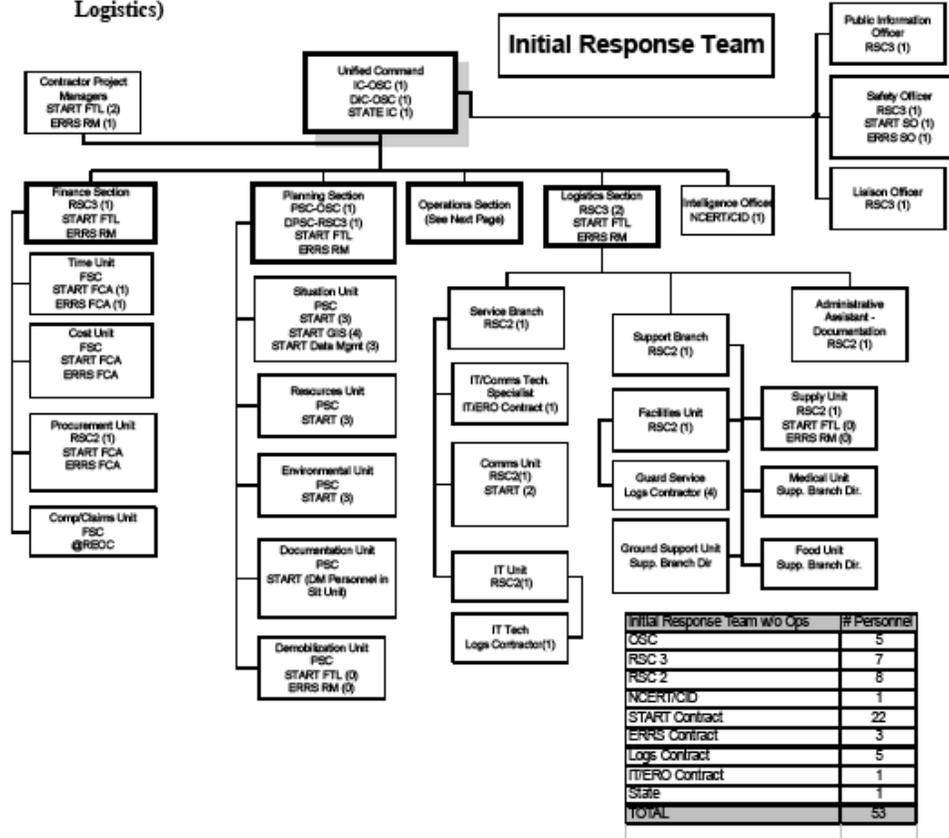
DEPARTMENT OF HOMELAND SECURITY
SCENARIO 10 – MAJOR HURRICANE IN A PORT CITY

March 2008



9.4.2 Initial Response Organizational Structure (ICS 207 Forms)

9.4.2.1 ICS 207 Form – Organizational Chart (Initial Response-Finance, Planning, & Logistics)



Timeline

- 9/11/2008 FEMA requests EPA participation in Task Force Ike.
- 9/12/2008 EPA mobilizes OSCs and Contractors to San Antonio, TX for Task Force Ike.



Task Force Ike - San Antonio, TX



Ike Task Force – Pre-deployment staging in San Antonio, TX



Ike Task Force in San Antonio – Immediately prior to departure for Galveston, TX



Task Force Ike - Ball High School, Galveston, TX





Reconnaissance activities immediately after landfall

- Critical Infrastructure Recon (ASPECT)
- FRP/RMP Facility Recon (ASPECT)
- Orphan Container/Facility Recon (Helo)
- Orphan Container (Ground)
- Water/Wastewater Treatment Plant



Critical Infrastructure Recon Utilizing ASPECT



Hurricane Ike

Houston Area: Infrastructure of Concern 1200 EDT 09/11/08

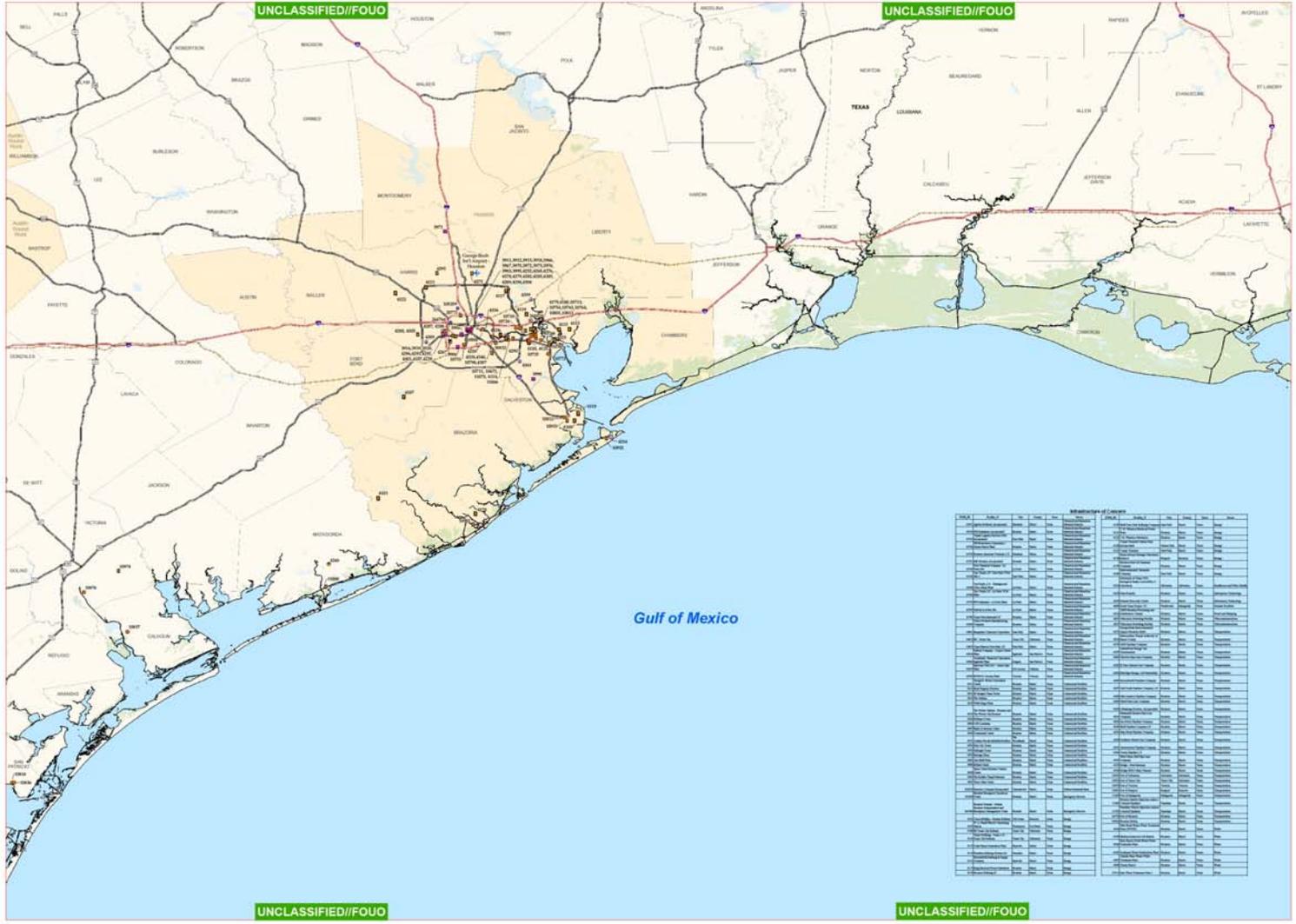
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- Infrastructure of Concern**
- Agriculture and Food
 - Building and Finance
 - Chemical
 - Commercial Facilities
 - Dams
 - Defense Industrial Base
 - Emergency Services
 - Energy
 - Government Facilities
 - Health Care
 - Information Technology
 - Nuclear Facilities
 - Physical Security
 - Telecommunications
 - Transportation
 - Water
- Other**
- George Bush Intercontinental Airport
- Map Features**
- Interstate
 - Limited Access
 - Rail Network
 - Airline
- Geographic Lines**
- State Boundary
 - County
 - Local (City, ZIP)
 - Water Features
 - Major Body
 - Reservoir or Marsh

907-971-999-110
 907-971-999-111
 Version 11, 2008 1200 EDT
 Produced by: ICD-IGP, 11-09-08
 Infrastructure of Concern 2008
 Map Scale - 1:500,000
 Geographic Coordinate System, WGS84
 0 10 20 30 40 Kilometers
 0 10 20 30 40 Miles

Department of Homeland Security
 Infrastructure Protection
 Infrastructure Information Collection Division
 Geospatial Program Office
 Produced using the ICD-IGP System
 Contact: ICD-IGP@production.dhs.gov

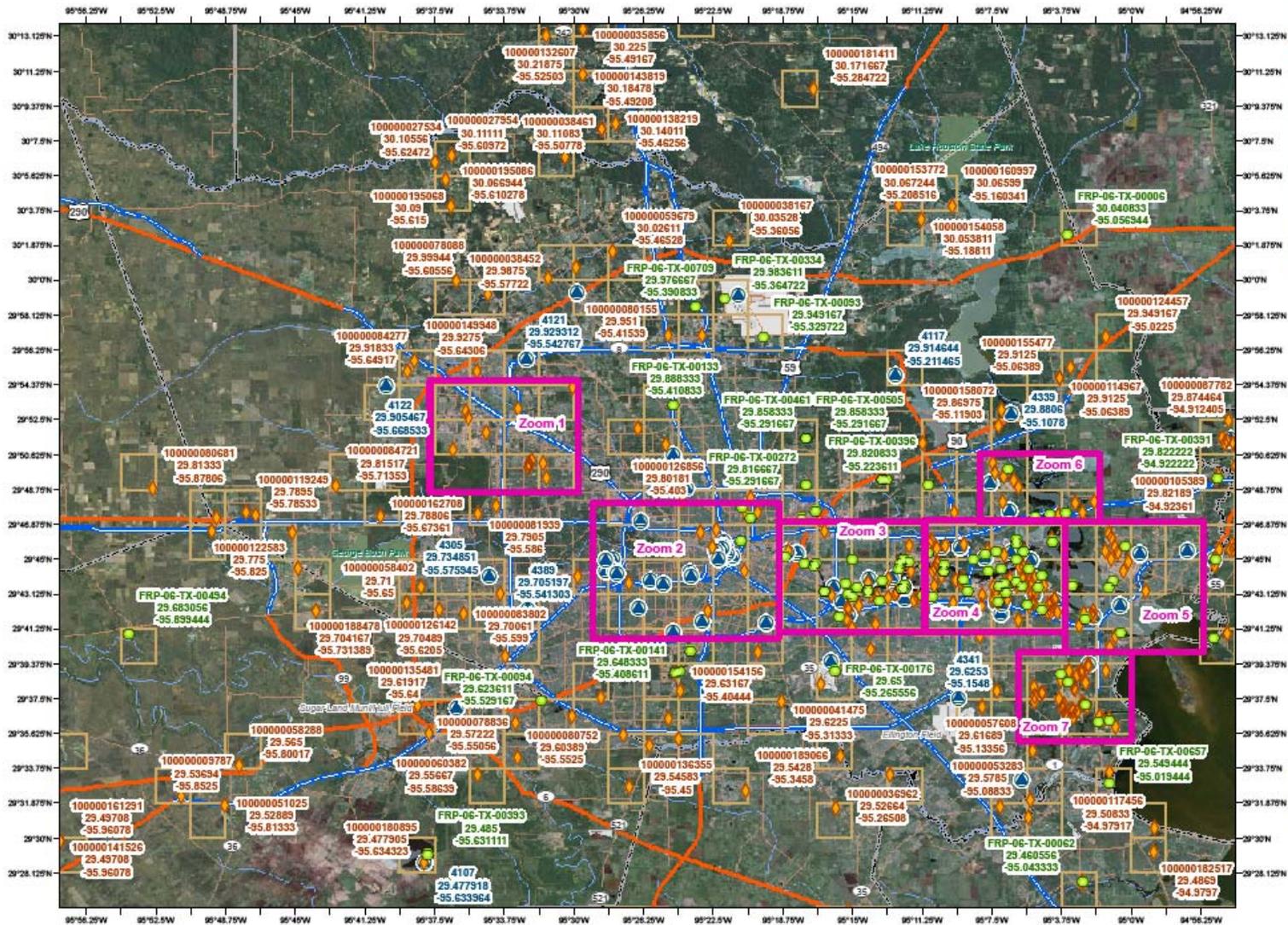


Infrastructure of Concern	
Category	Location
Agriculture and Food	...
Building and Finance	...
Chemical	...
Commercial Facilities	...
Dams	...
Defense Industrial Base	...
Emergency Services	...
Energy	...
Government Facilities	...
Health Care	...
Information Technology	...
Nuclear Facilities	...
Physical Security	...
Telecommunications	...
Transportation	...
Water	...



RMP/FRP Facility Recon Utilizing ASPECT





Legend

-  RMP Facility
-  FRP Facility
-  CIKR Locations
-  RNA Counties
-  6k Reference Grid



USEPA REGION 6

Hurricane Ike Response

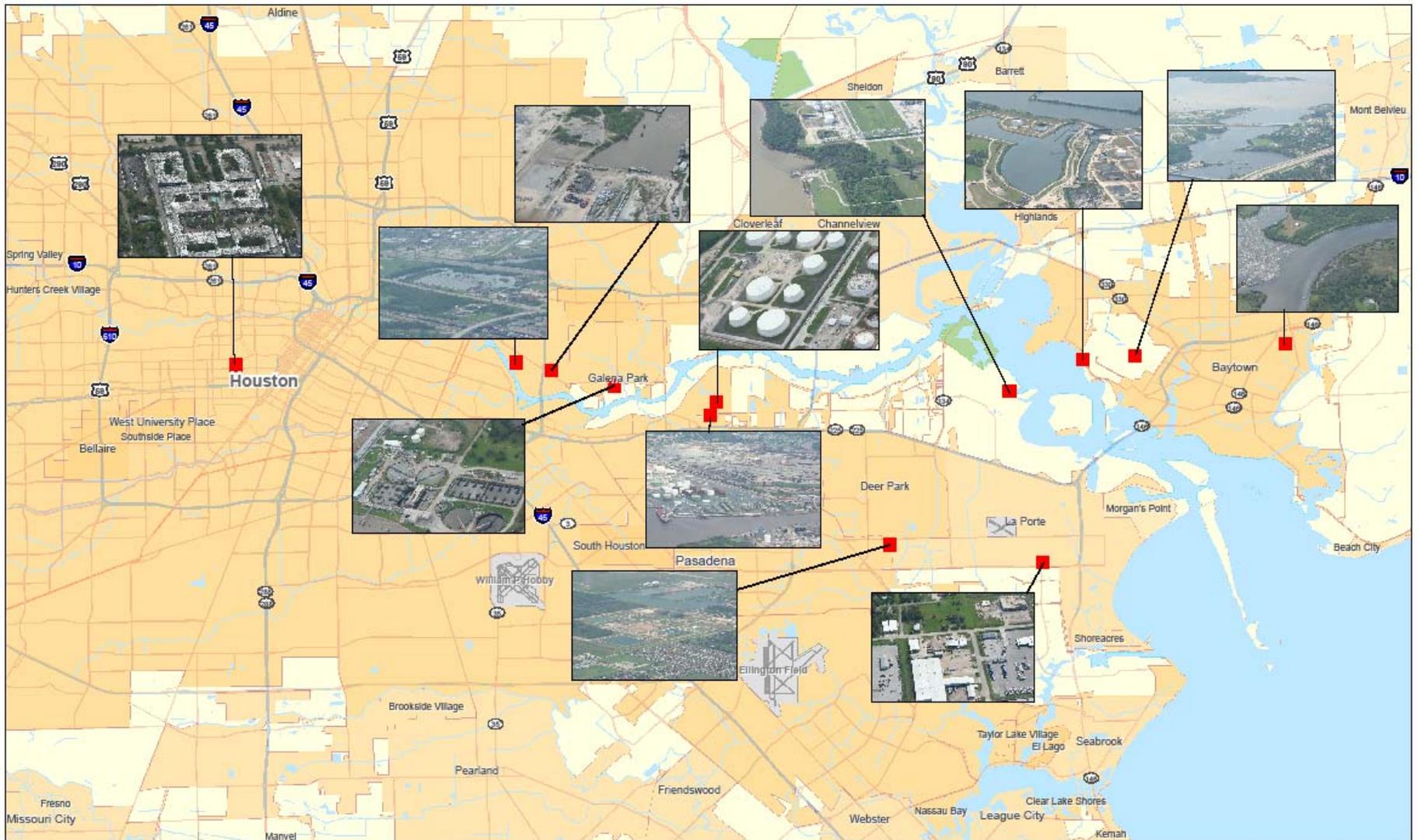
Harris

Overall Map

DATE Sep 12, 2008	PROJECT NO	SCALE AS SHOWN
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File: C:\Documents and Settings\jld\My Documents\Info\Project\080809\MapBook\Map_Recent\1x170809\Harris\Overall_12-Sep-08 05:36.dwg



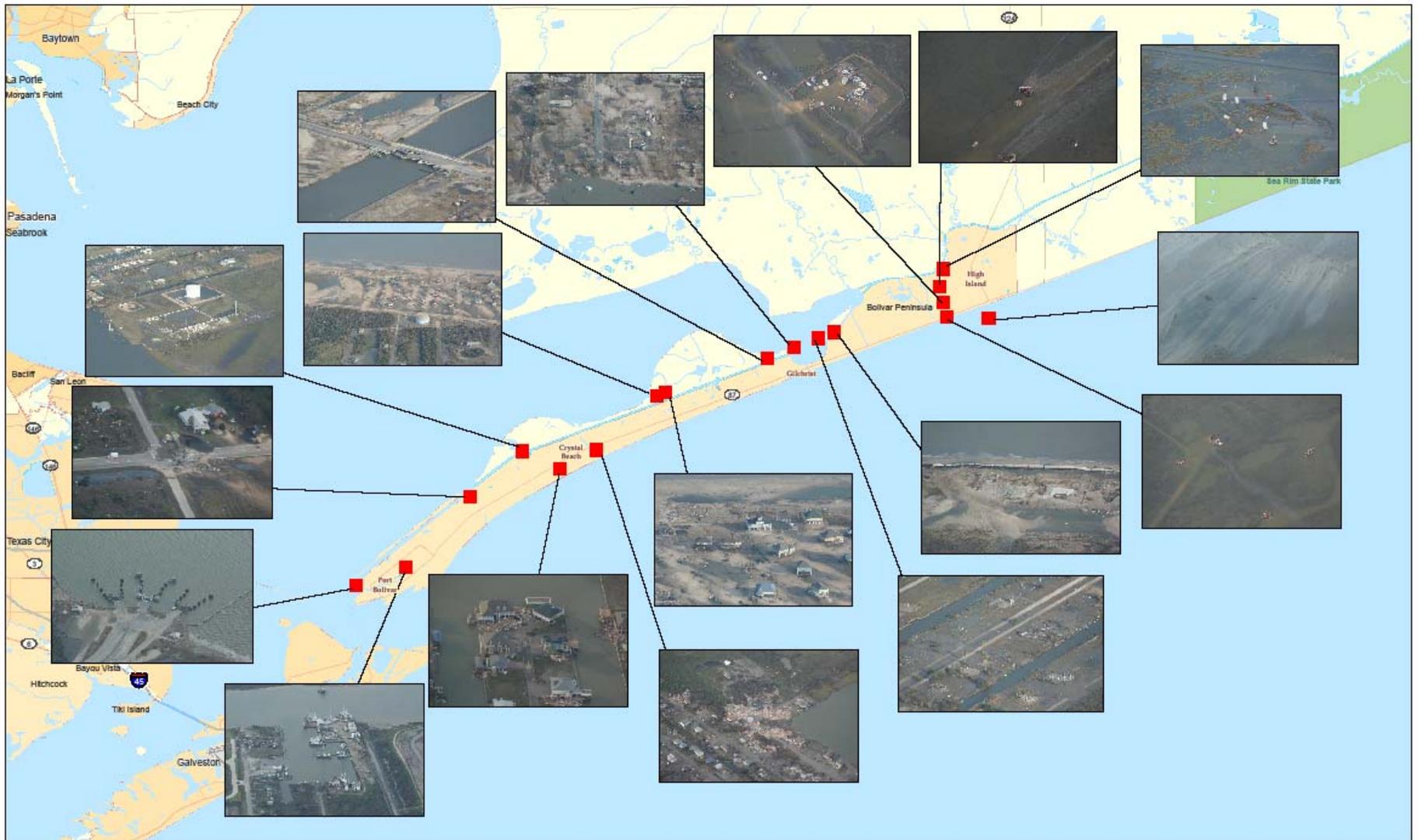


**Post-Ike ASPECT Aerial Overflight Photos
Harris County: Houston Area**



For Official Use Only
Map Created 9/29/2008 @ EPA Region 4 RRC

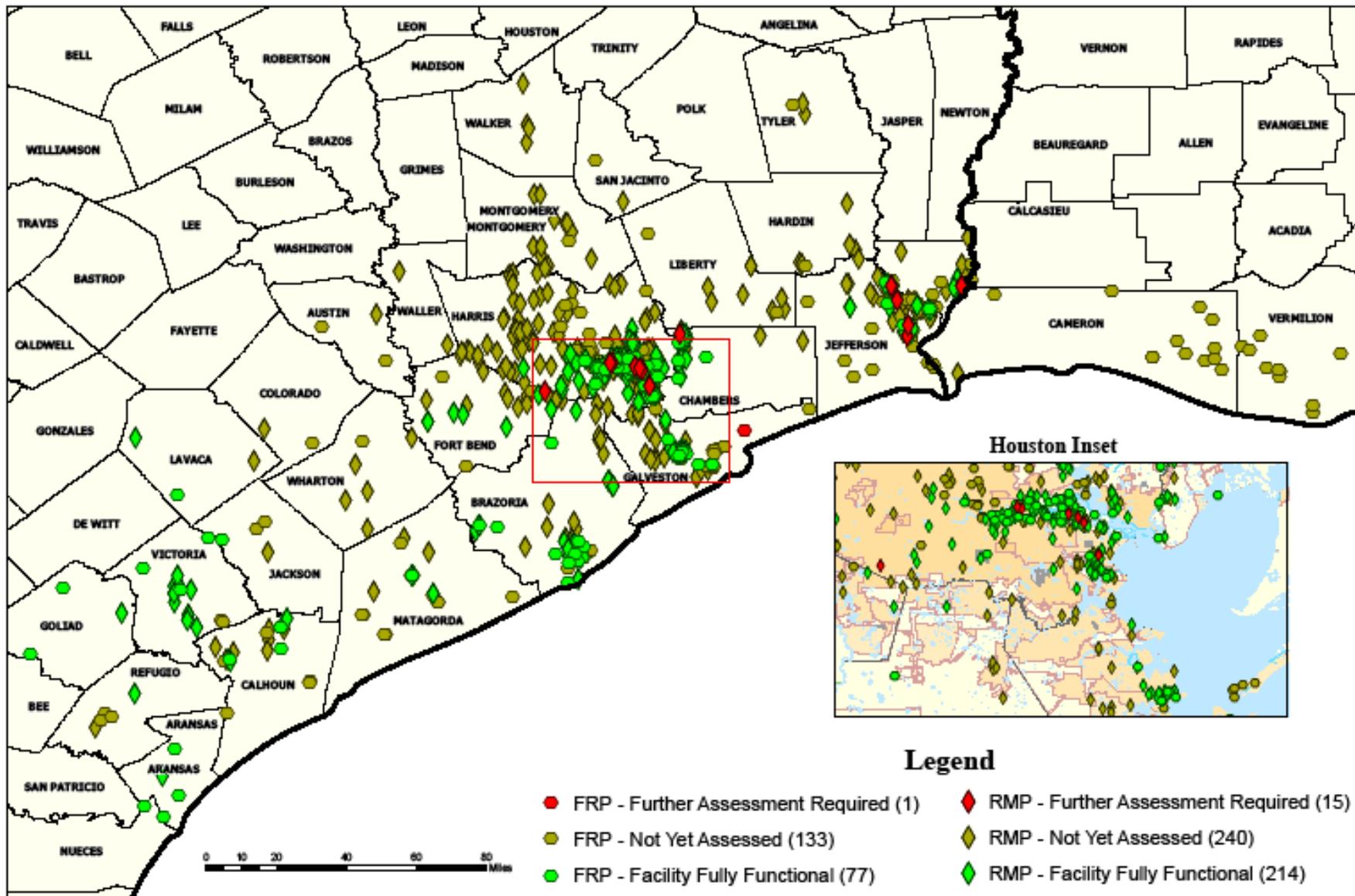




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Map Created: 9/25/2008 @ EPA Region 4 RRC

Post-Ike ASPECT Aerial Overflight Photos Bolivar Peninsula





**Status of FRP & RMP Facilities
in FEMA Designated Counties and Parishes
as of 9/19/08**



For Official Use Only
Map Created: 9/21/2008 @ EPA Region 6 RBC



Orphan Container/Facility Recon Utilizing Helicopters



Overflight 9/15/08

Flooded Facility - Houston Ship Channel



N 29° 44.738' W 095° 11.807'

388 ft

09/15/2008 11:51:56 AM

Overflight 9/15/08

Light Oil Streamers - Houston Ship Channel



N 29° 43.440' W 095° 01.328'

496 ft

09/15/2008 12:02:16 PM

Overflight 9/15/08

Destroyed FRP Facility



N 29° 41.783' W 094° 06.193'

209 ft

09/15/2008 3:39:04 PM



Overflight 9/15/08

Tanks in Water



N 29° 38.483' W 094° 37.156'

190 ft

09/15/2008 1:17:27 PM



Orphan Container Ground Recon



55 Gallon Drums



15 1:58PM

N 29° 18.579' W 094° 47.450'

0 ft

09/15/2008 1:59:13 PM



Overpack Drum



N 29° 19.448' W 094° 46.392'

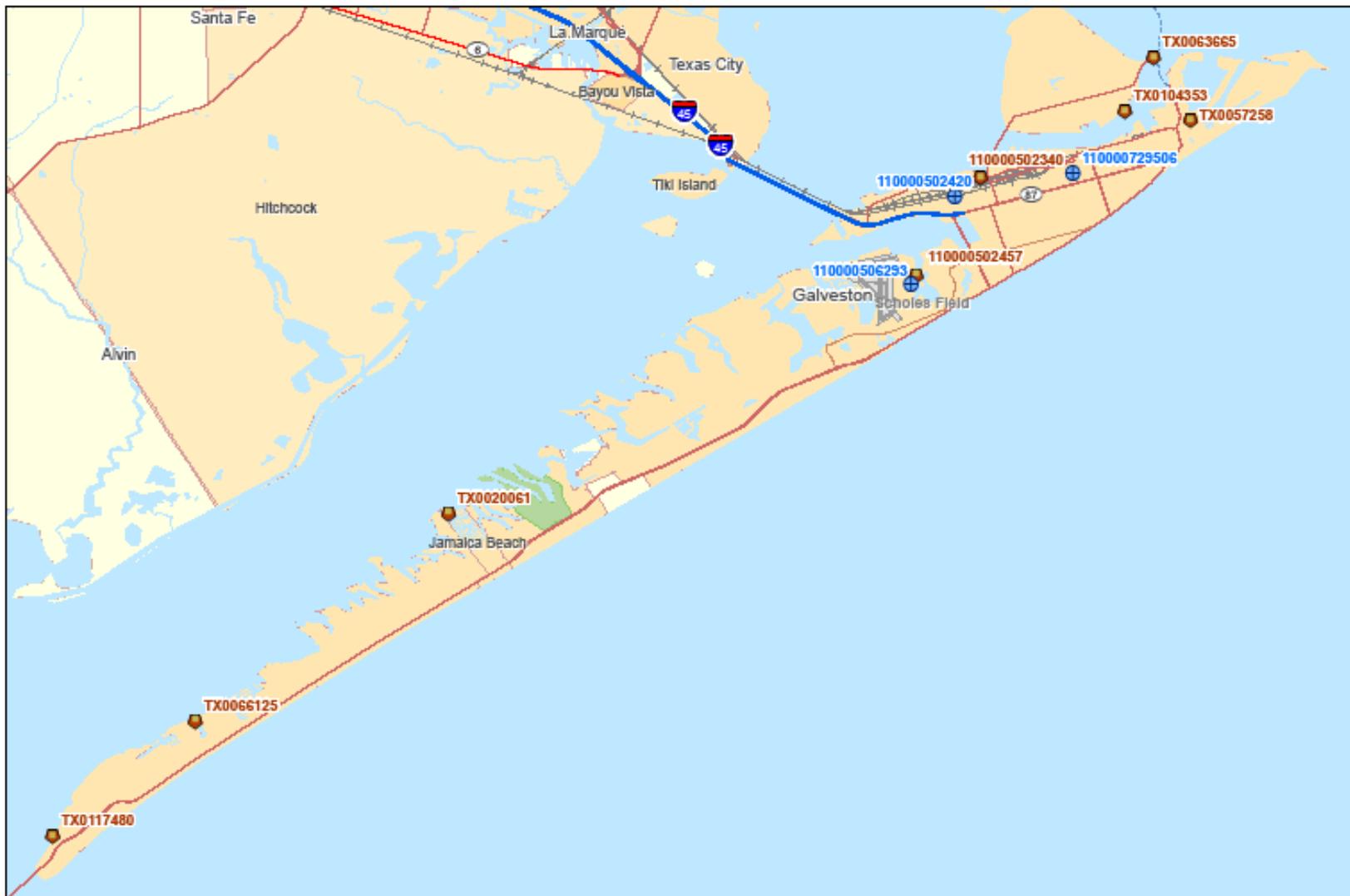
-28 ft

09/15/2008 3:15:47 PM



Water/Wastewater Treatment Plant Assessment





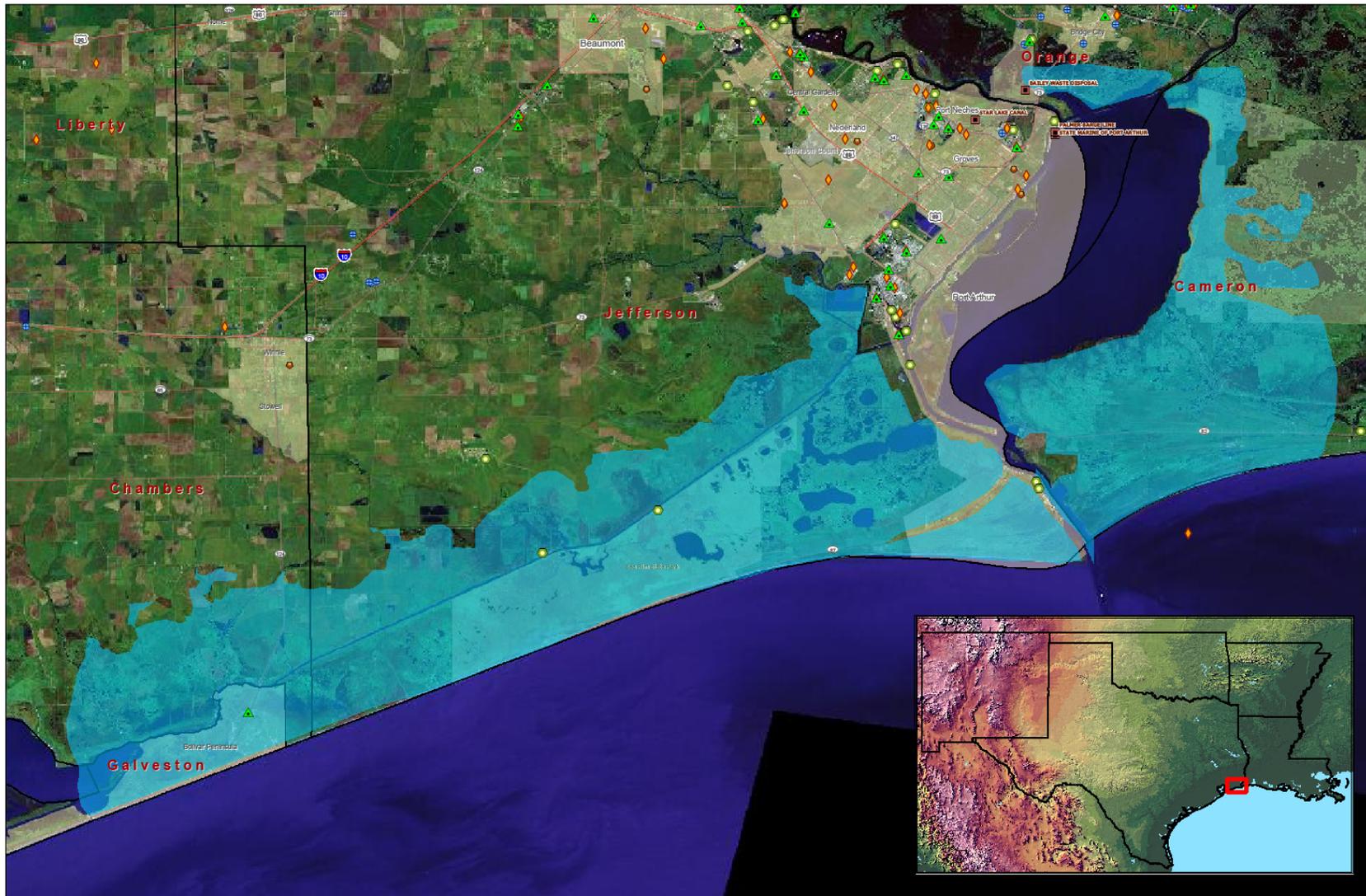
Legend

-  Wastewater Treatment Plant
-  Drinking Water Treatment Plant

Drinking Water and Wastewater Treatment Plants on Galveston Island, TX

For Official Use Only
Map Created: 9/29/2008 @ EPA Region 6 BRC



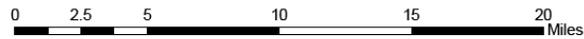


Legend

- NPL Site
- RCRA Facility
- RMP Facility
- Water Treatment Plant
- FRP Facility
- Flooded Areas*

*Source: Homeland Security Information Network

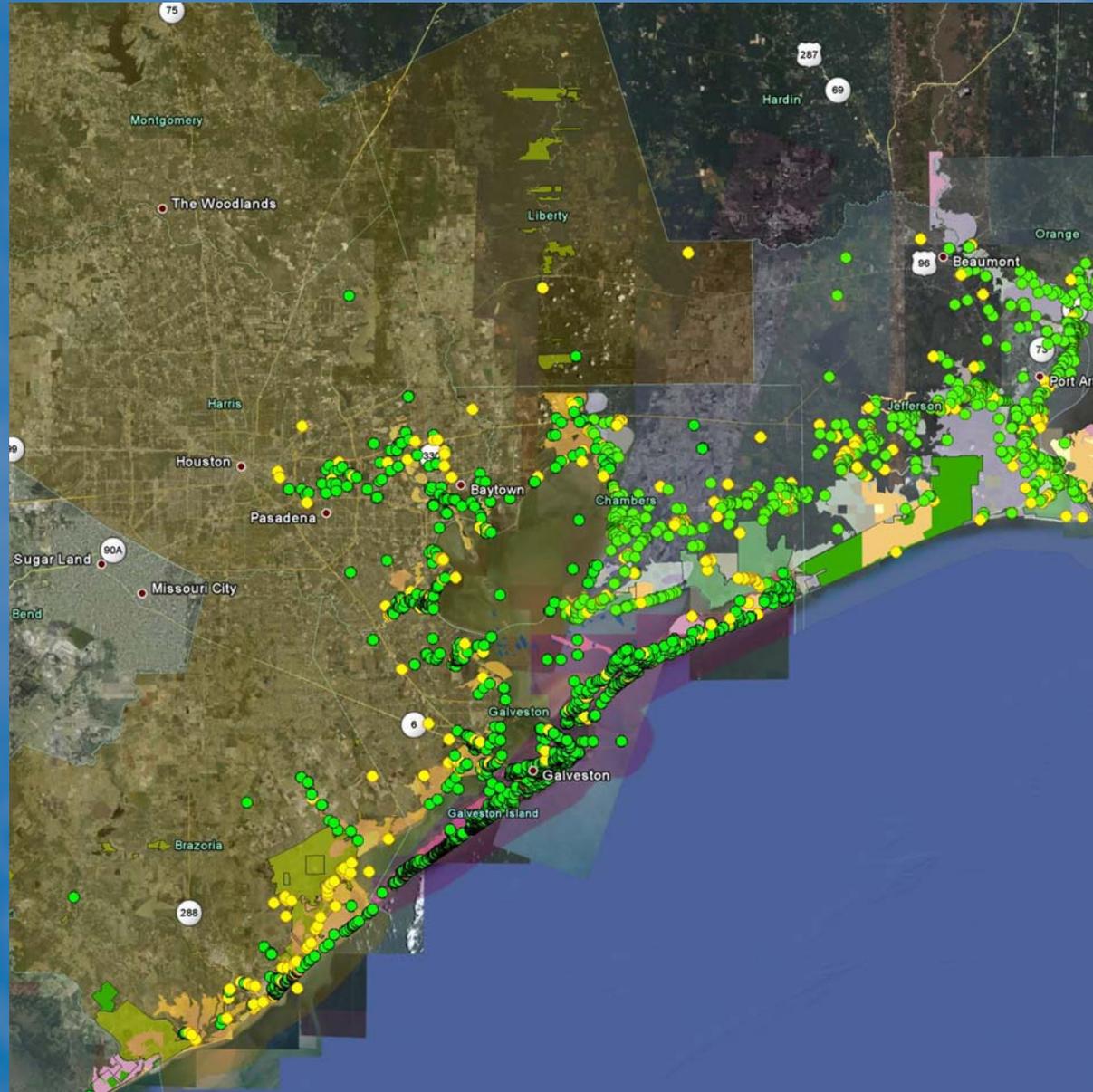
Known Flooding Extents as of 6pm 09/13/08

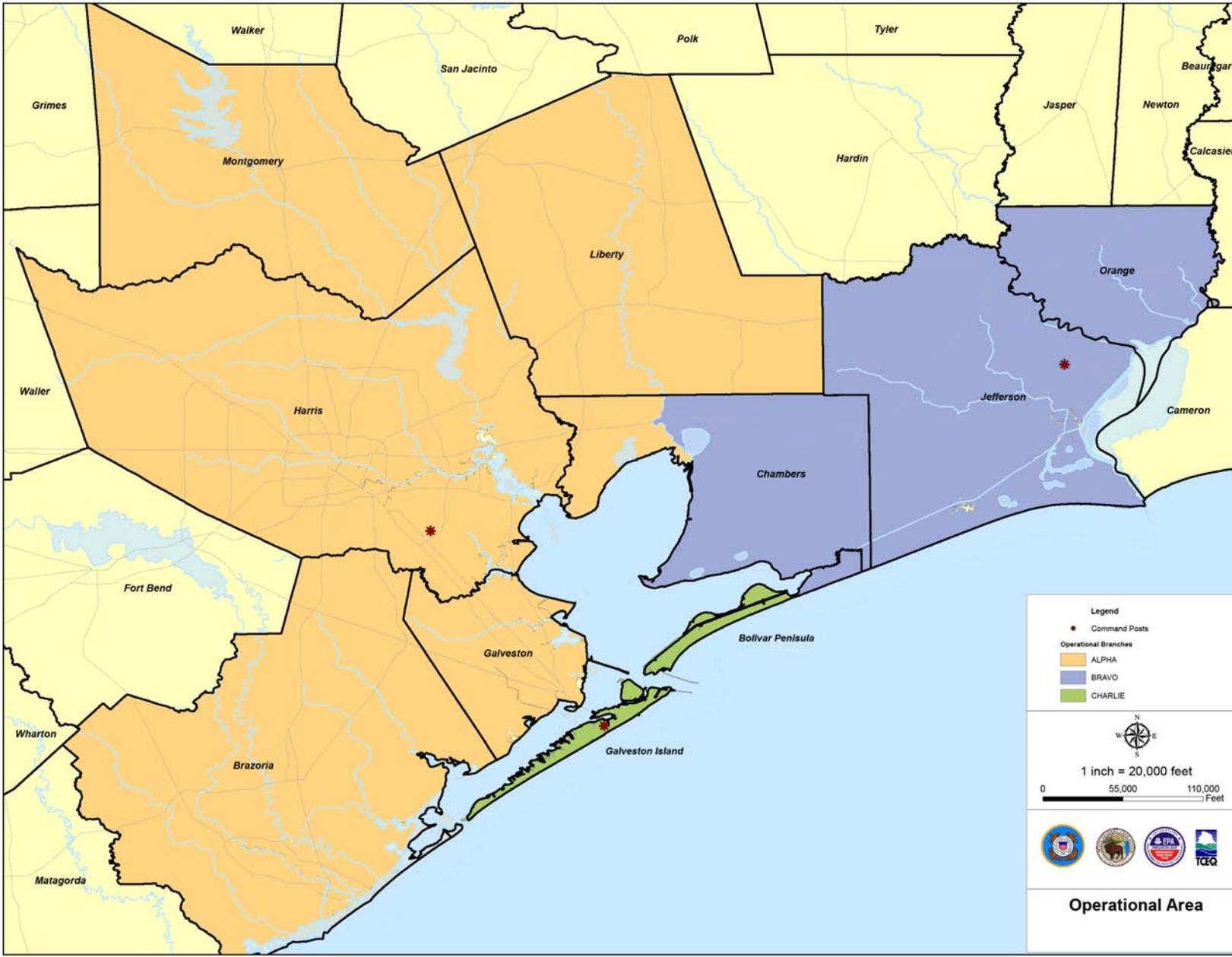


Map Created: 9/14/2008 09:48 @ EPA Region 6 BRC



Overview of Operational Area including Recovered (Green) and Left in Place Targets (Yellow)





Legend

- Command Posts

Operational Branches

- ALPHA
- BRAVO
- CHARLIE

0 55,000 110,000 Feet

1 inch = 20,000 feet

Operational Area



Organization

- EPA recon teams “in theater” pre-landfall.
- Daily operations calls between EPA, USCG and TCEQ field teams conducted pre-landfall.
- EPA IC, Ops, PSC, SO, mobilized to Beaumont TCEQ offices on 9/16/2008.
- Agencies conducting aerial and ground recon since 9/14/2008.



Organization

- Organizational meeting with TCEQ, TGLO, USCG and EPA on Galveston Island 9/17/2008.
- Additional meetings with TCEQ Houston Office (Region 12) and Beaumont Office (Region 10).
- By 9/18/2008 EPA, USCG, TCEQ, and TGLO are in agreement to enter Unified Command for ESF10.



Organization

- First Unified Command IAP produced 9/22/2008.
- TCEQ, TGLO, USCG, EPA begin conducting unified operations from the Pasadena, TX Command Post.



SIGNIFICANT OBJECTIVES

- Recon and assessment of impacted areas to verify targets for recovery.
- Minimize environmental impacts from the release of oil and hazardous materials
- Conduct collection and disposal of household hazardous waste, orphan containers, high hazard materials and other such materials.
- Evaluate and determine impacts to facilities posing risk to the public.



SIGNIFICANT OBJECTIVES

- Contain recover and remove spilled oil and hazardous materials as needed.
- Conduct environmental sampling as necessary to assess the impact of releases of hazardous materials released during the storm.
- Provide assistance with debris management through landfill and staging area observations.



Operations













SUCSESSES

- Smart and Professional Personnel.
- Pre-planning Activities.
- The Numbers



THE NUMBERS

Category	Total
5 gallon containers	72745
15-30 gallon containers	2307
55 gallon containers	1724
Greater than 55-gal	201
85 gallon overpacks	163



THE NUMBERS

Category	Total
cylinders	1447
large propane tanks under 250 gallons	28
large propane tanks over 250 gallons	390
totes	114
large oil and fuel tanks	9



THE NUMBERS

Household Hazardous Waste

Category	Totals
HHW	10192
lead acid batteries	818
mercury containing items	43
small propane tanks	3752



CHALLENGES

- Data Collection, Data Management, Data Users.
- ICS
- Logistics, Logistics, Logistics.
- Exit Strategy
- Pre-Planning





Questions?

