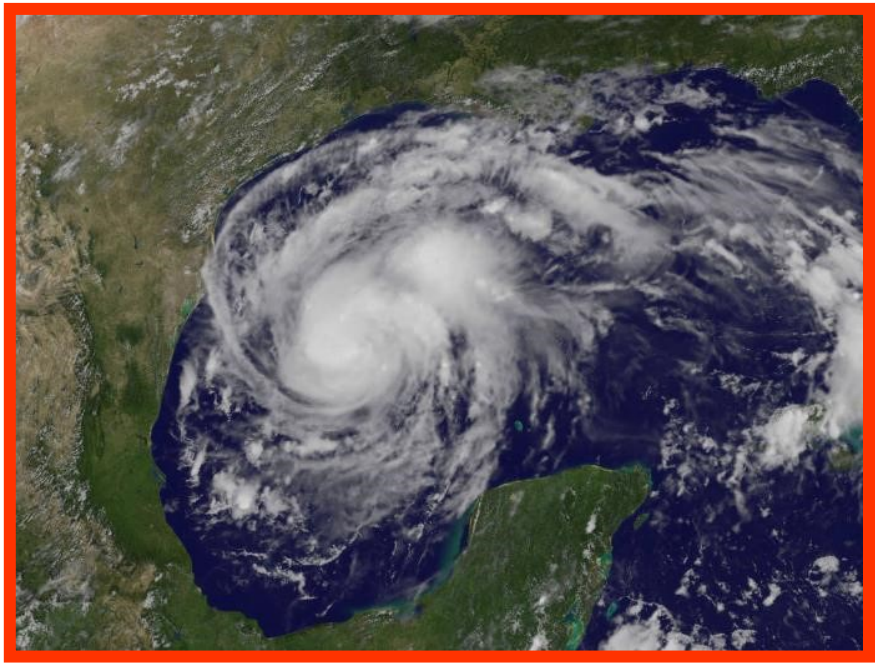
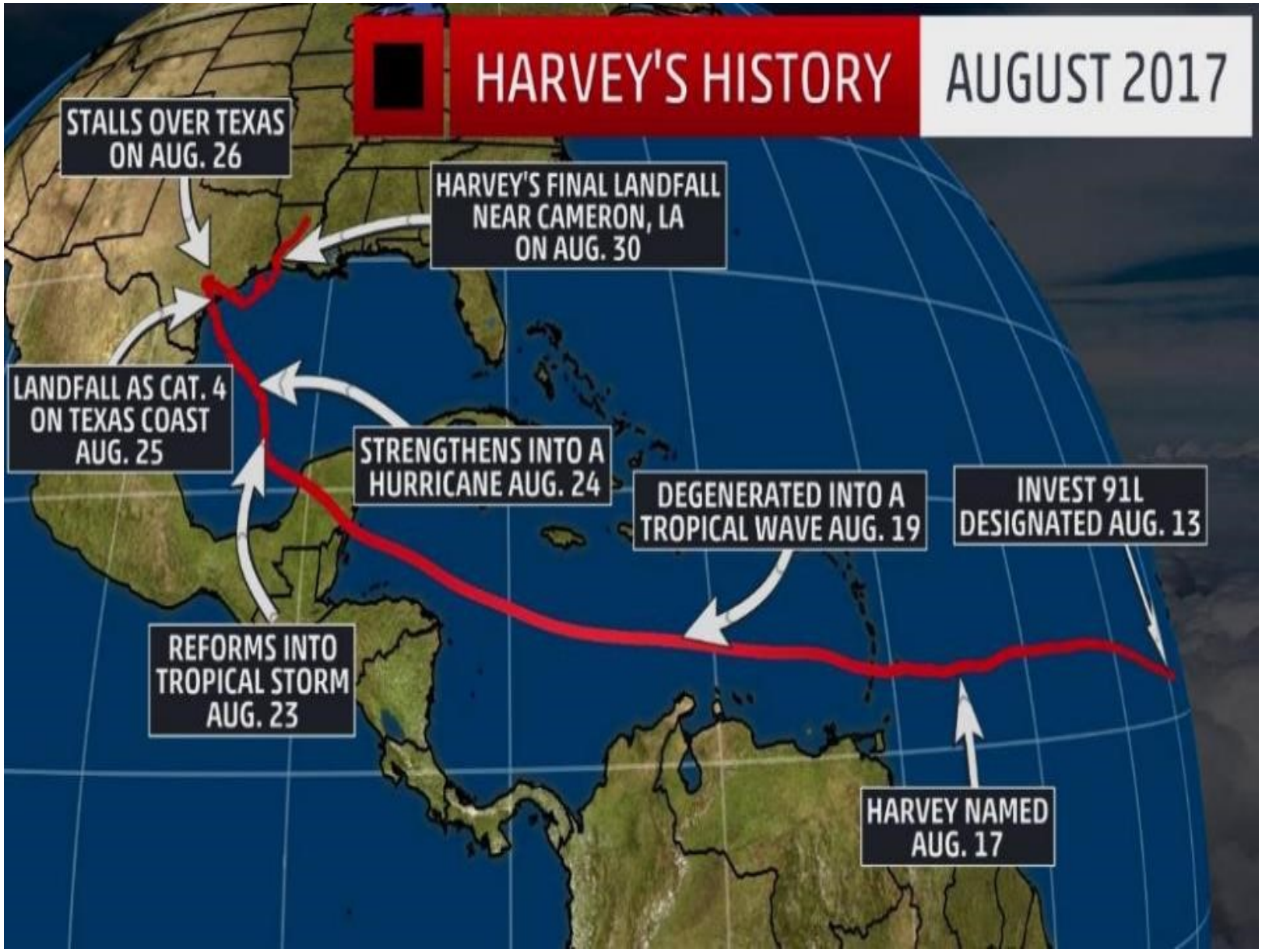


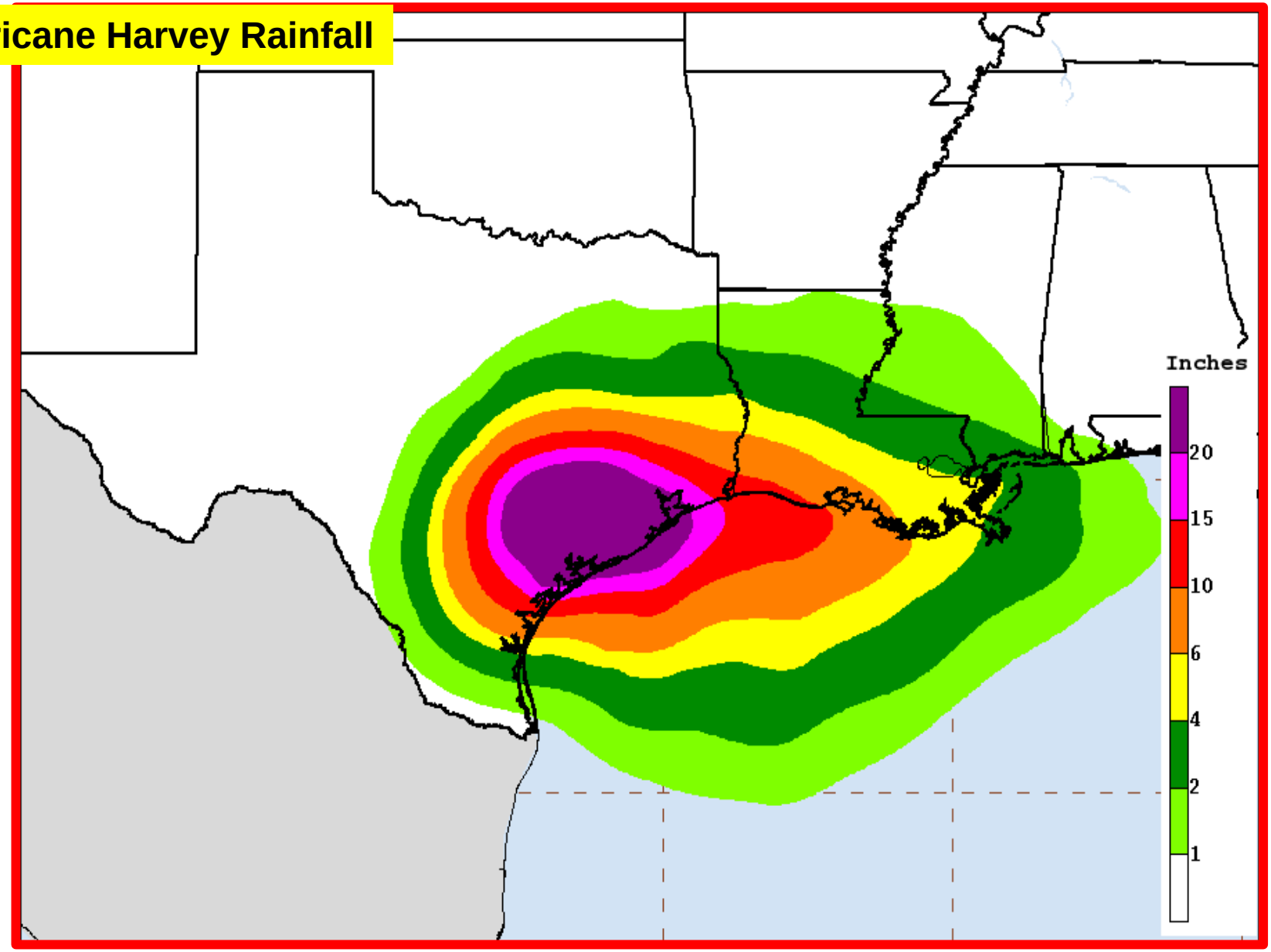
EPA Response to Hurricane Harvey

Carl Edlund
Director, Superfund Division
Region 6

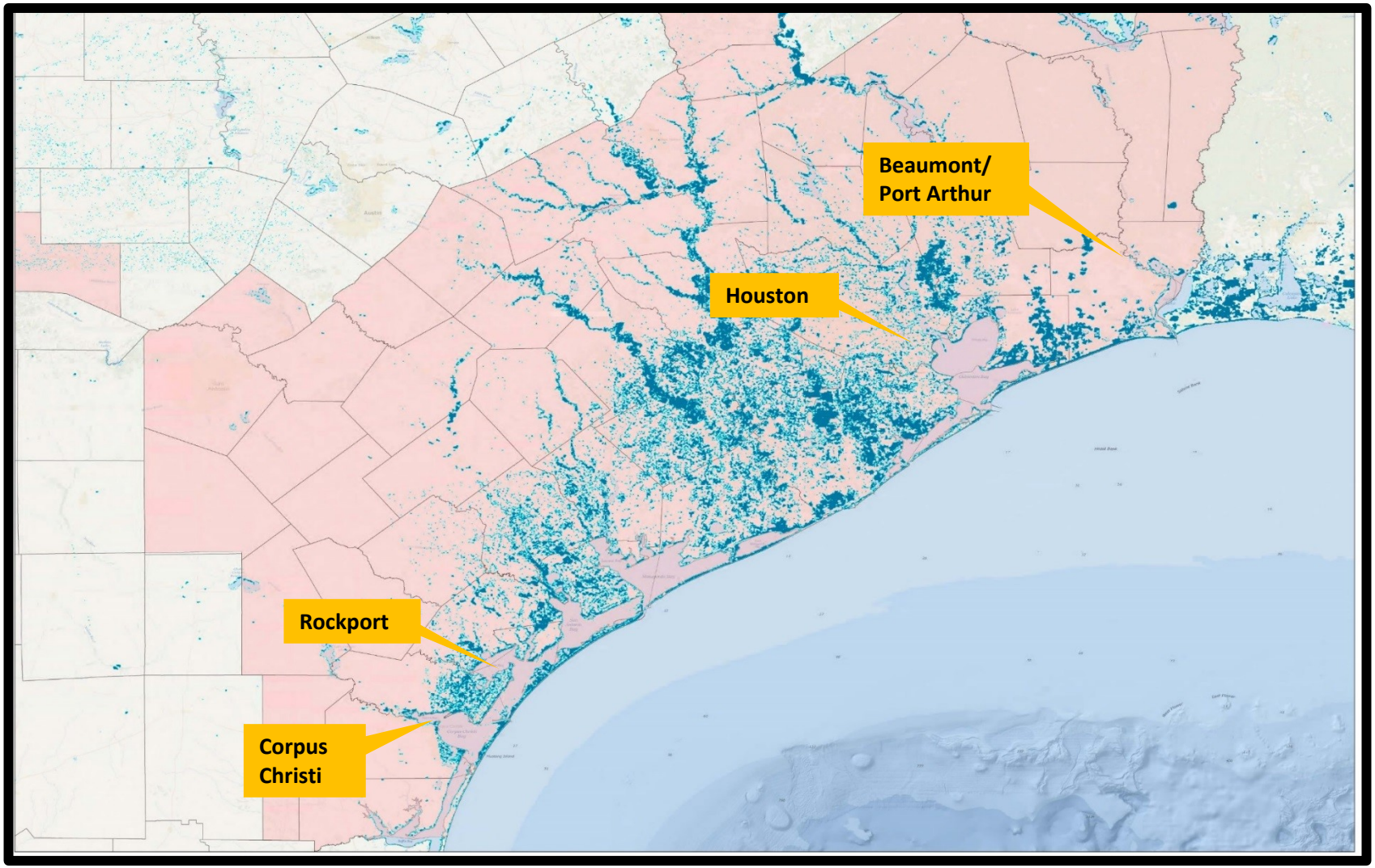
7063050


HARVEY'S HISTORY
AUGUST 2017
STALLS OVER TEXAS ON AUG. 26
HARVEY'S FINAL LANDFALL NEAR CAMERON, LA ON AUG. 30
LANDFALL AS CAT. 4 ON TEXAS COAST AUG. 25
STRENGTHENS INTO A HURRICANE AUG. 24
DEGENERATED INTO A TROPICAL WAVE AUG. 19
INVEST 91L DESIGNATED AUG. 13
REFORMS INTO TROPICAL STORM AUG. 23
HARVEY NAMED AUG. 17

Hurricane Harvey Rainfall



Hurricane Harvey Flooding

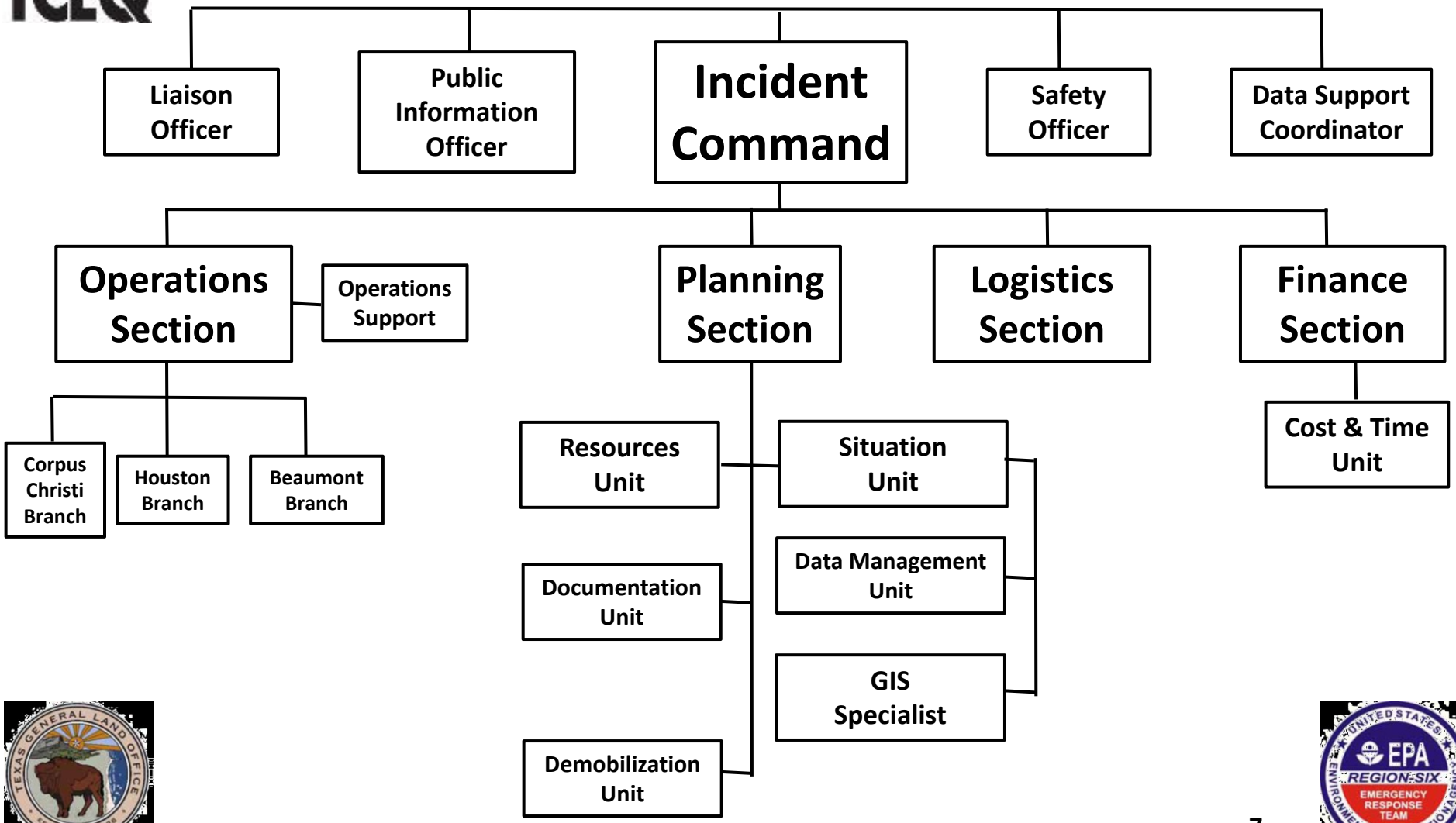


UNIFIED COMMAND

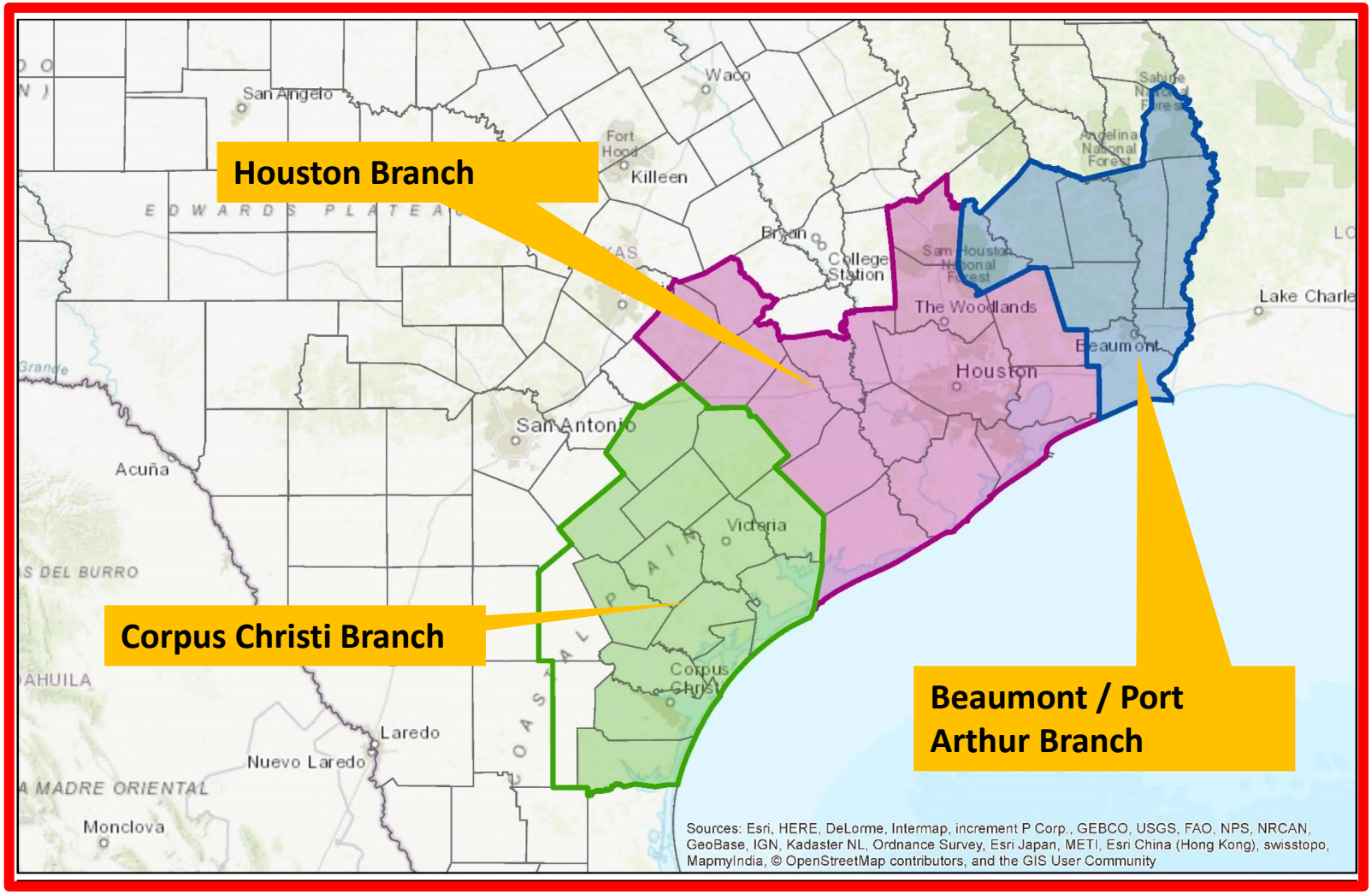
RESPONSE OBJECTIVES

- Maximize protection of public, health, and safety.
- Coordinate through the Unified Command.
- Drinking water and wastewater systems
- Orphaned containers or discharges
- Identify and address pollution targets.
- Critical infrastructure, chemical, and refining facilities
- Inform the public, stakeholders, and the media
- Deploy unique EPA assets
- Secure Superfund sites

Unified Command Organization Chart

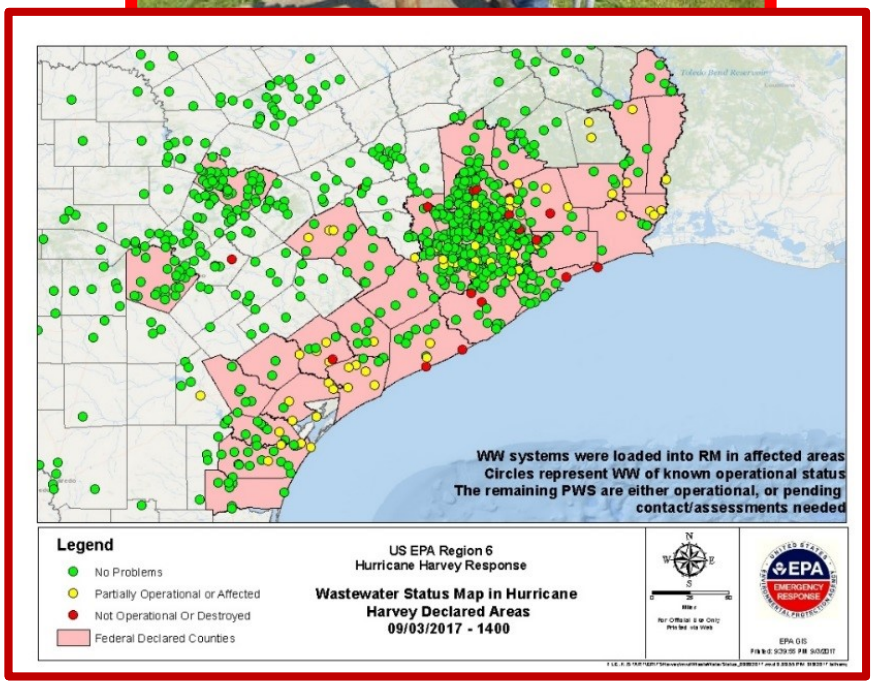


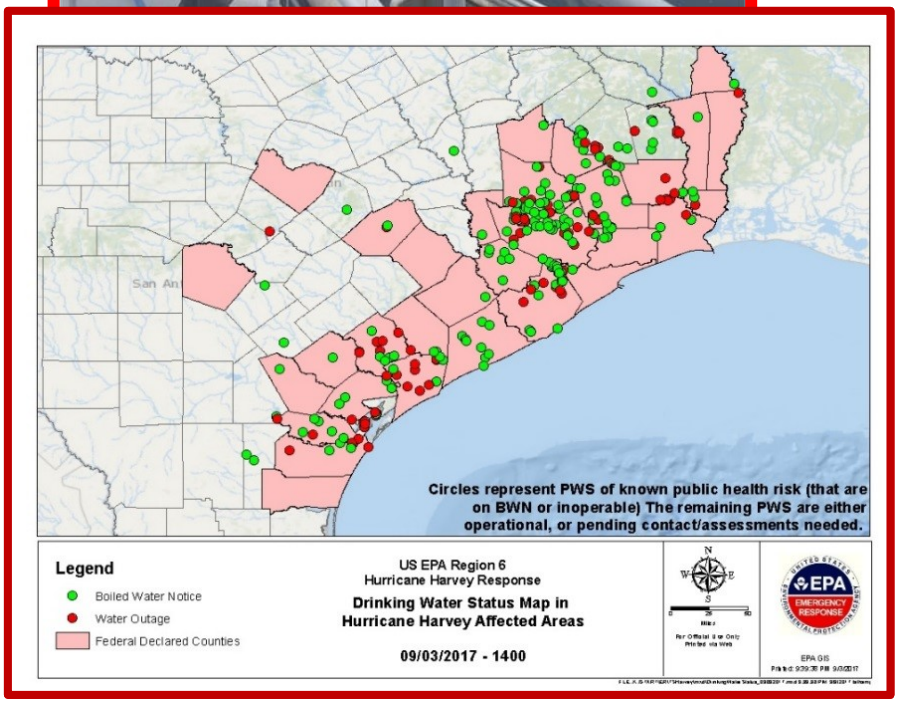
EPA Resources



Unified Command
Mobile Command Post

Drinking Water / Waste Water Assessments



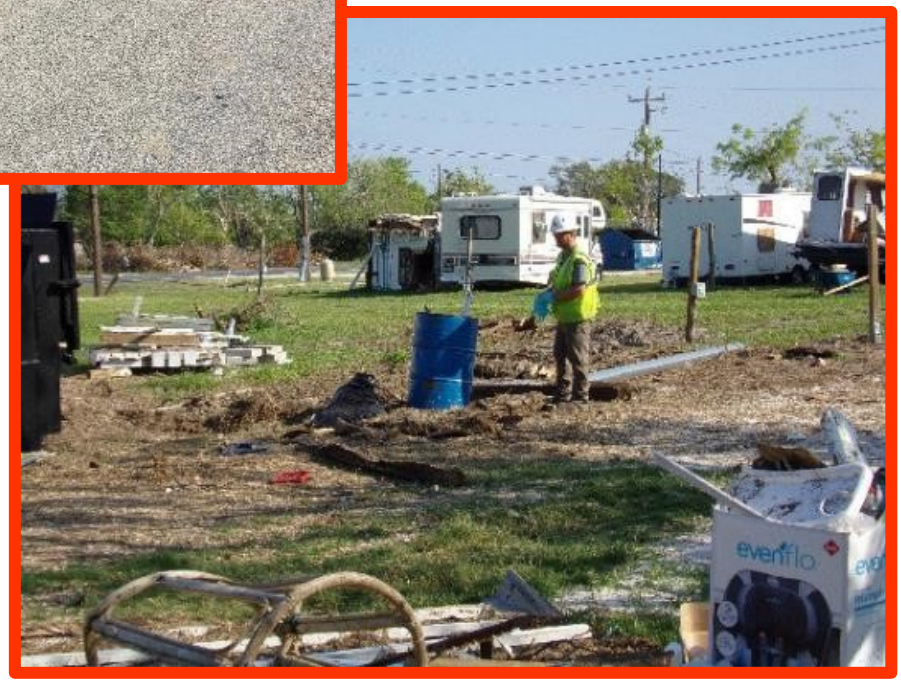


Orphaned Container Recovery

Port Arthur

Corpus Christi

Port Aransas



10/18/2017

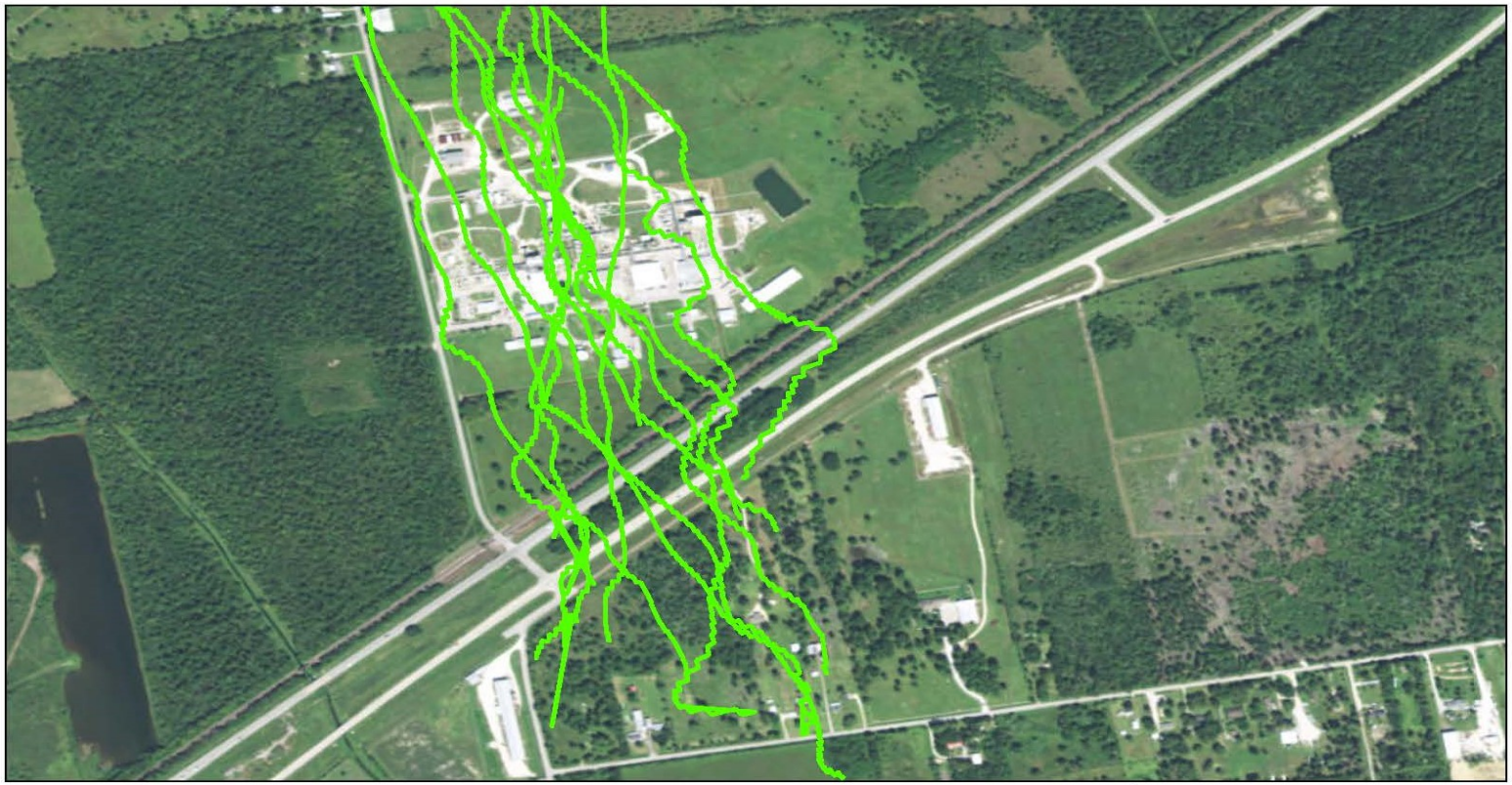
Support to TCEQ / Staging Area Observers

Superfund Sites

ASPECT Activities

- DHS and DOE requested monitoring
- Pipelines
- Refineries
- Releases at chemical and oil facilities
- Releases and orphan containers

Arkema Chemical Facility, Crosby, TX



Chemical Compounds	Short-term AMCV (ppm)
1,1-dichloroethane	1.0
1-butene	27
acetone	11
dichlorodifluoromethane	10
ethyl acetate	4
ethylene	500
isobutane	33
methyl ethyl ketone	20
methylene chloride	3.4
n-butyl acetate	7.4
n-propyl acetate	2
propylene	Simple Asphyxiant
vinyl chloride	27

Legend

No Readings Above Benchmarks

What's an AMCV?

AMCV is a collective term used to describe chemical-specific air concentrations used to evaluate air monitoring data that are set to protect human health and welfare. Short-term AMCVs are based on data concerning acute health effects. **AMCVs** may contain health-based Reference Values (ReVs) and health- and welfare-based ESL values. AMCVs are screening levels used in TCEQ's evaluation of ambient air monitoring data to assess the potential for measured concentrations of specific chemicals to cause health or welfare effects. Health-based AMCVs are safe levels at which exposure is unlikely to result in adverse health effects. ESLs are screening levels used in the TCEQ's air permitting process to establish maximum emission rates that are written into enforceable air permits. Health-based **ESLs** are set 70 percent lower than the safe level, or AMCV. This additional buffer allows TCEQ to take into account exposure to chemicals from multiple sources in air permit reviews.

USA EPA REGION 6
Flight 13 ASPECT

N
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0 0.065 0.13
Miles

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EPA GIS
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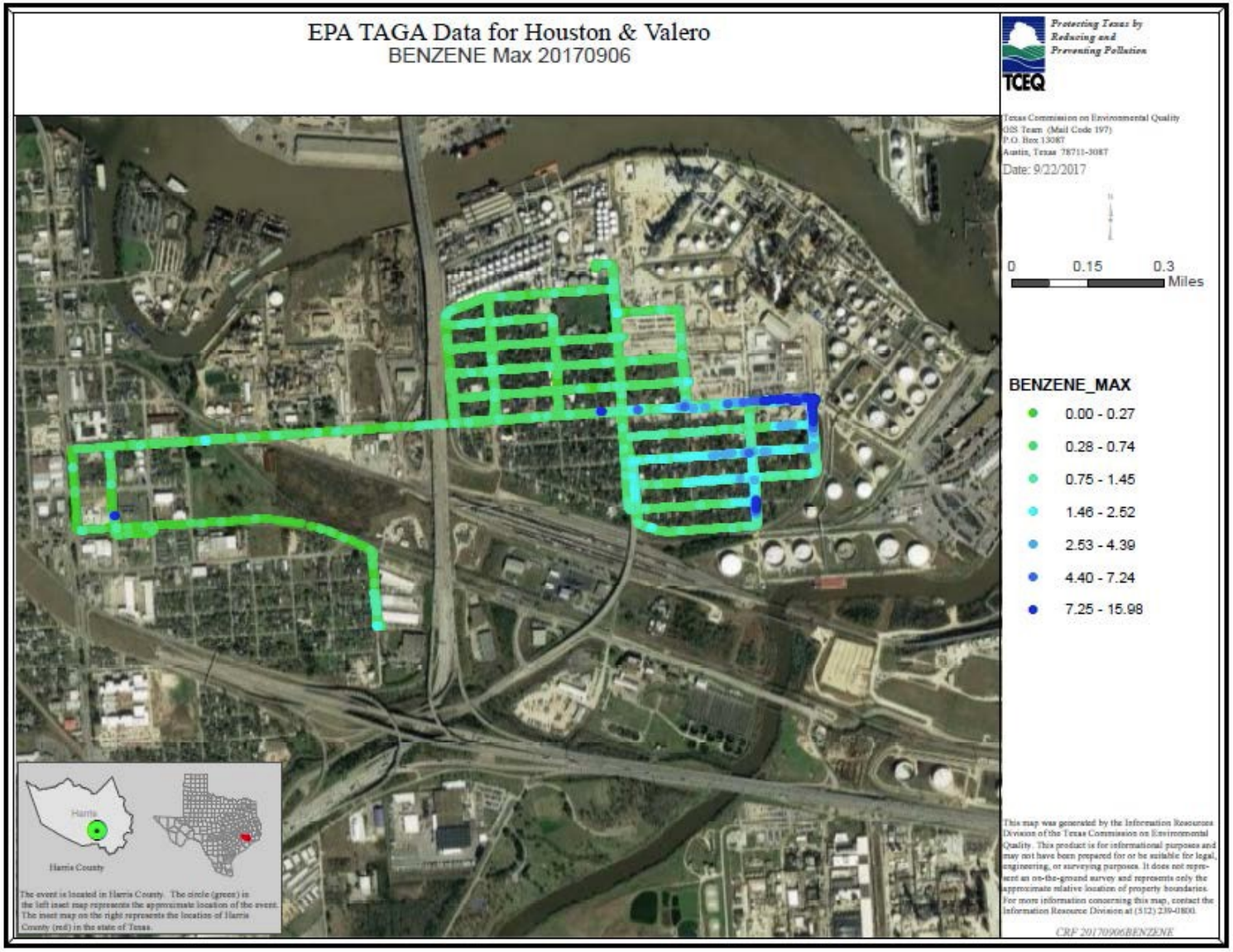
TAGA Monitoring Activities

- Refineries
- Sensitive communities
- Chemical manufacturing


EPA TAGA Data for Houston & Valero
BENZENE Max 20170906
Protecting Texas by Reducing and Preventing Pollution
TCEQ
Texas Commission on Environmental Quality
GIS Team (Mail Code 197)
P.O. Box 13087
Austin, Texas 78711-3087
Date: 9/22/2017
0
0.15
0.3
Miles
BENZENE_MAX
0.00 - 0.27
0.28 - 0.74
0.75 - 1.45
1.46 - 2.52
2.53 - 4.39
4.40 - 7.24
7.25 - 15.98
Harris
Harris County
The event is located in Harris County. The circle (green) in the left inset map represents the approximate location of the event. The inset map on the right represents the location of Harris County (red) in the state of Texas.
This map was generated by the Information Resources Division of the Texas Commission on Environmental Quality. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact the Information Resource Division at (512) 239-0800.
CRF 20170906BENZENE

10/18/2017

PHILIS Analytical Activities

- On- Site Releases
- Staging area sampling
- Superfund sites

Community Liaisons

Accomplishments

- 648 Hazard Evaluations completed
- 256 spills investigated
- 1,055 orphan containers recovered
- 625 drinking water assessments completed
- 441 waste water assessments completed
- Daily aerial over-flights for air monitoring
- Fuel waivers and No Action Assurance letters issued