



USEPA Region 6 Environmental Justice Summit



**Emergency Response and
Preparedness for Disasters Discussion**

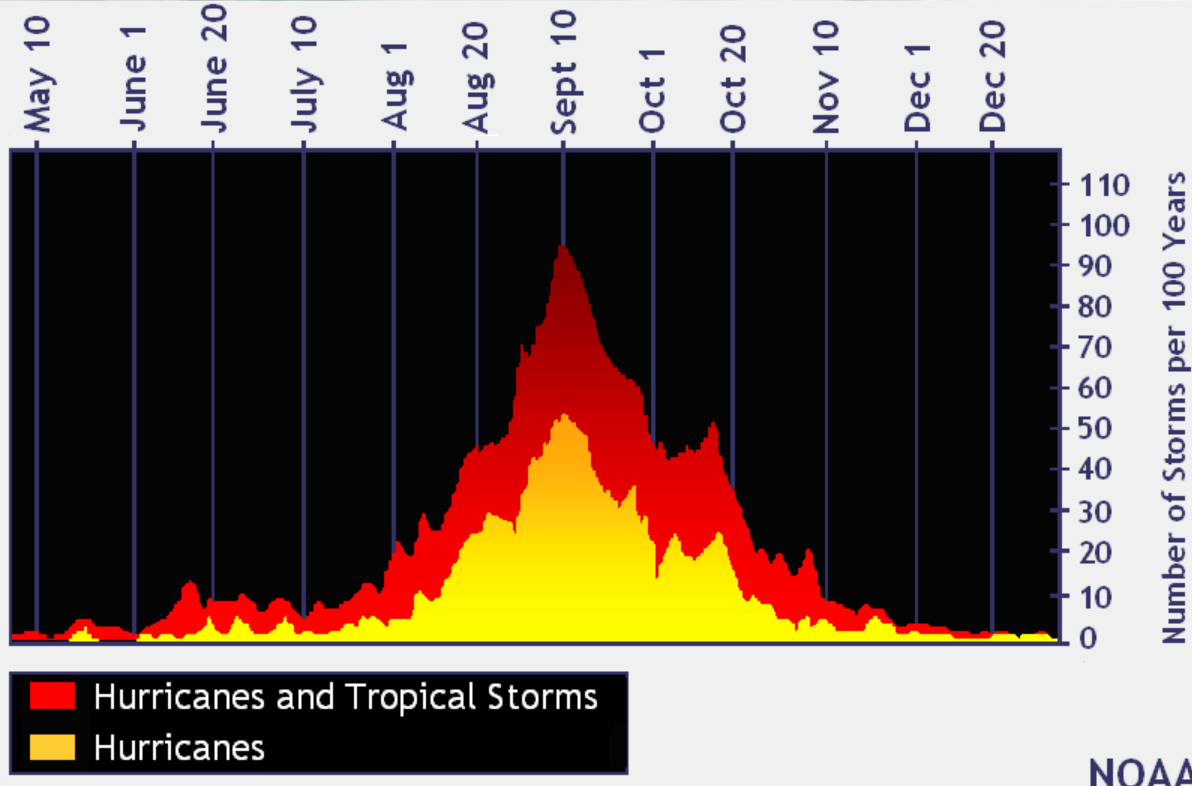
HURRICANE PREPARDNESS

**Kelly Cook, Director
Critical Infrastructure Division
Office of Compliance and Enforcement
Texas Commission on Environmental Quality**



Hurricane Season

- Hurricane season officially begins on June 1 and ends on November 30, but tropical cyclones do form outside of those dates



NOAA

This chart shows hurricane and tropical storm activity in the Atlantic and Gulf of Mexico



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Past Hurricane Seasons

| | Average From 1981 - 2010 | Average Since 1995 | 2013 | | 2014 | | 2015 | |
|-----------------------------|--------------------------|--------------------|-----------|-----------|-----------|----------|-----------|-----------|
| | | | Predicted | Actual | Predicted | Actual | Predicted | Actual |
| Named Storms | 12 | 15 | 13 - 20 | 13 | 11 - 14 | 8 | 6-11 | 12 |
| Hurricanes | 6 | 8 | 7 - 11 | 2 | 5 - 6 | 6 | 3 - 6 | 4 |
| Major (Category 3 or above) | 3 | 4 | 3 - 6 | 0 | 1 - 2 | 2 | 0 - 2 | 2 |





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2016 Hurricane Season Prediction

| | AccuWeather | Weather Channel | Colorado State | NOAA |
|---|-------------|-----------------|----------------|----------------|
| Named Storms | 14 | 14 | 13 | 10 – 16 |
| Hurricanes | 8 | 8 | 6 | 4 – 8 |
| Major Hurricanes (Category 3 or above) | 4 | 3 | 2 | 1 – 4 |

NOAA's Climate Prediction Center says the 2016 Atlantic hurricane season, which runs from June 1 through November 30, will most likely be near-normal, but forecast uncertainty in the climate signals that influence the formation of Atlantic storms make predicting this season particularly difficult.

2016 Atlantic Tropical Cyclone Names

Alex

Bonnie

Colin

Danielle

Earl

Fiona

Gaston

Hermine

Ian

Julia

Karl

Lisa

Matthew

Nicole

Otto

Paula

Richard

Shary

Tobias

Virginie

Walter

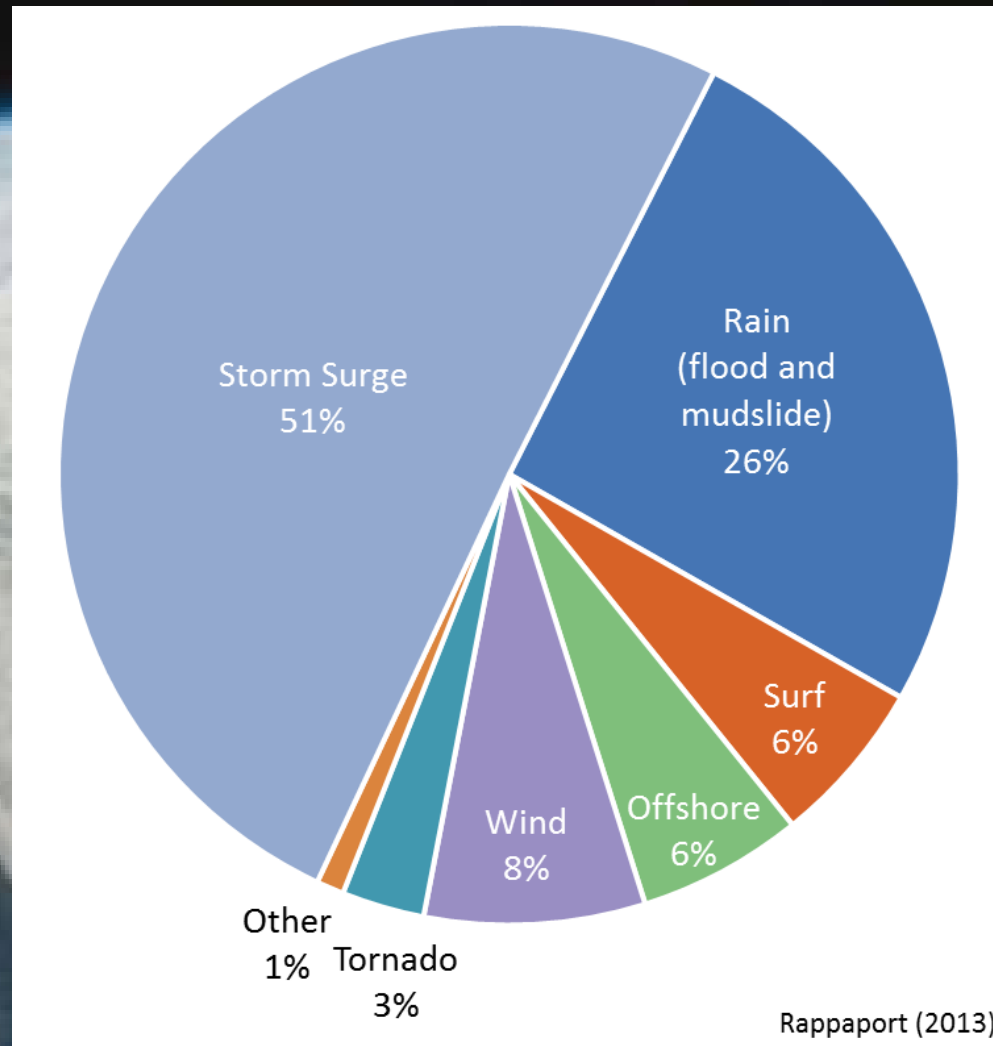


Be prepared: Visit hurricanes.gov

and follow @NWS and @NHC_Atlantic on Twitter

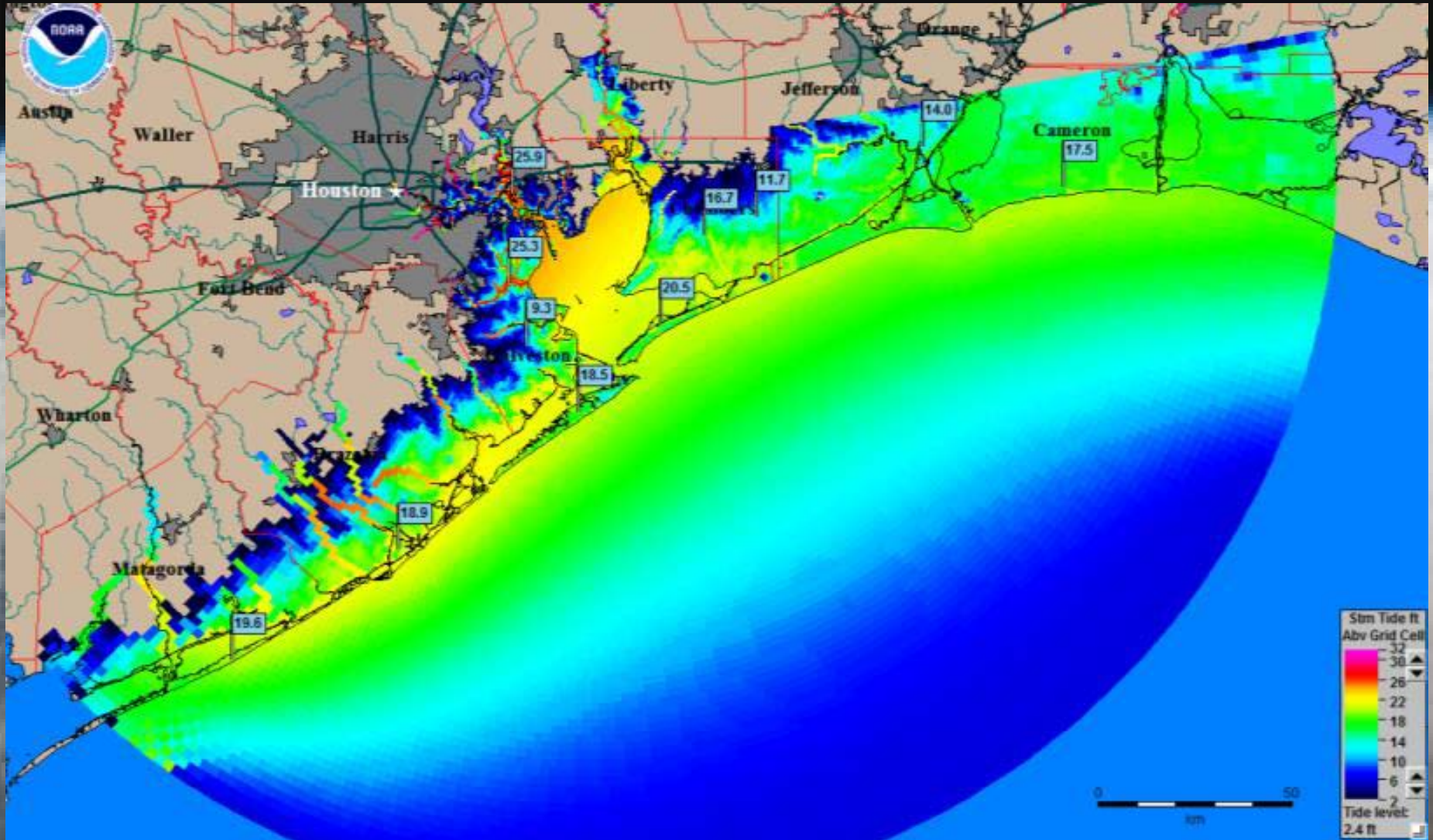


Hurricane Impacts





Storm Surge



Maximum expected surge, for a category 5 storm at high tide



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Hurricane Preparedness

Hurricane Preparedness

FAIL





Hurricane Preparedness

The three major components of disaster preparedness:

1. Have viable plans;
2. Train and Exercise with your response partners; and,
3. Hold "After Action Reviews" to update your plans.



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State of Texas Emergency Management Plan

Hurricane Annex

Hurricane Annex

State of Texas Emergency Management Plan

June 2014



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Hurricane Annex



www.txdps.state.tx.us/dem/documents/planState/annexHurricane.pdf

Texas Commission of Environmental Quality (TCEQ)

| Phase | TCEQ Responsibilities |
|-------------------------------|--|
| Hurricane Preparedness | <ul style="list-style-type: none">▪ Contact refineries in hurricane evacuation zones to make inquiries regarding facilities.▪ Coordinate with NDOW partners. Initiate incident in Response Manager data management system.▪ Storm debris management planning.▪ Fuel waiver coordination. |
| Response | <ul style="list-style-type: none">▪ Process fuel waivers▪ Conduct rapid needs assessments in conjunction with NDOW partners (TGLO, TPWD, USCG, US EPA).▪ Coordinate and process fuel waiver requests (EPA, DOE and Fuel Coordination Team).▪ Assess and provide technical infrastructure assistance to public water supply systems and wastewater systems.▪ Assess dams.▪ Authorize temporary debris management sites.▪ Support interoperable communications.▪ Provide a mobile command post to support ESF 3 and ESF 10 operations.▪ Coordinate HAZMAT and oil spill recovery operations. |



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Appendix 1

Emergency Fuel Support

www.txdps.state.tx.us/dem/documents/planState/emerFuelSupportApndx1.pdf

APPENDIX 1

Hurricane Annex



STATE OF TEXAS EMERGENCY MANAGEMENT PLAN

Revised August, 2011/Updated March 14, 2013

EMERGENCY FUEL SUPPORT

I. PURPOSE

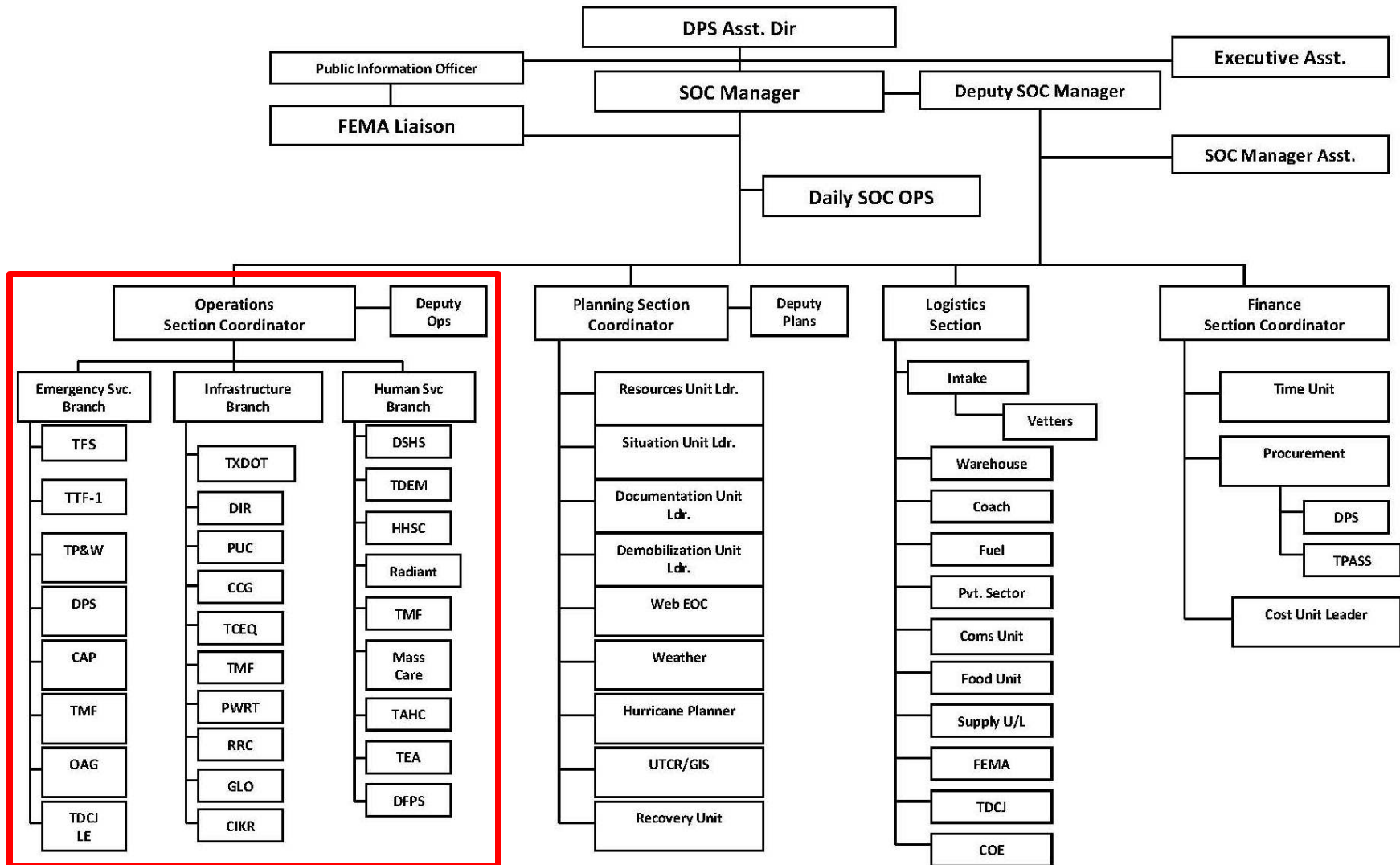
The purpose of this attachment is to establish and provide operational concepts, organizational arrangements, roles, and technology requirements for emergency fuel support and associated components required for optimizing fuel availability for coastal evacuees and recovery efforts in the event of a catastrophic hurricane threat to the Texas Coast. The Texas Division of Emergency Management (TDEM), in coordination with the Texas Department of Transportation (TxDOT), will serve as the lead state agency to oversee this function.

II. SITUATION & ASSUMPTIONS

A. SITUATION

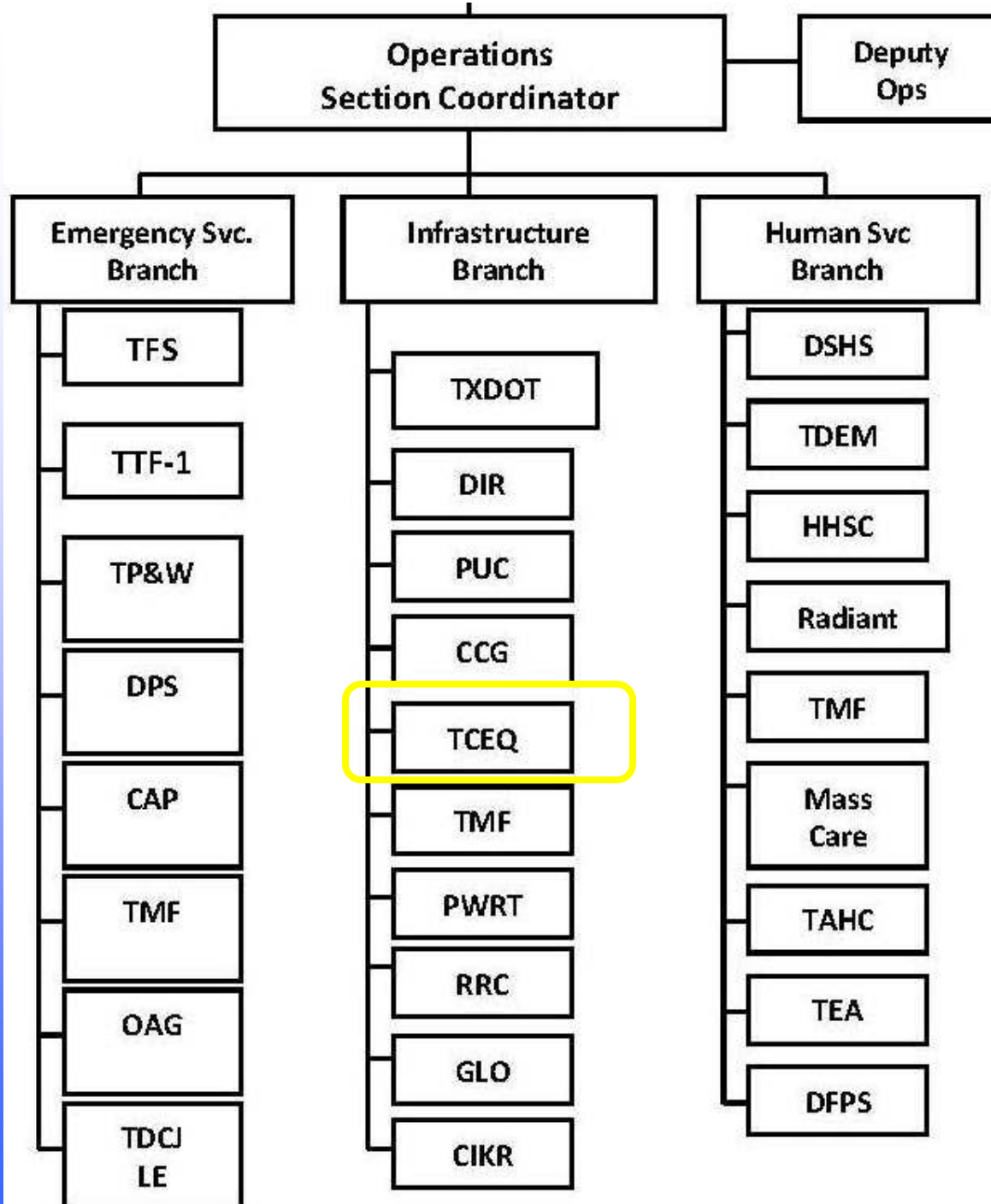
1. The Governor commissioned a Task Force in the aftermath of Hurricane Rita to document lessons learned, identify key challenges of urban area mass evacuations, and recommend improvements for the state, regional, and local emergency evacuation plans.
2. Fuel distribution was one of five stated areas of concentration the Task Force was charged by the Governor to address.
3. The Fuel Committee determined the private-sector industry was the only viable infrastructure system for fuel delivery to the citizens of Texas during emergency evacuations.
 - a. The Fuel Committee working with TxDOT, the sponsor agency, determined the State had considerable resources for communication, control, security, and reconnaissance that could assist the industry in expediting and optimizing fuel deliveries.
 - b. It was determined that any efficient fuel distribution process must include state and industry cooperation.
 - c. The Fuel Committee recommended the establishment of an independent Fuel Coordinator position to coordinate state and industry cooperation.
4. The Fuel Committee determined that existing industry infrastructure is highly segmented and diverse. In order to maximize fuel delivery during emergency evacuations a team of representatives from each segment of the industry should form to support State hurricane response. This team could include, but is not limited to, representatives from various industry segments such as: Refining,

State Management Team



2012





SOC Battle Rhythm

- 12-Hour Operational Periods: 0700-1900
1900-0700
- Battle Rhythm Posted on WebEOC
- Adaptable to H-Hour
(Expected Onset of Hurricane Hazards)



2012



SOC Battle Rhythm

- 0700: Receive DDC Logistics/Resource Staging Area Situation Reports and IMT Status Check Reports
- 1000-1200: Regional Calls (as needed)
- 1030: State Coordinator Call
- 1200: Statewide Conference Call
- 1400: DDC Situation Reports & Regional Input for State Situation Report Received
- 1500: Receive State Agency Situation Report
- 1700: State Situation Report Due for Distribution



2012








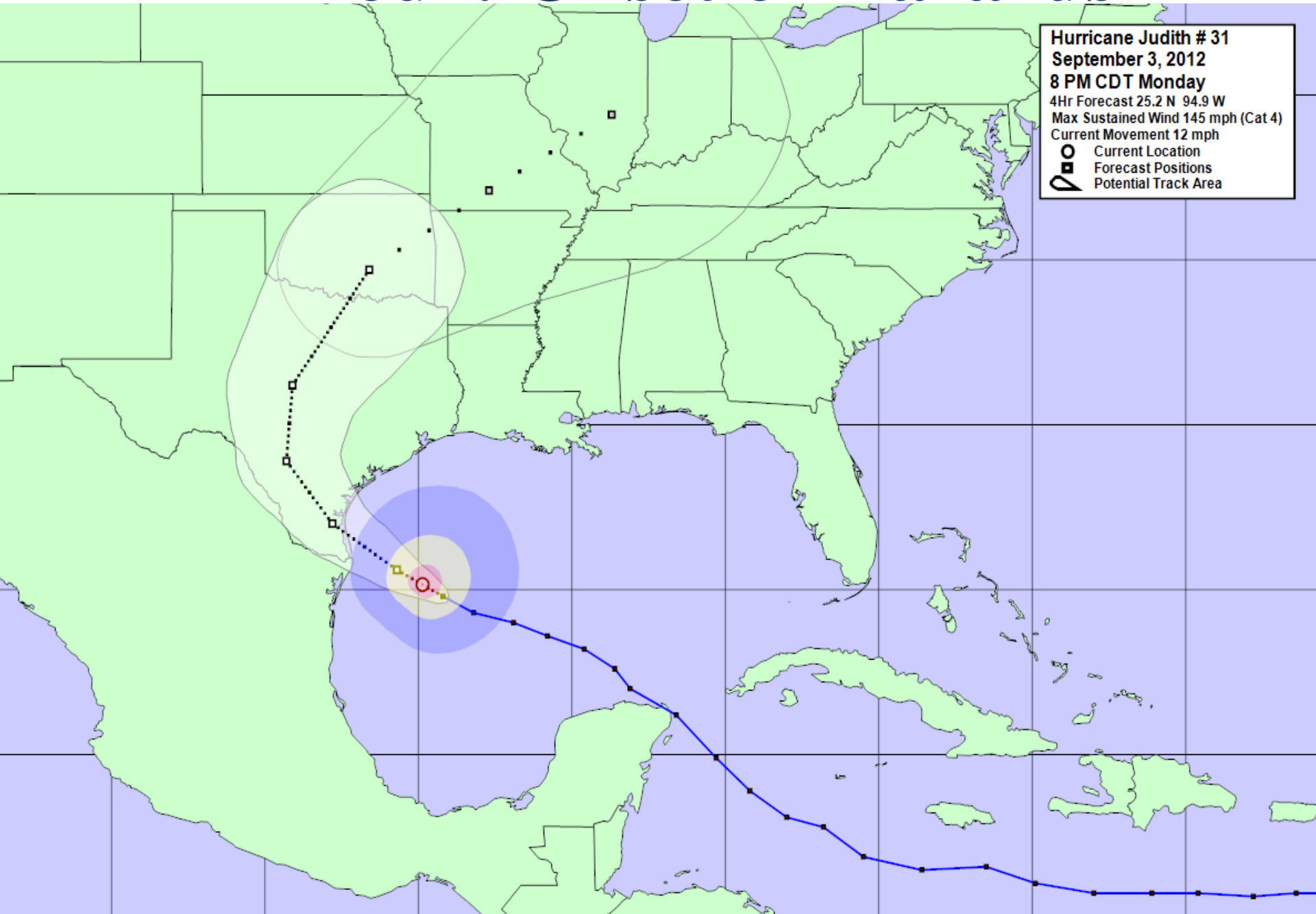
H-120 Clock Countdown

- **H-0 is when tropical storm-force winds (≥ 39 mph) reach the coast**
- **The countdown clock starts at H-120 hours**
- **The clock will adjust according to the prediction of landfall (*i.e.*, we may not get 120 hours to begin with)**

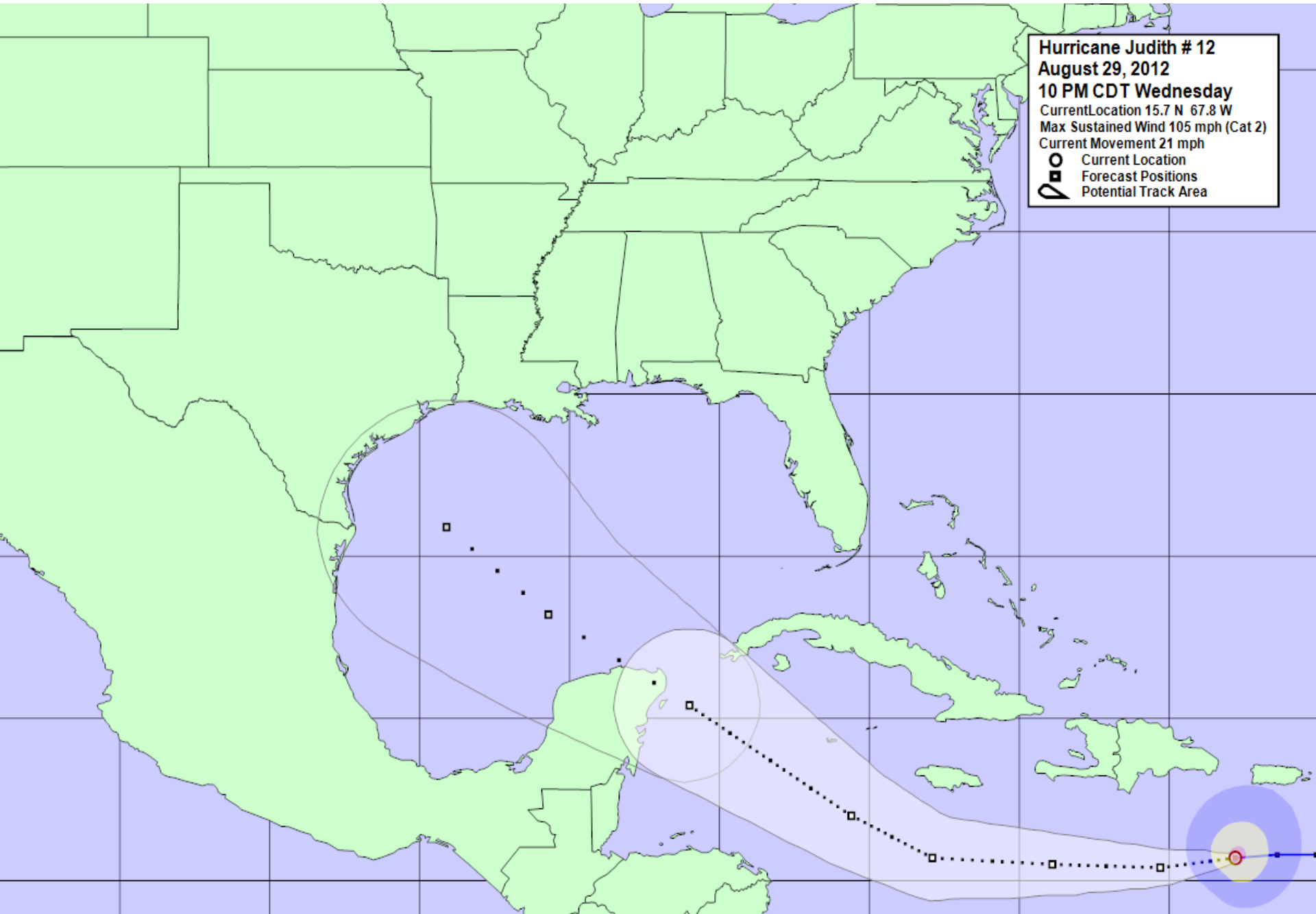
H-Hour: Onset of Hazards

Hurricane Judith # 31
September 3, 2012
8 PM CDT Monday
4Hr Forecast 25.2 N 94.9 W
Max Sustained Wind 145 mph (Cat 4)
Current Movement 12 mph

 Current Location
 Forecast Positions
 Potential Track Area

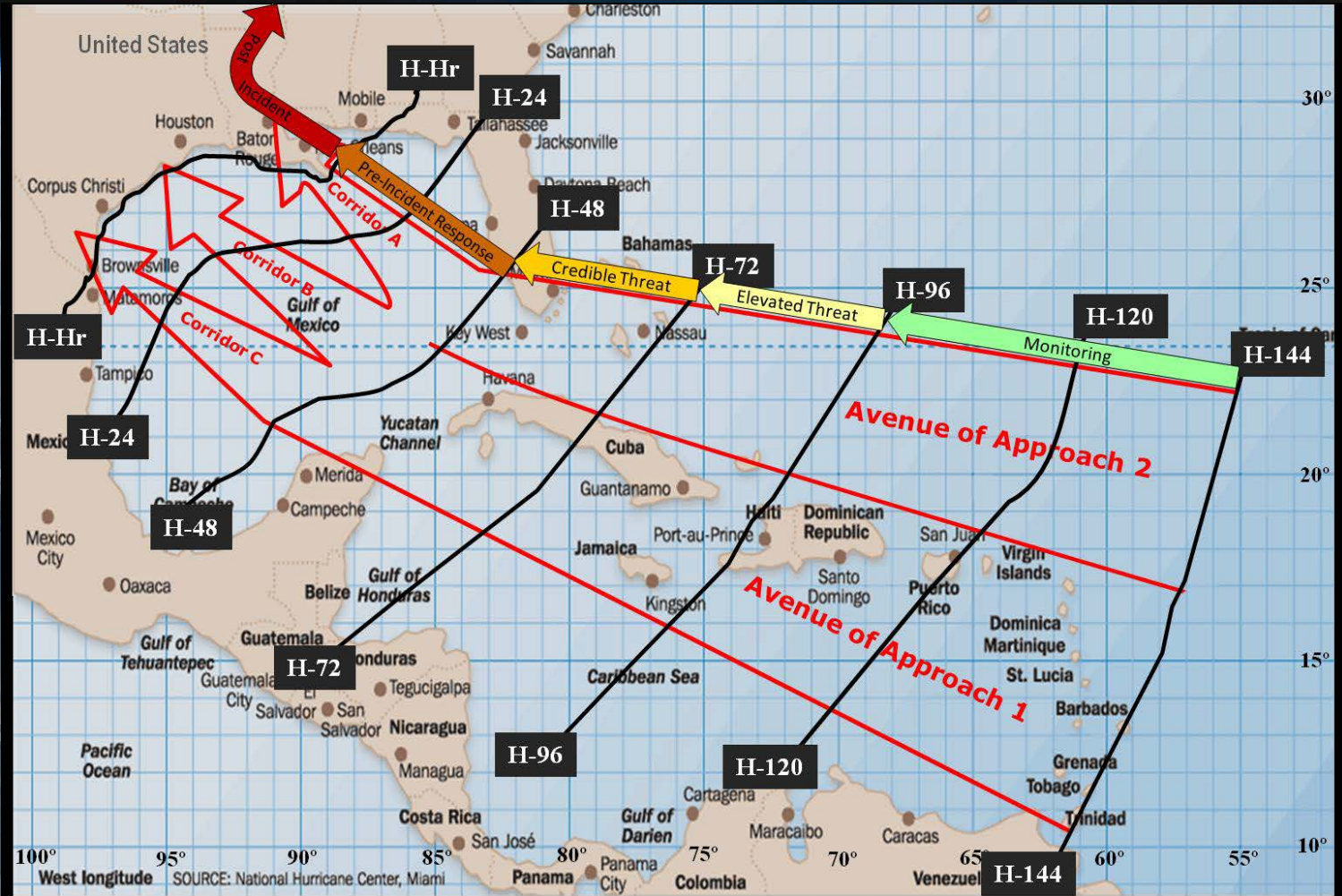


H-120





Tropical Cyclone Location and Timing



Average or possible distances that tropical cyclones can travel as they approach the coast of the Gulf of Mexico

TCEQ H-120 Countdown Activities Example

Refinery, Petrochemical Industry and Other Production Facilities Status

Remediation Facilities Evaluation

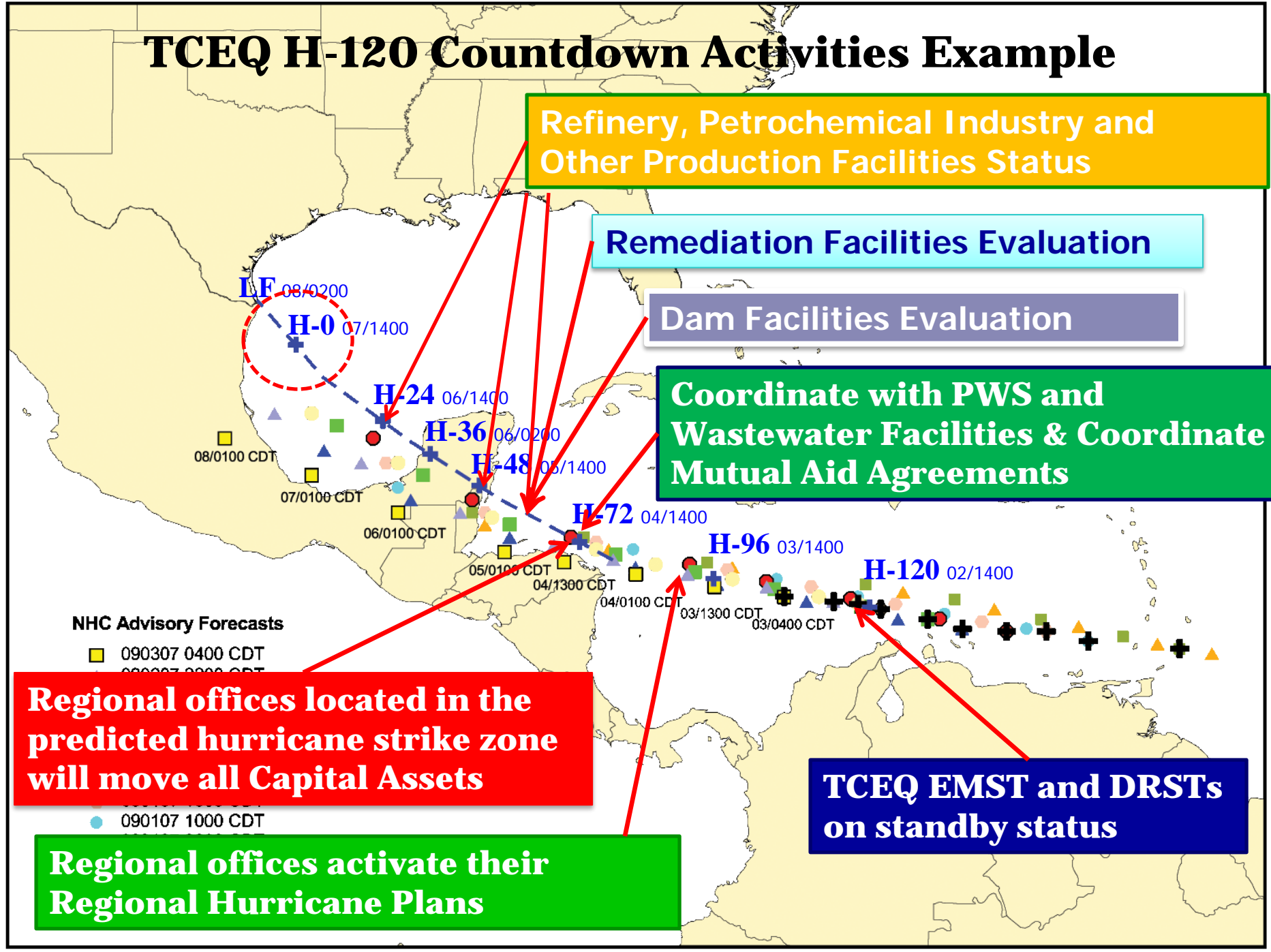
Dam Facilities Evaluation

Coordinate with PWS and Wastewater Facilities & Coordinate Mutual Aid Agreements

Regional offices located in the predicted hurricane strike zone will move all Capital Assets

TCEQ EMST and DRSTs on standby status

Regional offices activate their Regional Hurricane Plans





TCEQ Plans for Hurricane Season

- **“All Hazards” Plan**
- **Hurricane Response Plan**
- **Debris Management Plan**
- **Agency Communications Plan**
- **Pre-Landfall and Post-Landfall Incident Action Plan**
- **After Action Review Plan**



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TCEQ "All Hazards" Plan



Texas Commission on Environmental Quality

**TCEQ PARTICIPATION IN
MANAGEMENT OF STATE-LEVEL
EMERGENCIES--ALL HAZARDS**

**Annex Y to TCEQ CONTINUITY OF
OPERATIONS PLAN (COOP)**



Homeland Security Program

DRAFT JUNE 7, 2011



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Hurricane and Debris Management Plans

TCEQ Hurricane Preparation, Response and Recovery Plan



Texas Commission on Environmental Quality

TCEQ HURRICANE PREPARATION, RESPONSE AND RECOVERY

Attachment 1 to Annex Y of TCEQ COOP, TCEQ Participation in Management of State-Level Emergencies--All Hazards



Homeland Security Program

DRAFT AUGUST 1, 2011

Debris Management Plan



Texas Commission on Environmental Quality

DEBRIS MANAGEMENT PLAN

Attachment 2 to Annex Y of TCEQ COOP, TCEQ PARTICIPATION IN MANAGEMENT OF STATE-LEVEL EMERGENCIES--ALL HAZARDS



Homeland Security Program

DRAFT OCTOBER 14, 2011



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Incident Action Plans

Pre-Landfall Incident Action Plan

Post-Landfall Incident Action Plan

| | | |
|---|--|-----------------|
| 1. Incident Name HURRICANE NAME | 2. Operational Period to be covered by IAP (Date/Time) PRE-LANDFALL PLAN | IAP COVER SHEET |
| 3. Approved by: | | |
| IC/HSC _____ | | |
| OCE DD _____ | | |
| DED _____ | | |
| ED _____ | | |
| HURRICANE NAME PRE-LANDFALL INCIDENT ACTION PLAN | | |
| A SUMMARY OF NECESSARY ACTIONS FROM TCEQ "ALL HAZARDS" PLAN FOR PARTICIPATION IN MANAGEMENT OF STATE-LEVEL EMERGENCIES AND ATTACHMENTS | | |
| The items checked below are included in this Incident Action Plan: | | |
| <input checked="" type="checkbox"/> ICS 202-OS (Response Objectives) | | |
| <input checked="" type="checkbox"/> ICS 203-OS (Organization List) – OR – ICS 207-OS (Organization Chart) | | |
| <input type="checkbox"/> ICS 204-OSs (Assignment Lists) One Copy each of any ICS 204-OS attachments: | | |
| <input type="checkbox"/> Map | | |
| <input type="checkbox"/> Weather forecast | | |
| <input type="checkbox"/> Tides | | |
| <input type="checkbox"/> Shoreline Cleanup Assessment Team Report for location | | |
| <input type="checkbox"/> Previous day's progress, problems for location | | |
| <input checked="" type="checkbox"/> TCEQ COMMUNICATIONS PLAN (REPLACES LCS 205a) | | |
| <input type="checkbox"/> ICS 206-OS (Medical Plan) | | |
| <input type="checkbox"/> General Information | | |
| <input type="checkbox"/> Hotel Map & directions | | |
| <input type="checkbox"/> Hotel Room Assignments | | |
| <input type="checkbox"/> Hospital Info/Maps for Work Areas | | |
| <input type="checkbox"/> | | |
| <input type="checkbox"/> | | |
| 4. Prepared by: LAUREL CARLISLE Date/Time DATE | | |
| IAP COVER SHEET June 2000 | | |

| | | |
|---|---|-----------------|
| 1. Incident Name HURRICANE NAME | 2. Operational Period to be covered by IAP (Date/Time) POST-LANDFALL PLAN | IAP COVER SHEET |
| 3. Approved by: | | |
| IC/HSC _____ | | |
| OCE DD _____ | | |
| DED _____ | | |
| ED _____ | | |
| HURRICANE NAME POST-LANDFALL INCIDENT ACTION PLAN | | |
| A SUMMARY OF NECESSARY ACTIONS FROM TCEQ "ALL HAZARDS" PLAN FOR PARTICIPATION IN MANAGEMENT OF STATE-LEVEL EMERGENCIES AND ATTACHMENTS | | |
| The items checked below are included in this Incident Action Plan: | | |
| <input checked="" type="checkbox"/> ICS 202-OS (Response Objectives) | | |
| <input checked="" type="checkbox"/> ICS 203-OS (Organization List) – OR – ICS 207-OS (Organization Chart) | | |
| <input type="checkbox"/> ICS 204-OSs (Assignment Lists) One Copy each of any ICS 204-OS attachments: | | |
| <input type="checkbox"/> Map | | |
| <input type="checkbox"/> Weather forecast | | |
| <input type="checkbox"/> Tides | | |
| <input type="checkbox"/> Shoreline Cleanup Assessment Team Report for location | | |
| <input type="checkbox"/> Previous day's progress, problems for location | | |
| <input checked="" type="checkbox"/> TCEQ COMMUNICATIONS PLAN (REPLACES LCS 205a) | | |
| <input type="checkbox"/> ICS 206-OS (Medical Plan) | | |
| <input type="checkbox"/> General Information | | |
| <input type="checkbox"/> Hotel Map & directions | | |
| <input type="checkbox"/> Hotel Room Assignments | | |
| <input type="checkbox"/> Hospital Info/Maps for Work Areas | | |
| <input type="checkbox"/> | | |
| <input type="checkbox"/> | | |
| 4. Prepared by: LAUREL CARLISLE Date/Time DATE | | |
| IAP COVER SHEET June 2000 | | |



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Pre-Landfall Plan Incident Objectives

| | | |
|---|--|------------------------------------|
| Incident Name HURRICANE NAME | Operational Period (Date/Time) PRE-LANDFALL PLAN | INCIDENT OBJECTIVES ICS 202-IMT |
| Objectives: | | |
| 1. Ensure health and safety of responders and public by conducting operations in accordance with safety regulations, standards and rules. (All) | | |
| 2. Place the Emergency Management Support Team/Disaster Response Strike Teams (EMST/DMSTs) on standby to assist affected regions to conduct Emergency Support Function (ESF) 10 (HazMat) response and ESF-3 assessment of PWS and WWTP facilities in affected areas. Pre-stage teams as needed. (CID, Field Operations) | | |
| 3. Decide on protocol for enforcement discretion and waiver requests. Inform affected programs and regions of protocol. Coordinate with EPA as necessary. (OCE Admin) | | |
| 4. Post contact information for waiver and enforcement discretion requests on external web, and distribute to facility contacts at SOC (Include in regulatory guidance). (CID, EXEC Communications) | | |
| 5. Develop regulatory guidance, including debris management, household hazardous waste disposal, burn authorizations, sediment sampling, carcass disposal, etc. for distribution and for posting on external web. (CID, FOSD, Field Operations) | | |
| 6. Post regulatory guidance, including contact information for enforcement discretion requests, to external web. Distribute as appropriate to affected jurisdictions prior to H-60. Develop Public Service Announcements as appropriate. (CID, Agency Communications, Field Operations) | | |
| 7. Notify staff responsible for processing fuel waiver requests. Coordinate with EPA and DOE as needed to respond to requests. (OCE, CID, Chief Engineer, AQD, OLS) | | |
| 8. Secure all capital assets in targeted areas (move outside surge and strike zones) by H-72, before evacuation of citizens as necessary. Refuel vehicles. (Field Operations) | | |
| 9. Develop and institute protocol to coordinate with PWS and WWTP facilities to confirm operational status after landfall and to prepare for assessments. (WSD, WQD) | | |
| 10. Confirm and report on mutual aid agreements, including generator needs, for PWS and WWTP (TXWARN). (OW) | | |
| 11. Coordinate with EPA for ESF 3 and ESF 10 response. (CID, Field Operations) | | |
| 12. Develop draft templates for possible EPA Mission Assignments (MA) prior to H-60. (CID, Field Operations) | | |
| 13. Evaluate status of dams and related structures at risk from storm-related conditions. Dam Safety Program on stand-by. (Dam Safety) | | |
| 14. As requested by SOC, verify and report on operational status of refinery and petrochemical facilities. (APD) | | |
| 15. Activate SOC Team staffing. (CID) | | |
| 16. Participate in and report to management regarding conference calls as called for in TCEQ Communications Plan. (CID, All Offices) | | |
| 17. Provide logistical support for response staff, including EMST/DRSTs and Field Operations, affected regions, and HQ staff as needed. (OAS) | | |

| |
|--|
| 18. Identify, train and prepare response staff. (SERT, RRT, DMSTs, Field Operations, HQ [e.g., PWS, Remediation], and relief staff) (CID) |
| 19. Identify "sister region" staff/regions to fulfill work obligations (e.g. complaint calls) for affected regions, and prepare them for transferred activities. (Field Operations) |
| 20. Develop "sister region SOPs, so that staff supporting affected regions will understand what needs to be done. (ADs, Field Operations) |
| 21. Develop DMSTs, and train senior emergency response personnel in Incident Command protocols, interactions with other state and federal agencies, and forms. (CID, Field Operations) |
| 22. Develop deployment protocols for trained staff. (Field Operations) |
| 23. Develop protocol to provide GIS mapping assistance to affected regions (e.g., PWS, WWTP, debris sites). (IRD) |
| 24. Coordinate with local entities to develop candidate acceptable debris management sites prior to H-120. (Field Operations) |
| 25. Alert TCEQ Emergency Response contractors and place on standby. (CID) |
| 26. Activate Regional Hurricane Plans, including evacuation of regional staff and securing capital assets as required. (Field Operations) |
| 27. Activate Estuary Program and Houston Laboratory Hurricane Plans as required. (OW) |
| 28. Identify method to communicate with evacuated staff. (ADs, RDs) |
| 29. Identify staff familiar with the impacted area to participate in flyovers of oil refineries and chemical plants to investigate damage and releases and of communities to mark for investigation areas with displaced hazardous materials and water system damage. (Field Operations) |
| 30. Develop a protocol to staff and operate a debris management hotline and plan to activate it within 24 hours as needed after landfall. (FOSD) |
| 31. Develop a storm surge sediment residue sampling and management plan or protocol. (Remediation) |
| 32. Develop a protocol for risk-based inspections of debris management sites. (Field Operations) |
| 33. Identify and train staff in FEMA protocols for cost recovery. Develop efficient processes to track expenses eligible for reimbursement. (OCE, CID, FAD) |
| 34. Identify items eligible for FEMA reimbursement, and track these expenses according to FEMA requirements for reimbursement. (All Offices) |
| 35. Identify and document equipment and supplies that would be needed to restore the operational status of each regional office, including use as sleeping quarters for TCEQ staff and other agencies providing assistance to TCEQ. (Field Operations) |
| 36. Develop protocol for securing air monitoring site equipment and resuming operations. (Field Operations) |
| 37. Develop and activate agency communications plan. (CID) |

| | | |
|--|---|---|
| 38. As called for by TDEM, research evacuation staging sites for potential contamination, review spill prevention, control and countermeasure plans provided by TDEM (developed by their contractors), and provide TDEM approval letters. (CID, Remediation) | | |
| 39. Coordinate with the Department of State Health Services to ascertain recommended vaccinations for responders. Ensure that responders have appropriate vaccinations. (CID, All Offices) | | |
| 39. Coordinate with International Boundary Water Commission (IBWC) as indicated to ascertain status of dam and related facilities under their jurisdiction. (CID) | | |
| 40. Coordinate with the Public Works Response Team (PWRT) regarding ESF-3 PWS and WWTP restoration of service. (CID) | | |
| 41. Evaluate status of all at-risk remediation sites in the strike zone. (Remediation) | | |
| 42. Provide trained staff for Communication Coordination Group headquarters in Austin as needed for deployments. (IRD) | | |
| 43. Provide IT support for EMST/DRSTs. (IRD) | | |
| 44. Ensure agency representation on Communications Coordination Group (Field Operations, IRD) | | |
| 45. Ensure that State of Texas radio interoperability statutes, standards, policies, and policies are followed in agency emergency communications. (CID, Field Operations) | | |
| Operational Period Command Emphasis (Safety Message, Priorities, Key Decisions/Directions) | | |
| 1. Verify preparations for landfall and response. | | |
| Approved Site Safety Plan Located at: | | |
| ATTACHMENTS (Mark if Attached) | | |
| <input checked="" type="checkbox"/> Organization List – ICS 203 | <input type="checkbox"/> Org Chart – ICS 207 | <input type="checkbox"/> Assignment Lists ICS 204 |
| <input type="checkbox"/> Medical Plan – ICS 206 | <input type="checkbox"/> Safety Message | <input type="checkbox"/> Weather Forecast |
| <input checked="" type="checkbox"/> TCEQ Communications Plan (replaces LCS 205A) | <input type="checkbox"/> Other <u>Hot Zone Map</u> | <input type="checkbox"/> Information Statement |
| <input type="checkbox"/> Unit Log | <input type="checkbox"/> Other <u>Staging Area/Hospital Map</u> | <input type="checkbox"/> Other _____ |
| Prepared by: (Planning Section Chief) | Date/Time | |
| Laurel Carlisle | June 6, 2012 | |
| Approved by: (Incident Commander) | Date/Time | |
| Kelly Cook | June 6, 2012 | |
| Notes: | | |
| APD = Air Permits Division | | MA = Mission Assignment |
| AQD = Air Quality Division | | OAS = Office of Administrative Services |
| CID = Critical Infrastructure Division | | OCE = Office of Compliance and Enforcement |
| DRST = Disaster Response Strike Team | | OLS = Office of Legal Services |
| EMST = Emergency Management Support Team | | OoW = Office of Waste |
| ESF = Emergency Support Function | | OW = Office of Water |
| FAD = Financial Administration Division | | PWS = Public Water Supply |
| Field Operations = FOSD, Area Directors, Regions | | RRTF = Rapid Response Task Force |
| FOSD = Field Operations Support Division | | SOP = Standard Operating Procedure |
| HAZMAT = Hazardous Materials | | WSD = Water Supply Division |
| IRD = Information Resources Division | | WQD = Water Quality Division |
| JFO = Joint Field Office | | WWTP = Wastewater Treatment Plant |



USEPA Region 6 Environmental Justice Summit After Action Review Results Incorporated in TCEQ Plans



Lessons Learned



Texas Commission on Environmental Quality

After Action Review

Hurricanes DOLLY and IKE

July 23 and September 13, 2008



Homeland Security Program

APRIL 1, 2009





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TCEQ Disaster Response Strike Teams (DRSTs):

- 16 DRSTs, one in each TCEQ region
- Approximately 129 members
- Team size is dependent on the Region size
- NIMS/ICS trained (ICS-100, 200, 300, 400, 700, 800 courses)
- Each team is comprised of regional staff from various disciplines (air, waste, water)
- Provides the agency adequate staff to conduct extended responses and on multiple fronts if needed





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Command Post Interior





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Public Water Supply (PWS) Assessments:

- The TCEQ Regional offices conduct outreach (first, by phone) to PWS facilities in the impacted area to determine operational status, provide technical assistance and guidance.
- For those systems not available by phone, TCEQ may conduct site visits as flood waters recede.
- Determine issues and track Boil Water Notices (BWN).
- Coordination with the Public Works Response Team (PWRT) and TXWARN who is also able to provide needed assistance.
- Coordination as appropriate with USEPA.
- Report this information back to the SOC and included in the statewide Daily Situation Report for the State of Texas.



TCEQ testing chlorine levels while conducting PWS recons along the Rio Grande.

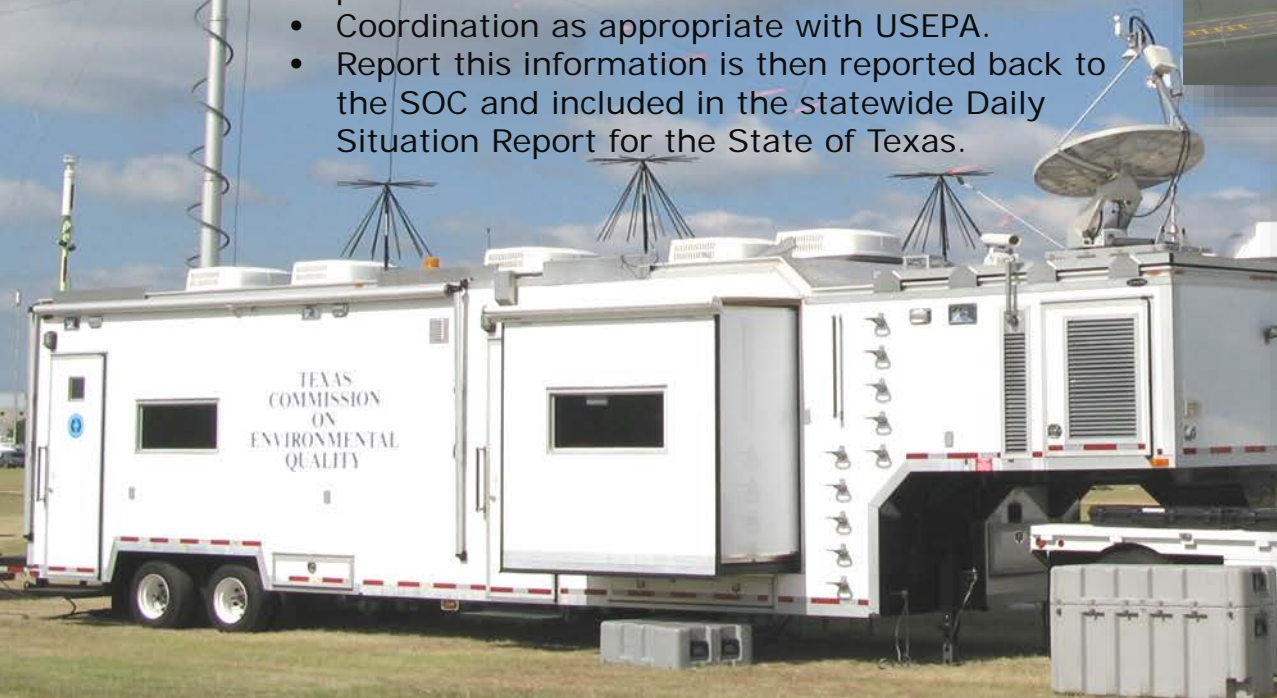


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Wastewater Treatment Plants (WWTP) Assessments:

- The TCEQ Regional offices conduct outreach (first, by phone) to WWTP facilities in the impacted area to determine operational status, provide technical assistance and guidance.
- For those systems not available by phone, TCEQ may conduct site visits as flood waters recede.
- Determine issues and track Sanitary Sewer Overflows (SSOs).
- Coordination with the Public Works Response Team (PWRT) and TXWARN who were able to provide needed assistance.
- Coordination as appropriate with USEPA.
- Report this information is then reported back to the SOC and included in the statewide Daily Situation Report for the State of Texas.





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Dam Safety:

- TCEQ Dam Safety Engineers track reported issues with dams and provide the dam owner/engineer with technical assistance and guidance.
- TCEQ Dam Safety Engineers conduct site investigations for impacted dams as appropriate.
- Determine and track dam issues.
- Report this information is then reported back to the SOC and included in the statewide Daily Situation Report for the State of Texas.





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Debris Management:

- TCEQ provides oversight of appropriate disposal of storm waste.
- Ensure that debris management sites are operated in a manner not to create a human health threat or threat to the environment
- Ensure proper separation of Household Hazardous Waste (HHW) and white goods (i.e. refrigerators, washers & dryers) from storm debris prior to disposal
- Ensure proper disposal of HHW and white goods
- Provide authorizations for temporary debris management sites.
- Provide debris management/disposal guidance.
- Issuing “burn” letters to local jurisdictions as appropriate.
- Assisting with animal carcass disposal issues.
- When needed, the TCEQ will set up and staffed a Debris Management Hotline in coordination with the Regional Offices to address and process requests regarding temporary debris management sites.





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Hazardous Materials:

- Under the State of Texas Emergency Management Plan, TCEQ is the primary agency for Hazardous Materials and Oil Spill Response (Annex Q).
- Activities related to hazardous materials spill response include:
 - Responding to, tracking and monitor releases of hazardous materials during the floods.
 - Locating, identifying and removing “orphan drums and containers”, dislocated by the flood to protect the health and safety of citizens returning to the flood-impacted areas.
 - Overseeing the staging of household hazardous waste resulting from flooding.
 - Overseeing disposal of hazardous materials.





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Regulatory Flexibility:

- Provided guidance and regulatory flexibility to facilities.
- TCEQ may be requested to assist with requesting Fuel Waivers from USEPA or USDOE due to issues that may disrupt Texas' gasoline and diesel fuel supply.
- A few of the waivers that may be requested included:
 - low-Reid Vapor Pressure gasoline
 - federal reformulated gasoline
 - Texas Low-Emission Diesel fuel in the eastern part of the state
- TCEQ may also will work the Governor's Office to obtain a waiver from USEPA and the Internal Revenue Service to allow use of dyed diesel fuel to be used in on-road vehicles to facilitate the rescue and feeding of stranded livestock.





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Cost Tracking:

- The TCEQ submits daily flood response operation costs to the SOC.

Refinery and Commercial/Industrial Facilities:

- TCEQ verifies and reports on operational status of refinery and industrial facilities as needed.
- TCEQ may conduct site visits to industrial facilities as flood waters recede to determine the integrity of facilities which handle hazardous materials, including petrochemical production facilities, hazardous waste disposal facilities, fuel storage tanks, etc.





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Landfills:

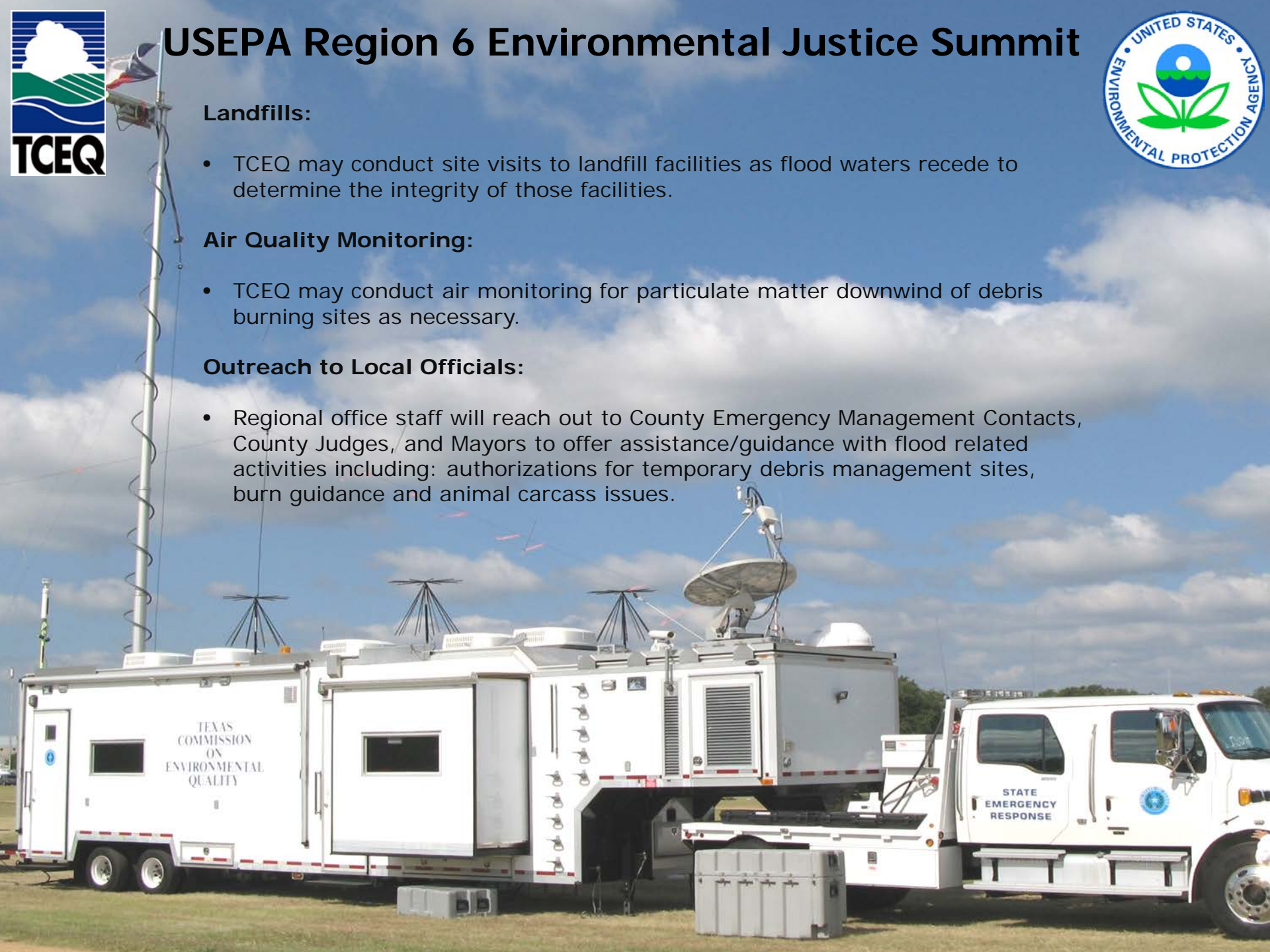
- TCEQ may conduct site visits to landfill facilities as flood waters recede to determine the integrity of those facilities.

Air Quality Monitoring:

- TCEQ may conduct air monitoring for particulate matter downwind of debris burning sites as necessary.

Outreach to Local Officials:

- Regional office staff will reach out to County Emergency Management Contacts, County Judges, and Mayors to offer assistance/guidance with flood related activities including: authorizations for temporary debris management sites, burn guidance and animal carcass issues.





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Natural Disaster Operational Workgroup (NDOW)

<http://eparesponsemanager.net/ndow/>



The screenshot shows a web browser window with the URL <http://eparesponsemanager.net/ndow/>. The page title is "NATURAL DISASTER OPERATIONAL WORKGROUP". On the left side, there is a vertical navigation menu with buttons for Home, Calendar, Contacts, Documents, Photos, Links, RM Support, Coastal Spill Plans, and Login. The main content area features a "Mission Statement" section, followed by a list of agencies comprising the NDOW. At the bottom of the page, there is a footer with logos for EPA Region Six, United States Coast Guard District Eight, TCEQ, Texas General Land Office, Texas Parks & Wildlife, and NOAA, along with the text "Established April 2009".

NATURAL DISASTER OPERATIONAL WORKGROUP

Home
Calendar
Contacts
Documents
Photos
Links
RM Support
Coastal Spill Plans
Login







Mission Statement :

The Natural Disaster Operational Workgroup (NDOW) was created as a result of the Hurricane Ike Texas response to improve coordination between State and Federal Agencies operating under Emergency Support Functions (ESF)s 3 and 10. Like the NRF, NDRF, and NIMS the NDOW seeks to establish an operational structure and common planning framework. The NDOW established a framework of standard operational procedures, standardized data quality objectives, one common database system, training and exercises for effective coordination of multi-agency response to man-made and natural disasters. The NDOW framework is a concept of operations and not intended to impose new, additional or unfunded net resource requirements on State or Federal agencies. In support of the National Incident Management System (NIMS) the framework optimally engages existing State and Federal resources and authorities, incorporating the full capabilities of all sectors. The NDOW intends to institutionalize and expand use of standardized procedures throughout all Gulf Coast Regional Response Team (RRT) agencies to ensure effective incident response in support of community recovery.

The NDOW is comprised of the following Agencies:

- United States Environmental Protection Agency Region Six
- United States Coast Guard District Eight
- Texas Commission on Environmental Quality
- Texas General Land Office
- Texas Parks and Wildlife Department

EPA Response Manager is currently on version 6.0.9. To download the latest install package, [click here.](#)

Established April 2009



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NDOW Documents

(Field Data Sheets, ICS Forms, SOPs, etc.)

The screenshot shows a web browser window with the URL <http://eparesponsemanager.net/ndow/Documents/Documents.aspx>. The page title is "NATURAL DISASTER OPERATIONAL WORKGROUP". On the left side, there is a vertical navigation menu with buttons for Home, Calendar, Contacts, Documents, Photos, Links, RM Support, Coastal Spill Plans, and Login. The main content area is titled "Documents" and contains a list of links under the heading "NDOW Documents":

- [Field Data Sheets](#)
- [ICS Forms](#)
- [Map Examples](#)
- [Map Request Forms](#)
- [Marsh Plan Template](#)
- [Photo Placard Form](#)
- [Presentations](#)
- [SOPs](#)
- [TCEQ RM Procedures](#)
- [Training and Exercises](#)
- [FEMA Reimbursable Equipment List.pdf](#)

At the bottom of the page, there is a row of logos for various organizations: EPA Region-Six Emergency Response Team, the Texas State Fire Marshal's Office, the United States Coast Guard District 13, TCEQ, the Texas Department of Parks and Wildlife, and NOAA.



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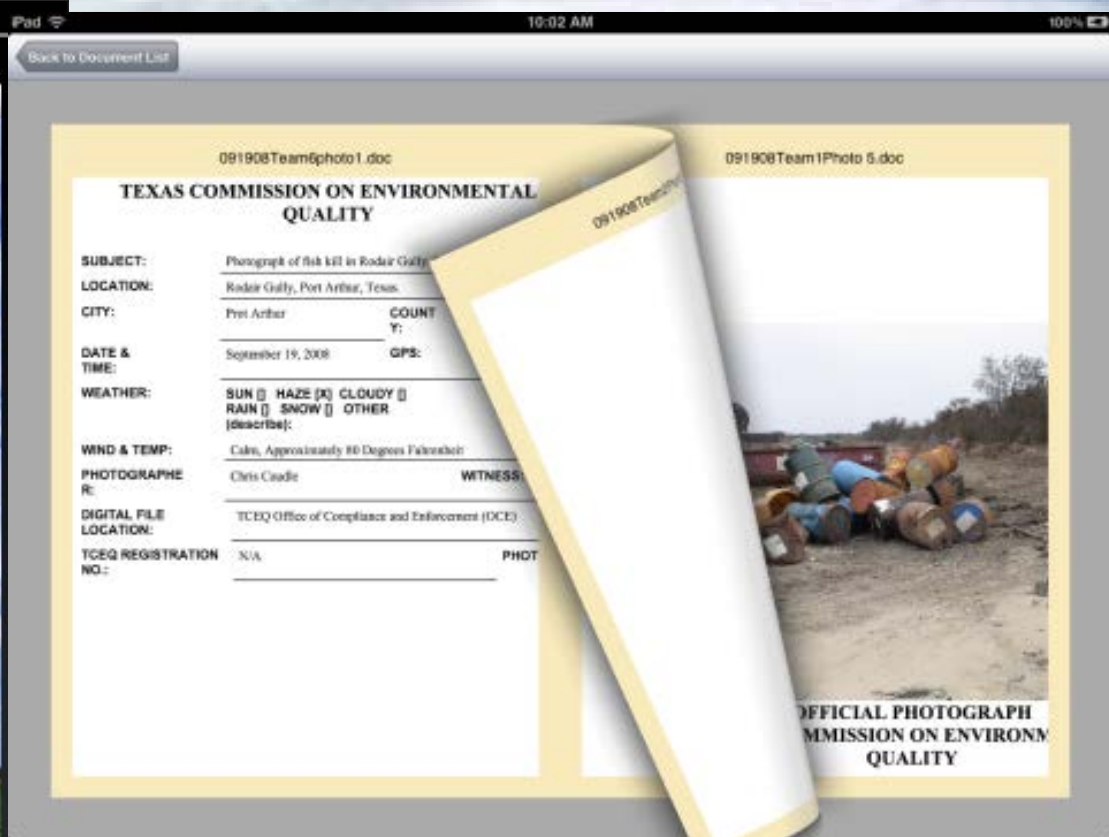


NDOW SOPs

- **Rapid Needs Assessment**
- **Orphan Container Hazard Evaluation**
- **Orphan Container Recovery**
- **Water Infrastructure Assessment**
- **Waste Collection Pad**
- **Facility/Vessel Oil Discharge Assessment**
- **Facility/Vessel Oil Discharge Removal**
- **Response Manager Procedures**



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Preparedness Exercises

Corpus Christi NDOW Hurricane Exercise

- Multi Agency exercise with TCEQ participation numbering over fifty personnel with all Regions involved
- Highly successful at fostering teamwork between agencies during a disaster
- Agencies included: USEPA, USCG Sectors Port Arthur/Houston/Corpus, USCG District 8, TCEQ, TGLO, TPWD, USFWS, and NOAA





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Preparedness Exercises

Texas HOTZONE Conference in October (Training)

- o Regional HAZMAT training conference with over 600 attendees from 30 different States
- o TCEQ and EPA support the conference





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Preparedness Exercises

Texas Emergency Management Conference

Texas Hurricane Conference

Texas Hurricane Equipment Readiness Exercise

Texas Communications Exercise



A LOOK BACK ON HURRICANE IKE



The TCEQ's Response to Hurricane Ike

Hurricane Ike, which developed into a Category 5 storm, was originally predicted to veer away from Texas. However, Ike made landfall along Galveston Island as a strong Category 2 storm on September 13, 2008. Due to the size of the storm, Ike caused a significant storm surge which pushed across barrier islands and far into coastal counties, carrying debris from destroyed structures, mud and sediment, hazardous materials containers, and salt water along with it.



Hurricane Ike



Hurricane Ike Storm Surge

Storm Surge Captured by Spaceborne Radar
Canadian RADARSAT 2
September 12, 2008, at 7:39:14 PM CDT

Synthetic aperture radar data processed by the UT Center for Space Research

A LOOK BACK ON HURRICANE IKE





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Hurricane Ike 2008

Gilchrist Before Hurricane





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Hurricane Ike 2008 Gilchrist After Hurricane





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Hurricane Ike 2008

Crystal Beach Before Hurricane



Crystal Beach, TX, Bolivar Peninsula





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Hurricane Ike 2008

Crystal Beach After Hurricane



To protect the health and safety of citizens returning to the storm-impacted areas, TCEQ formed a Unified Command with other state and federal partners and identified and evaluated over 5,000 hazardous material target areas and collected over 46,000 hazardous material containers, including orphan drums, tanks, and household hazardous waste.



A LOOK BACK ON HURRICANE IKE

- TCEQ provided the oversight for the management and disposal of storm debris.
- Issued “burn guidance” letters to local jurisdictions giving authorizations for burning vegetative materials to help reduce the amount of debris going into landfills
- TCEQ set up a Debris Management Hotline to assist local jurisdictions in setting up 170 temporary debris management sites and help facilitate cost recovery efforts for local governments.





Hurricane Ike



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Hurricane Preparedness

Questions?

