Hurricane Annex

State of Texas Emergency Management Plan

June 2014

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Introduction

This document is an annex to the *State of Texas Emergency Management Plan*, which responds to state and federal laws, policies, doctrine and guidelines as described below.

In responding to federal emergency response doctrine and, specifically, the National Response Framework (NRF), the *State of Texas Emergency Management Plan* (State Plan) takes into account the needs of the whole community of citizens likely to be affected by an incident or event that requires a state-level coordinated response.

The State Plan complies with Homeland Security Presidential Directive 5 (HSPD-5) "Management of Domestic Incidents" and Presidential Policy Directive 8 (PPD-8) "National Preparedness," the "National Preparedness Goal," and Texas Executive Order RP40, which mandates the adoption of the National Incident Management System (NIMS) as the "declared State standard for incident management."

The State Plan is composed of a Basic Plan, functional annexes, and hazard annexes. The State Plan responds to **Texas Government Code, Section 418.042**, which directs the Texas Division of Emergency Management (TDEM) to "prepare and keep current a comprehensive state emergency plan." The plan outlines the "coordination of federal, state, and local emergency management activities."

Further, this annex sets forth cross-agency coordination responsibilities as agreed to by Emergency Management Council (EMC) agency representatives in response to their mandate, **Texas Government Code, Section 418.013**, to "assist the division [TDEM] in identifying, mobilizing, and deploying state resources to respond to major emergencies and disasters throughout the state." The State Plan is designed to integrate with other state agency or entity plans and annexes when they are included as subordinate appendices or attachments to the State Plan.

All sections of the plan contain links to related information. For an explanation of the acronyms, abbreviations, and terms in this document, refer to the State of Texas Acronyms and Terms (STAT) Book, which can be found online at [unformatted url].

This document is intended to provide guidance and is not prescriptive or comprehensive. Use judgment and discretion to determine the most appropriate actions at the time of an incident.

Overview and Purpose

This section defines the scope of this planning document including its objectives, planning assumptions and intended audience.

Goal

Outline key capabilities and coordination functions that support hurricane preparedness, response and recovery activities using resources provided by government entities, voluntary organizations and the private sector.

Objectives

- Provide information to local, regional, tribal, state and federal decision-makers about the state's planned response to hurricanes.
- Define coordination strategies and explain how local, regional, state, tribal and federal entities coordinate during hurricane preparedness, response and recovery.
- Provide linkages to relevant functional strategies within the State Emergency Management Plan.
- Provide time-phased responsibilities for key stakeholders.

Audience

- Texas Emergency Management Council representatives
- State Operations Center (SOC) personnel
- State Medical Operations Center (SMOC) personnel
- Disaster District Committee (DDC) Chairs
- Emergency management field personnel
- Emergency Operations Center staff
- Decision-makers serving areas vulnerable to hurricane hazards
- National Oceanic and Atmospheric Administration (NOAA) personnel

Planning Assumptions

- A jurisdiction may request additional assistance from Disaster District Committees (DDC) when the jurisdiction anticipates a depletion of resources, identifies a gap in resources or exhausts resources.
- If resources or information cannot be provided by the Disaster District Committee (DDC), the DDC Chairperson will send a State of Texas Assistance Request (STAR) to the State Operations Center (SOC) for resolution.
- Assistance may be sought from other states and the federal government.
- Hurricanes have the potential to cause catastrophic damage, mass casualties, mass fatalities, critical infrastructure disruptions and inundation of communities throughout the state.
- Hurricanes have the potential to quickly overwhelm local governments and rapidly deplete and damage state resources.
- When state resources are depleted, assistance may be sought from other states and the federal government.
- Flooding and loss of power from a hurricane can cause critical public works infrastructure components to be out of service for days or weeks. These include

commercial electric power, water, wastewater, storm water drainage, roads and bridges. Disruption of these services impacts the ability of key businesses to reopen and citizens to return.

- Hurricanes have the potential to hinder the delivery of key emergency services such as firefighting, Emergency Medical Services and law enforcement.
- Effective prevention and preparedness operations, early warning and evacuation, and well-trained and equipped response forces may reduce the number of casualties caused by a hurricane.
- Each jurisdiction is responsible for carrying out emergency response and short-term recovery actions, as outside assistance may not arrive immediately following a catastrophic hurricane.
- Various jurisdictions develop, maintain and implement comprehensive all-hazards emergency management plans pursuant to National Incident Management System (NIMS) guidelines.

Defining the Hazard

This section provides an overview of tropical cyclone characteristics, definitions, timelines and hazards.

Tropical cyclones are large-scale, relatively slow moving rotating storm systems that originate over tropical or subtropical waters. They are characterized by a low-pressure center, strong winds, and a spiral arrangement of thunderstorms that produce heavy rain. Tropical cyclones include hurricanes, tropical storms and tropical depressions.

Hazards from tropical cyclones include storm surge, wind, tornadoes, inland flooding, wave action and rip currents. Impacts of these hazards vary greatly depending on the location of landfall, direction of travel, size, forward speed, barometric pressure, wave setup, tides and wind intensity of the storm.

Although hurricane-force winds can cause significant damage to coastal communities, it is important to remember that storm surge inundation is almost always the deadliest threat associated with hurricanes. Other life-safety hazards, such as flooding and tornadoes, may continue to occur as a storm moves inland and the hurricane is downgraded to a tropical storm or tropical depression. Remnants of hurricanes can cause high wind, tornadoes and catastrophic flooding in any part of the State of Texas.

Even though response and recovery requirements differ for each incident, the strategies contained in this document may be used to respond to any tropical cyclone. The three types of tropical cyclone are designated by sustained wind speed.

Tropical Cyclones

The following table lists each type of tropical cyclone with one minute average maximum sustained wind speed in miles per hour (mph), knots (kt) and kilometers per hour (km/hr).

Type	Wind Speed		
Hurricane	74 mph or higher	64 kt or higher	119 km/hr or higher
Tropical Storm	39 mph to 73 mph	34 kt to 63 kt	63 km/hr to 118 km/hr
Tropical Depression	38 mph or less	33 kt or less	62 km/hr or less

Timelines

Hurricane Season

Hurricane season officially begins on June 1 and ends on November 30, but tropical cyclones can form outside of those dates. Historically, tropical cyclone activity peaks on September 10. Tropical cyclone activity usually affects the state of Texas between the beginning of June and the end of October.

Hazard Hour (H-Hour)

Hazard Hour, or H-hour, is used for planning purposes as the time when hazardous conditions begin.

For a hurricane, H-hour is used to estimate the onset of hazardous or unsafe conditions. Response operations may continue past H-hour. The decision to place operations on hold due to unsafe conditions is left to incident commanders in the field.

H-hour usually occurs upon the arrival of sustained 39 mph tropical storm-force winds, but may occur prior to tropical storm conditions if storm surge precedes tropical storm-force winds. Hurricane Ike in 2008 is one example of storm surge inundation affecting coastal evacuation routes prior to tropical storm conditions.

If early storm surge is forecast to occur prior to tropical storm conditions, the predicted time for hazardous storm surge conditions is considered to be the H-hour.

The State Operations Center (SOC) works with weather experts, utilizing the expertise of the National Weather Service (NWS) to set the SOC hurricane clock to count down to H-hour. The SOC hurricane clock is adjusted as needed while the storm approaches based on changes to weather observations and forecasts.

Because H-hour varies by location, the SOC hurricane clock is set to the time when hazards are forecast to first occur in the state.

Responder Reentry Hour (R-Hour)

Responder Reentry Hour or R-hour occurs when incident commanders on the ground determine that conditions are safe enough to operate. Like H-hour, R-hour varies by location depending on where hurricane impacts occur. The amount of time between H-hour and R-hour also varies for each hurricane incident, depending on the scope and location of hazardous conditions. Some areas may be able to resume operations, while others nearby are still facing conditions that are too hazardous for response personnel to safely operate.

Characteristics

The figure below shows the composition of a hurricane. The hurricane’s eyewall, surrounding the relatively calm eye, is composed of dense clouds that contain the highest winds in the cyclone. The storm's outer rainbands are made up of dense thunderstorms. Due to the counter-clockwise motion of the cyclone, the right-front quadrant is usually the most dangerous part of hurricanes and tropical storms with regard to storm surge, winds and tornadoes.

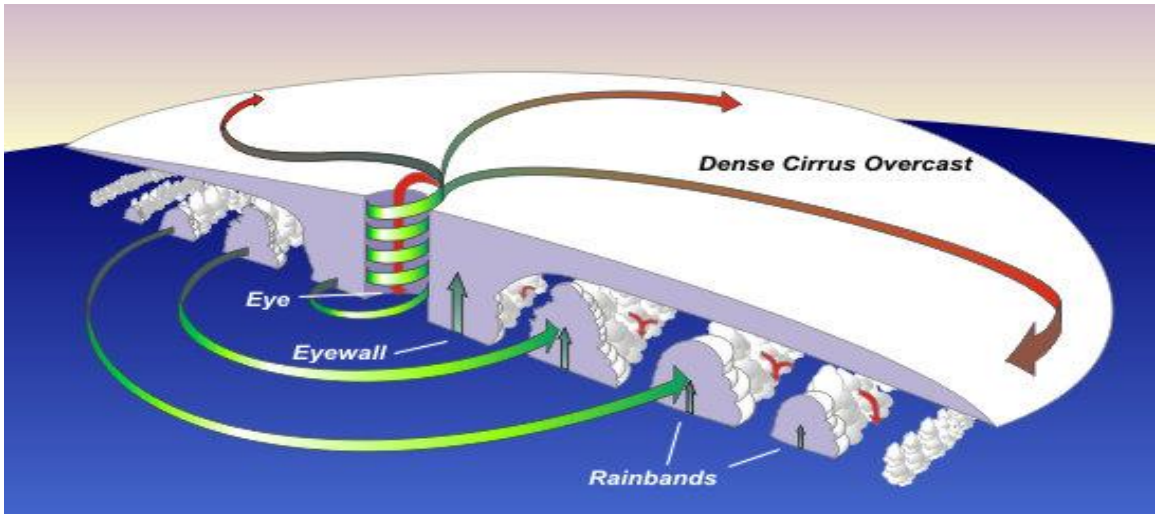


Figure 1: This image shows the composition of a hurricane including the eye, eyewall, rainbands and dense cirrus overcast.

Tropical cyclone impacts can be difficult to forecast due to multiple unpredictable factors.

The chart below shows the breakdown of fatalities caused by tropical cyclones between 1963-2012 with proportion of deaths due to storm surge (51%), rain (26%), wind (8%), surf (6%), offshore (6%), tornado (3%) and other (1%).

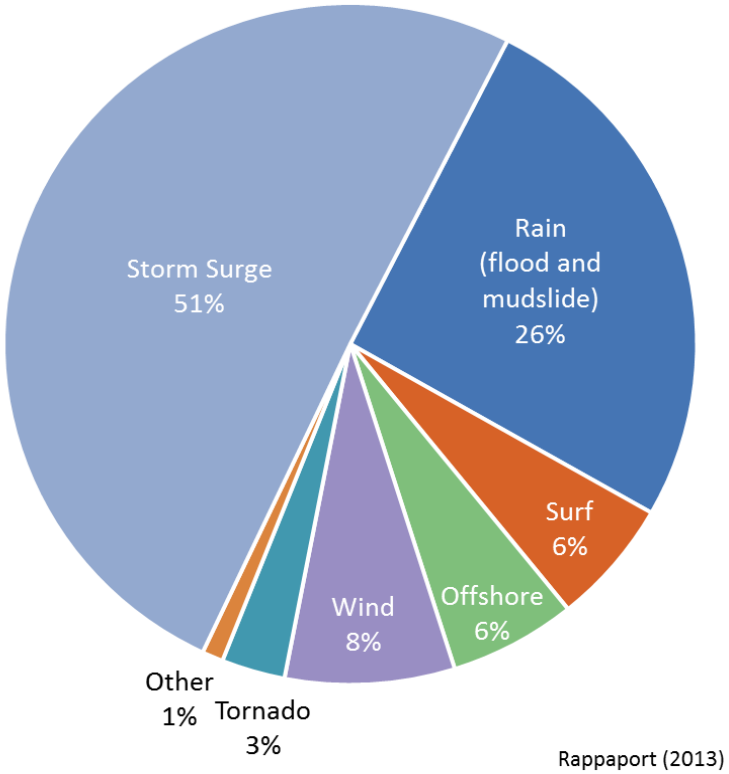


Figure 2: United States Atlantic Tropical Cyclone Deaths, 1963-2012.

Storm Surge

Storm surge is offshore seawater rise caused by hurricanes and tropical storms. Due to shallow depths offshore, the Texas coast is especially vulnerable to storm surge. Coupled with normal high tide and wave action, some populated areas of the state can potentially experience more than 25 feet of storm surge. Storm surge is a major threat even from low category hurricanes. In 2008 Hurricane Ike made landfall as a category 2 on the Saffir-Simpson Wind Scale but resulted in storm surges of 15-20 feet above normal tide levels, causing significant damage.[1]

The effects of storm surge are very difficult to mitigate; therefore, hurricane evacuation zones are based on storm surge projections. Twenty-two of the state's counties are vulnerable to storm surge and have designated evacuation zones or risk areas.

The National Hurricane Center (NHC) issues forecasts for potential storm surge, and issues storm surge watches and storm surge warnings when life-threatening surge inundation is possible or likely, respectively. The NHC releases potential storm surge flooding maps on their website to depict a reasonable worst case scenario of inland penetration and depth of storm surge at any individual location on the map.[2] Local NWS offices along the Texas coast work with the NHC to release location-specific storm surge threat levels and potential impact as the storm nears land.

The Sea, Lake and Overland Surge from Hurricanes (SLOSH) display is a tool available to forecasters and decision makers to estimate worst-case surge penetration and water depth. The maximum expected surge is depicted in the graphic at the right, modeled for a category 5 storm at high tide.

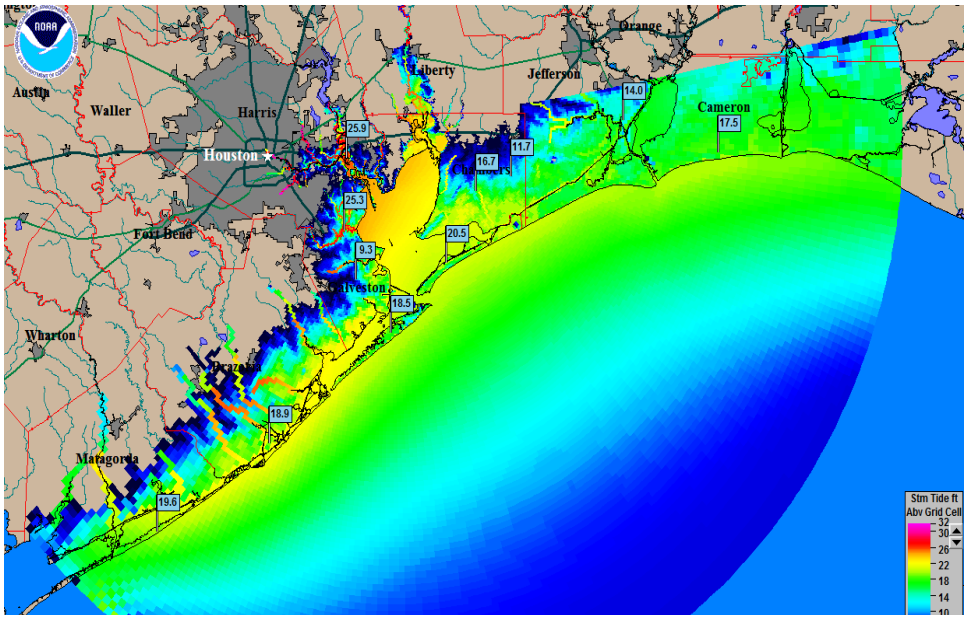


Figure 3: Maximum expected surge, for a category 5 storm at high tide.

[1] For more information, refer to Hurricanes in History by the National Weather Service.
[2] For more information, refer to Tropical Weather Outlook by the National Hurricane Center.

Wind Impacts

Impacts from a tropical cyclone vary by wind speed. The table below lists categories along the Saffir-Simpson Hurricane Wind Scale and provides a damage estimate for each.

Category	Speed	Damage Estimate
1	74 - 95 mph	Very dangerous winds that produce some damage. Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large tree branches snap and shallowly-rooted trees may be toppled. Extensive damage to power lines and poles may result in power outages that could last a few to several days.
2	96 - 110 mph	Extremely dangerous winds cause extensive damage. Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees may be snapped or uprooted and block numerous roads. Near-total power loss is expected, with outages that could last from several days to weeks.
3	111 - 129 mph	Devastating damage occurs. Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees may be snapped or uprooted, blocking numerous roads. Electricity and water may be unavailable for several days to weeks after the storm passes.
4	130 - 156 mph	Catastrophic damage occurs. Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees are snapped or uprooted and power poles downed. Fallen trees and power poles are isolates to residential areas. Power outages may last weeks to possibly months. Most of the area may be uninhabitable for weeks or months.
5	157 mph or higher	Catastrophic damage occurs. A high percentage of framed homes may be destroyed, with total roof failure and wall collapse. Fallen trees and power poles may isolate residential areas. Power outages could last for weeks to possibly months. Most of the areas are uninhabitable for weeks or months.[3]

Tornados

In addition to water and wind impacts, tropical cyclones may also spawn tornadoes capable of inflicting significant damage. Nearly 60% of hurricanes that make landfall generate at least one tornado, usually in the storm's front-right quadrant or in its rainbands. Although tornadoes produced by tropical cyclones are typically less intense than those that occur in the Great Plains, falling in the EF-0 to EF-1 range

[3] For more information, refer to Saffir-Simpson Hurricane Wind Scale by the National Weather Service.

on the Enhanced Fujita (EF) Tornado Damage Scale, destructive EF-2 and EF-3 tornadoes may occur in the outer bands of tropical cyclones.

Inland Flooding

Flooding from heavy rainfall creates another significant threat to life, safety and property even in places far from the coast. Preventable drowning deaths make up a significant portion of hurricane-related fatalities. Flash flooding of creeks and streams can quickly cause unexpected life-threatening conditions to occur.

The NWS Advanced Hydrologic Prediction Service (AHPS) provides flood forecasts along with water levels at river and stream observation points across the state.[4]

The AHPS does not consider urban and low-lying flooding caused by prolonged, persistent rainfall. One example of this type of flood disaster occurred in 2001 when Tropical Storm Allison's remnants remained over the state for several days, causing unprecedented urban flooding in Houston and an estimated $9 billion in damage.

Waves and Rip Currents

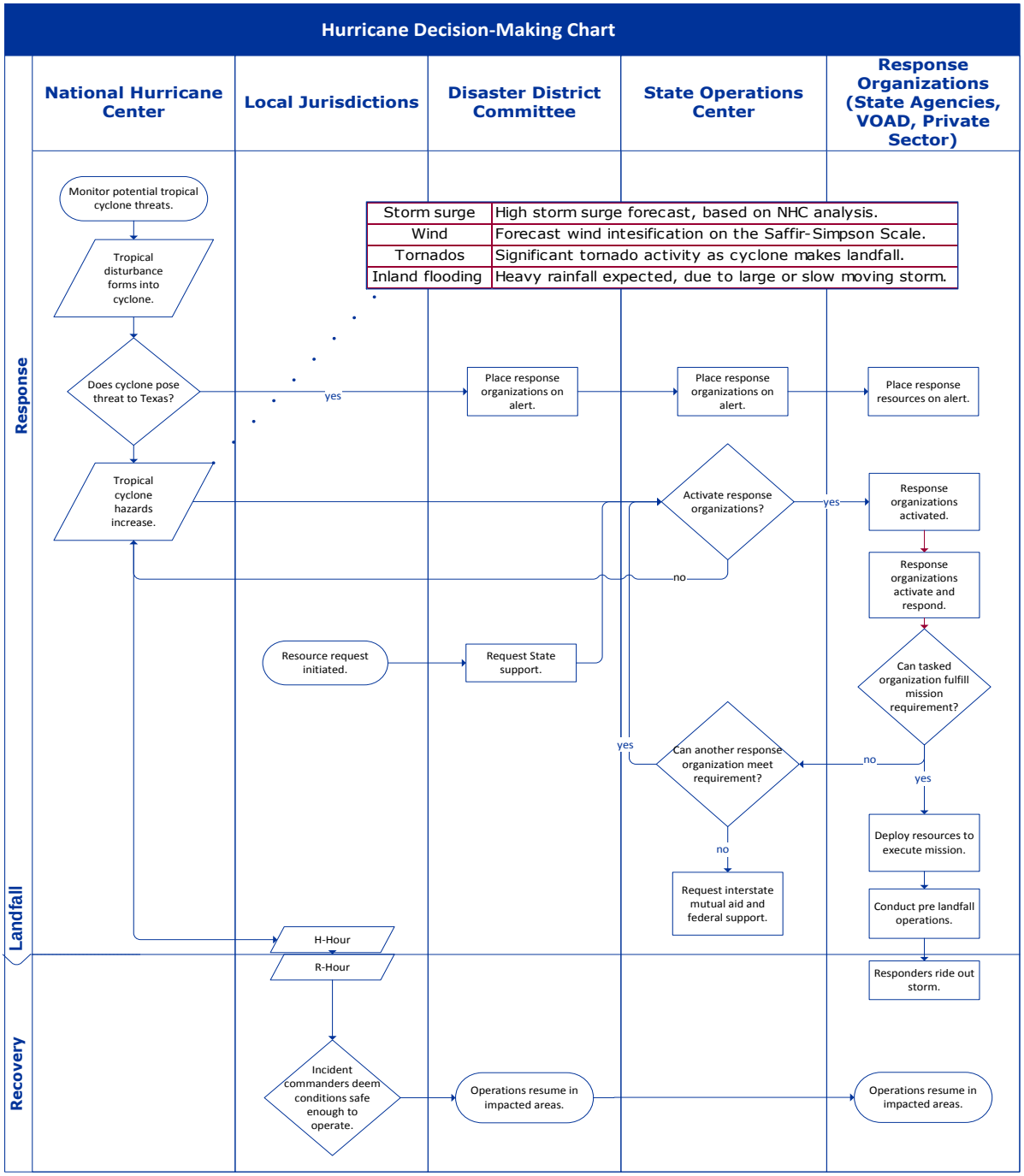
The strong winds of a tropical cyclone can cause dangerous waves more than a thousand miles from the storm. Rip currents are channeled currents of water flowing away from shore, usually extending past the line of breaking waves. They create a significant hazard because they can pull boats and swimmers out to sea. In 2009, all six deaths in the United States directly attributable to tropical cyclones occurred as the result of drowning from large waves or strong rip currents.

[4] For more information, refer to Advanced Hydrologic Prediction Service by the National Weather Service.

Decision-Making

This section identifies decision-making that results in the activation of state resources to perform hurricane response functions.

The following table outlines key decisions made by the Chief of the Texas Division of Emergency Management (TDEM) in coordination with executive partners during hurricane activations of the State Operations Center (SOC).



Concept of Operations

The state may perform several interrelated emergency functions in response to a hurricane. This section summarizes these functions.

The state's planned response to hurricanes involves many government and nongovernmental agencies and organizations. These entities collaborate to monitor hurricane threats, provide support to local operations and assist in recovery.

Hurricane Response Functions

This table provides possible notification and activation timeframes for core emergency response functions. There are four timeframes:

- Advisory **(A)**: notification of a potential threat
- Alert **(B)**: personnel prepare for activation
- Activation **(C)**: resources begin movement to support response operations
- Onsite/operational **(D)**: resources perform response functions

Emergency Function (Annex)	H-120	H-96 to 72	H-72 to 48	H-48 to 0	H-Hr. +	R-Hr. +
Emergency Management	D	D	D	D	D	D
Communications	D	D	D	D	D	D
Warning	C	D	D	D	D	D
Public Information	C	D	D	D	D	D
Resource Support	C	D	D	D	D	D
Food & Water	C	D	D	D	D	D
Health & Medical	C	D	D	D	D	D
Transportation	B	C	D	D	D	D
Evacuation	B	C	D	D	D	D
Shelter/Mass Care	B	C	D	D	D	D
HAZMAT Response	B	B	C	D	D	D
Radiological EM	B	B	C	D	D	D
Animals/Agriculture	A	B	C	D	D	D
Firefighting	A	B	C	D	D	D
Search & Rescue	A	B	B	C	D	D
Law Enforcement	A	B	B	C	D	D
Energy	A	A	B	C	D	D
Public Works/Engineering	A	A	B	C	D	D
Volunteer/Donations Mgmt	A	A	B	C	D	D
Recovery	A	A	B	C	D	D

- **Important:** The amount of warning time prior to the onset of hurricane hazards can vary greatly depending on the storm. While some hurricanes may afford an H - 120, or five day, warning, other tropical cyclones may arise with little notice and require immediate activation. Timelines in this document are meant to provide a

frame of reference only. The timing of response decisions varies, depending on storm forecasts and effects.

Key to Hurricane Response Timeframes

H = number of hours before (-) or after (+) the onset of hurricane hazards.

R = number of hours before (-) or after (+) post-landfall operations resume.

- H-120 Monitor
- H-96 to 72 Elevated Threat
- H-72 to 48 Credible Threat
- H-48 to 0 Pre-Incident
- H+0 to TBD Post-Incident
- R+0 to TBD Recovery

Hurricane-specific considerations for each function are described on the following pages. More comprehensive information on any function outlined in this hazard annex may be found in the corresponding functional annex within the State of Texas Emergency Management Plan by following the links provided.

Emergency Management Coordination

TDEM coordinates statewide emergency response. Together with supporting emergency management council agencies and non-council partners, TDEM supports local response efforts by coordinating state resources to fill unmet operational requirements. Emergency management council agencies, voluntary organizations and private sector partners work together in the State Operations Center (SOC) when it is activated in response to a hurricane or tropical cyclone threat. ↗

County judges and city mayors are the designated Emergency Management Directors (EMD) of their jurisdictions, as stated in Texas Government Code, Chapter 418. These elected individuals hold the authority to declare local states of disaster and order mandatory evacuations for all or part of their jurisdictions. EMDs can appoint an Emergency Management Coordinator (EMC) who can implement decisions made by the EMD.

Each jurisdiction is part of a disaster district. Disaster districts are the State's regional emergency management organizations that serve as the initial source of state emergency assistance for local governments. Disaster districts are aligned with DPS regional boundaries.

A Disaster District Committee (DDC) chair, who is the local Texas Department of Public Safety (DPS) Highway Patrol (THP) Division Captain or Lieutenant, directs each Disaster District Committee. Disaster District Committees consist of state agencies and volunteer groups that may provide disaster response and recovery resources within the district's area of responsibility and that assist the DDC chair in identifying, mobilizing and deploying personnel, equipment, supplies and technical

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↗ For more information on the emergency management function, refer to the **State Direction and Control Annex (N)**.

support to respond to requests for emergency assistance from local governments and state agencies in that disaster district.

A TDEM District Coordinator (DC) is stationed in each disaster district to coordinate emergency response operations and serve as a liaison between a disaster district's local officials and the State Operations Center (SOC). DCs report to TDEM State Coordinators (SC), who are assigned to the seven DPS regions that encompass the disaster districts and capitol area.

If disaster district resources are inadequate to support the type or quantity of assistance that has been requested, the request for assistance is forwarded to the SOC using a State of Texas Assistance Request (STAR).

Once state resources are committed, personnel work under the general direction of the DDC chair and take their specific task assignments from a local Incident Commander (IC).

If the state cannot meet mission requirements using state resources, the SOC may submit an Emergency Management Assistance Compact (EMAC) request for support from other states, or a Resource Request Form (RRF) to the Federal Emergency Management Agency (FEMA), which coordinates federal support to the state.

Coordination Tools

The SOC uses a number of tools to gather and analyze data and reports. Together these help provide a common operating picture, allowing responders at all levels to make effective, consistent and timely decisions. The following table provides a descriptive overview of each coordination tool.

Coordination Tool	Description
Conference Calls	The SOC hosts conference calls with local, state and federal partners to provide an overview of the current situation and receive reports from affected disaster districts.
Hurricane Checklist	The SOC uses a Hurricane Operations Checklist that specifies tasks the state may be required to perform during a hurricane response. The checklist identifies tasks for applicable State Emergency Management Council (SEMC) agencies and organizations, and facilitates TDEM coordination with partner agencies during SOC hurricane activations.
Situation Report (SITREP)	The SOC publishes a daily situation report (SITREP) to summarize key actions taken in response to identified potential threats that: ▪ Explains the nature of the current threat(s). ▪ Specifies actions taken since the last report. ▪ Identifies committed or staged resources. ▪ Establishes mission priorities for the next operational period. Find state SITREPs at the Texas Department of Public Safety's Situation Reports website.
WebEOC	WebEOC is an Internet-based critical information system that: ▪ Captures State of Texas Assistance Requests (STAR). ▪ Displays the SOC H-hour clock, the countdown to the onset of

Coordination Tool	Description
	tropical storm force winds or coastal storm surge inundation. ▪ Provides a standardized reporting platform. ▪ Is available to partner organizations. Log-in to WebEOC.

Conference Calls

The table below lists each type of conference call with the appropriate facilitator, recommended participants and a description of the purpose.

Type	Facilitator	Participants*	Purpose**
District Call	District Coordinator (DC)	Jurisdictions/agencies in specific district	Assess situation for DC and DDC chairs and allow locals to share information as needed.
Regional Call	State Coordinator (SC)	DCs in specific region, regional state agency representatives if required	Share information gathered by DCs during district calls to identify trends and coordinate message.
Statewide Call	State Operations Center (SOC)	(Potentially) impacted jurisdictions and agencies statewide	Disseminate information to state and local partners.

* Any parties not listed here should forward all questions to their respective office of emergency management.
**The purpose of each call varies based on current conditions.

Communications

Viable communications capabilities are vital for effective coordination of response and recovery operations.

The SOC serves as a statewide communications hub, employing a full spectrum of telecommunications capabilities to maintain contact with partner organizations throughout all phases of a hurricane incident. Information is received and distributed at the SOC year-round, 24 hours a day via a multitude of text, visual and voice systems.

DPS personnel operate 24-hour communication centers in each disaster district. Communication centers are equipped with a variety of primary, alternate and redundant telecommunications capabilities. Redundant systems ensure that coordinated response operations can continue even if failures exist in one or more network components.

Public Safety Answering Points (PSAP) are operated by local government organizations, usually the county sheriff's office or municipal police department. The responsibilities of each PSAP are similar to DPS communication centers except

PSAPs focus on the political jurisdictions they serve. PSAP hours of operation and their telecommunications capabilities vary.

Amateur Radio Emergency Service (ARES) and Radio Amateur Civil Emergency Service (RACES) volunteer ham radio operators may assist with communications needs and provide support if other communications resources are not operational.

Communication Coordinating Group

The Communication Coordination Group (CCG) is a group of representatives from multiple state and federal agencies as well as affected jurisdictions and industry providers whose mission is to facilitate interagency coordination and collaboration to provide communication planning and operational support to joint, interagency and intergovernmental task forces.

At the request of a DDC and the direction of the SOC, the CCG can provide support to coordinate tactical communications and communications infrastructure support if an emergency has exceeded the capabilities of local first responders. The CCG:

- Tracks available commercial, military and government communication resources.
- Coordinates with commercial vendors and assists in prioritizing the restoration of services.
- Reviews requests for communications assistance submitted to the SOC.
- Assists the SOC with assigning communications mission requests to the appropriate agency.
- Provides Subject Matter Experts (SME) to assist first responders with communications.
- Operates a network control center with systems-tracking capability to coordinate the use of deployed assets.
- Serves as a "channel of communication" between the stakeholders in federal, state and local agencies.
- Provides guidance and recommendations on functional requirements.
- Reviews information and issues provided by various groups to verify functions, resources and compliance with statutory guidance.
- Fosters communication, information sharing and working relations with federal emergency planning representatives.

Warning

Early warning to members of the public, the private sector and other critical partners saves lives and minimizes potential damage from hurricanes. The National Hurricane Center (NHC) is the official source of hurricane watches, warnings, forecasts and analysis of hazardous tropical weather.[5]

Watches and Warnings

The table below provides information on watches and warnings issued by the NHC for hurricanes and tropical storms.

[5] For more information, refer to the Atlantic Tropical Cyclone Activity by the National Weather Service.

Warning Type	Weather Conditions
Hurricane Warning	Sustained winds of 74 mph or higher are expected in association with a tropical, subtropical or post-tropical cyclone. The warning is issued 36 hours in advance of anticipated onset of tropical-storm-force winds and can remain in effect when dangerously high water or a combination of dangerously high water and waves continue even if winds are less than hurricane force.
Hurricane Watch	Sustained winds of 74 mph or higher are possible within the specified area in association with a tropical, subtropical or post-tropical cyclone. The watch is issued 48 hours in advance of the anticipated onset of tropical-storm-force winds.
Tropical Storm Warning	Sustained winds of 39 to 73 mph are expected within 36 hours in association with a tropical, subtropical or post-tropical cyclone.
Tropical Storm Watch	Sustained winds of 39 to 73 mph are possible somewhere within the specified area within 48 hours in association with a tropical, subtropical or post-tropical cyclone.
Storm Surge Warning	The danger of life-threatening inundation from rising water moving inland from the shoreline somewhere within the specified area, generally within 36 hours, in association with an ongoing or potential tropical cyclone, a subtropical cyclone, or a post-tropical cyclone. The warning may be issued earlier when other conditions, such as the onset of tropical storm-force winds, are expected to limit the time available to take protective actions for surge (e.g., evacuations). The warning may also be issued for locations not expected to receive life-threatening inundation, but which could potentially be isolated by inundation in adjacent areas.
Storm Surge Watch	The possibility of life-threatening inundation from rising water moving inland from the shoreline somewhere within the specified area, generally within 48 hours, in association with an ongoing or potential tropical cyclone, a subtropical cyclone, or a post-tropical cyclone. The watch may be issued earlier when other conditions, such as the onset of tropical storm-force winds, are expected to limit the time available to take protective actions for surge (e.g., evacuations). The watch may also be issued for locations not expected to receive life-threatening inundation, but which could potentially be isolated by inundation in adjacent areas.

Additional watches and warnings may be issued by National Weather Service (NWS) local forecast offices that provide detailed information regarding specific threats.

The SOC receives all NHC products including watches and warnings via the National Law Enforcement Telecommunications System (NLETS) and ensures that information is routed to appropriate coastal jurisdictions. The SOC also coordinates with the NHC and NWS Southern Region-Regional Operations Center (ROC) to identify potential hurricane impacts.

In addition to sending statewide email notifications regarding potential threats, the SOC coordinates conference calls with FEMA Region VI and the NWS to provide up-

to-date situation reports (SITREP) to partner organizations at all levels of government, and the nonprofit and private sectors.

Notification Resources

Hurricane warnings include notifications about cancellations, closings, states of emergency, evacuation and other critical information that is designed to help the recipient avoid heightened threats to safety and security. Warning methods vary depending on location and available resources.

The table below describes warning resources used by the state for hurricane response.

Notification Type	Description
Emergency Alert System (EAS)	A captioned emergency warning notification system that can message to the general public in the State of Texas or any portion of the broadcast coverage and cable system service area at the request of authorized local, state or federal government officials.
Integrated Public Alert and Warning System (IPAWS)	A system that allows for alerts to be originated by Federal, state, local and tribal officials and disseminated to the public using a range of national and local alerting systems, including the Emergency Alert System, Commercial Mobile Alert System and NOAA Weather Radio.
National Law Enforcement Telecommunications System (NLETS)	A computerized message switching system of state law enforcement agencies with criminal justice-related information. The SOC receives all NHC products including watches and warnings via NLETS.
National Oceanic and Atmospheric Administration (NOAA) Weather Radio	A nationwide network of radio stations broadcasting continuous weather information directly from the nearest NWS office. Broadcasts official warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.
National Public Safety Planning Advisory Committee (NPSPAC)	Limited, area-wide 800 MHz band radio frequencies used to conduct 2-way communications in support of mutual aid agreements; connecting an Area Warning Center (AWC) with city, county and state, federal, military, law enforcement and criminal justice agencies in Texas. Supplemental to the warning network's primary "voice-only" system.
National Warning System (NAWAS)	24-hour, nationwide, dedicated, multiple-telephone-line warning system provided by FEMA and operated by North American Aerospace Defense (NORAD).
Radio Amateur Communications Emergency Services (RACES)	Operated by volunteer amateur (ham) radio operators, may provide communications support between DDCs and the SOC.
Texas Law Enforcement Telecommunications System	Statewide telecommunications network connecting the State Warning Point (SWP) with city, county, state,

Notification Type	Description
(TLETS)	federal, military, law enforcement and criminal justice agencies in Texas. The warning network's primary "textual hard copy" system.
Texas Warning System (TEWAS)	State-level extension of NAWAS. The warning network's primary "voice only" system.

Public Information

Emergency public information is used to keep the public informed of the general progress of the storm and provide information on health and safety. The release of timely, consistent and effective public information helps all Texans understand threats, potential impacts, available services and timelines for response and recovery.

Emergency management council agencies and organizations with community relations, government relations and public affairs duties share responsibility for disseminating information to the public and the media during a hurricane. Public information must be accessible to the whole community, including persons with disabilities. Interpreters for spoken languages other than English and for American Sign Language (ASL) should be used whenever available.

Hurricane Specific Public Information

Various state agencies disseminate hurricane readiness information to the public to better prepare communities for hurricane season. Executive Order RP 57, issued in March, 2006, directed the Public Utility Commission of Texas to coordinate with telecom and electric utilities in hurricane evacuation zones to include hurricane preparedness and evacuation related public awareness information in monthly billing statements prior to, and during each hurricane season.

When a hurricane threat is identified a variety of public messages are disseminated by the state, with the governor's press office serving as a unified point for public information. The table below shows hurricane-related public information messages, along with the responsible state emergency management council agency.

Agency	Message
TxDOT	Issue refuel messages, intended to stimulate demand for fuel while there is still time to replenish the fuel system and avoid sudden depletion of fuel during evacuation or other emergency operations.
TDEM/TxDOT	Issue evacuation notifications and information about where to find evacuation comfort-stations.
DSHS	Post messages to support injury prevention during pre-storm preparation activities and post-storm cleanup activities.
DSHS	Remind the public to take medications and medical equipment if evacuating.
TDEM/VOAD	Publicize shelter-hub locations.

Agency	Message
TAHC/TDA/AGRILIFE	Issue traditional and social media messages about animal evacuation, care, safety, and sheltering.
TAHC/TDA/ AGRILIFE	Announce that evacuation or moving of tractors, combines or other agricultural equipment are not allowed on the public evacuation routes past H-96. Evacuation of agricultural equipment must be completed by this time.
TDEM/VOAD	Disseminate donation guidelines.

Resource Support

Hurricane response and recovery cannot occur without the deployment of resources. A large-scale hurricane response can deplete state resources and overwhelm state response capabilities. Effective resource management requires coordination across all levels of government. When hurricane impacts are severe, resources may be deployed to Texas from across the country.

The Resource Request Process

Resources are provided primarily by local jurisdictions. If a jurisdiction has unmet resource needs, it may try to obtain the resource from the following entities:

- Local nongovernmental or faith-based organizations.
- Local contracts or private-sector partnerships.
- Mutual aid agreements with nearby jurisdictions.
- Pre-designated regional response teams or resources.
- A regional multi-agency coordination center (MACC).
- The Disaster District Committee (DDC).

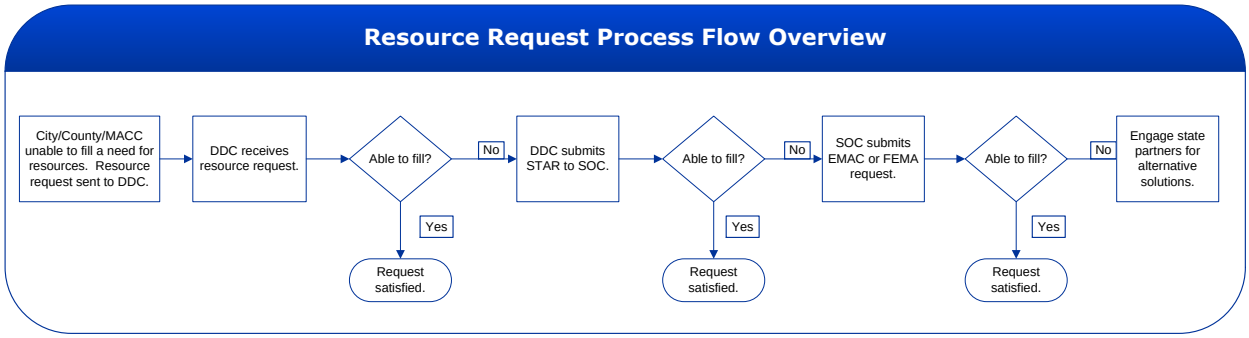
When a DDC receives a request for state assistance, the DDC provides the resource if it is available. If the resource is not available, the DDC submits a resource request to the SOC using a STAR form.

The state may request assistance from EMAC member states or territories, federal support agencies and external partners as appropriate using procedures.↗

Federal emergency assistance is available before, during and after a catastrophic hurricane landfall. Federal assistance relies on specific requests and priorities made by the state and becomes available once the state receives a presidential disaster declaration.

Although state and local governments have a wide variety of emergency response assets and potential staging sites, emergency contracts are available to provide certain specialized emergency response equipment, supplies and services.

↗ For more information on request assistance, refer to the **State Resource Support Annex (M)**.



Resource Staging and Distribution

Municipal, county and state authorities may activate resource staging areas (RSA), DDC staging areas (DSA), county staging areas (CSA), animal supply points (ASP) and points of distribution (POD) to manage and distribute resources. PODs may be used to distribute commodities, resources or medical supplies to the public. The following checklist assists with pre-storm resource management.

Public Health and Medical Services

Public health, medical response and recovery from a hurricane may require resources beyond those routinely available locally or through mutual aid agreements. The primary agency for the state's support of these response efforts is the Texas Department of State Health Services (DSHS).

Operational Coordination and Support

The State Medical Operations Center (SMOC) supports the SOC by coordinating state-level public health and medical activities during disasters.

The SMOC is staffed by DSHS personnel and includes representatives from all agencies housed under the Health and Human Services Commission (HHSC). DSHS representatives also serve as liaisons at the SOC.

Regional Health and Medical Operations Centers (RHMOC) provide operational support for health and medical response to the local and regional area. At the local and regional level RHMOCs provide ESF-8 support for coordination, control, response assets and recovery. The SMOC activates and deploys command assistance teams (CAT) for support in Health Service Regions (HSR) and the RHMOC.

Medical Services

DSHS coordinates and provides medical equipment, supplies or personnel to support medical response operations during sheltering, evacuation and recovery efforts as needed.

Disaster Behavioral Health (DBH) Services

HHSC is the state's leading mental health authority, functioning as the state-level behavioral health coordinating agency. HHSC has primary responsibility for assessment and provision of coordinated disaster behavioral health services during a state or federally declared disaster.

The Local Mental Health Authority (LMHA) has primary responsibility for assessment and provision of DBH services during locally designated emergencies or disasters.

As an ESF 8 function, the SMOC deploys behavioral health assistance teams (BHAT) to provide DBH services in the immediate area impacted by an event during a state or federally declared disaster when necessary.

Public Health Surveillance

DSHS works with the HSRs and local public health to conduct disease surveillance and monitor other public health concerns within general population and medical shelters as well as the disaster area.

Public Health Risk Communication

DSHS develops public health risk communications in conjunction with appropriate partners at the Joint Information Center (JIC).

Mass Fatality Management

If requested DSHS determines the need to activate and deploy state public health and medical resources, assesses the need for Emergency Management Assistance Compact (EMAC) or federal health and medical resource support, and specifies requirements.

DSHS also coordinates public health and medical resources from other states or the federal government; oversees the statewide data collection, analysis and reporting of disaster-related fatalities; and disseminates mortality surveillance reports and mass fatality management issues to state and federal leadership.

If the number of fatalities is anticipated to exceed the capacity of the jurisdiction, DSHS may activate Texas Funeral Director Association (TFDA) Strike Teams and accompanying resources. DSHS plans to deploy resources to the impacted area within 12-24 hours to assist local authorities in evaluating and characterizing a mass fatality incident, provide situational awareness to DSHS, and assist local jurisdictions with initial stages of response.

If activated, TFDA Strike Teams:

- Evaluate mass fatality incident characteristics to determine necessary response resources.
- Assist in determining the size of the gap in necessary resources.
- Assist with submitting requests for state or federal assistance and advocate for necessary resources and multi-agency involvement if additional resources are needed.
- Assist local jurisdictions with body recovery, transport and establishment of a holding morgue, and the recovery and transport of disinterred caskets.
- At the request of the local health authority, DSHS may also activate the state's portable morgue unit to assist in processing remains.

Evacuation

A catastrophic hurricane may prompt the evacuation of a large percentage of the coastal population to inland areas at lesser risk. The size and scope of the

evacuation is largely dependent on each hurricane's anticipated hazards and landfall location. Unpredictability of the strength, speed and direction of a hurricane poses a major challenge to public officials who must determine when to order an evacuation.

To implement a large-scale hurricane evacuation in support of multiple threatened jurisdictions, THP districts and DPS regions must perform a number of complex and interrelated activities across multiple emergency functions.

Evacuation timelines are uncertain and vary based upon the forecast for the onset of hazardous conditions. Each storm scenario is unique and forecast accuracy is not guaranteed, therefore evacuation timeline continually adjusts based upon the most recent storm information.

The information provided on the following pages outlines evacuation decision support resources available to government emergency management officials as well as strategies for state evacuation support.

Texas Hurricane Evacuation Study (HES) Areas

The Texas coast is divided into five areas for storm-surge vulnerability analysis. These areas, indicated in the table below, do not correspond to Texas disaster district boundaries.[6]

Study Area	Counties
Sabine Lake	Chambers*, Hardin, Jasper, Jefferson, Liberty, Newton, Orange
Houston-Galveston	Brazoria, Galveston, Harris
Matagorda Bay	Calhoun, Jackson, Matagorda*, Victoria
Costal Bend	Aransas, Kenedy, Kleberg, Nueces, Refugio, San Patricio
Rio Grande Valley (Laguna Madre)	Cameron, Hidalgo,** Willacy

Evacuation clearance time is the amount of time it takes to safely clear all evacuating traffic to inland points of safety. Hurricane Evacuation Studies (HES) provide planning assumptions such as evacuation clearance times for the population within designated hurricane evacuation zones. Clearance times vary, depending upon the evacuating location, storm scenario, tourist/seasonal occupancy and other factors.

Currently evacuation zones in Texas are defined by zip code, roads, jurisdictional boundaries or storm-surge projections.

Maps of Texas hurricane evacuation routes are maintained by TxDOT. Unless it conflicts with the established traffic management plan for the area, evacuation is self-directed and evacuees are allowed to use any route out of the coastal area.[7]

[6] For more information, refer to the Texas Emergency Management Executive Guide by the Texas Department of Public Safety – Division of Emergency Management.

Evacuation Coordination and State Support

THP is responsible for coordinating statewide evacuation traffic management activities when multiple THP district traffic-management plans are activated.

At the local level threatened jurisdictions and DDCs must work closely with one another to successfully implement a large-scale, multijurisdictional hurricane evacuation. This coordination is required because many local governments have pre-identified responsibilities for traffic management within their jurisdictions. The DDC assists in coordinating evacuation flow with jurisdictions within the THP district, as well as other districts.

Due to forecast uncertainty, the state must prepare to assemble resources and personnel to provide requested assistance to multiple DDCs. In the event the DDC determines local resources are inadequate, the state can assist individuals with critical transportation needs, as well as medical evacuees and evacuees with access and functional needs.

Critical Transportation Resource Support

Some evacuees require government-provided transportation to evacuate from a threatened area. Though the state deliberately plans to support transportation assistance requests during a catastrophic hurricane evacuation, responsibility for evacuee transportation rests primarily with local jurisdictions.

All feasible modes of transportation should be used for evacuation. Transportation resources are prioritized to best support movement of medical and critical transportation evacuees, including individuals with access and functional needs. TDEM may request school district bus resources through the DDCs. School districts may provide these resources as statewide mutual aid as these are defined by Chapter 418 Texas Government Code as governmental entities.

The state has contracts to provide a limited number of aircraft for evacuation support. This resource is deployed based on priority of need. Military air support may be requested during a catastrophic incident, though capacity on aircraft is limited.

Medical Evacuation

Individuals in hospitals, nursing homes or home environments requiring sustained medical care for chronic or acute health conditions are the focus of medical evacuations. In the case of a large-scale hurricane evacuation, the number of individuals requiring medical evacuation may reach into the tens of thousands and can overwhelm local jurisdictions.

In anticipation of this scenario the State Medical Operations Center (SMOC):

- Activates upon notification of a disaster or pending disaster.
- Establishes communication links with impacted Health Service Regions and Regional Health and Medical Operations Centers (RHMOC) to:

[7] For more information, refer to the Hurricane Evacuation Contraflow Publications by the Texas Department of Transportation.

    - Monitor status of hospitals and End Stage Renal Disease (ESRD) network facilities through WebEOC and EMSystems.
    - Receive and respond to STAR requests for medical evacuation and medical facility support.
- Activates and deploy medical incident support teams (MIST) to support RHMOC and jurisdictional MOCs in the management of state and federal medical transportation assets and assist in patient tracking.
- Deploys MIST personnel to assist in evacuations of medical facilities and nursing homes.
- Activates and deploy ambulance strike teams and supporting ambulance staging managers.
- Assists with transportation of medical evacuees.
- Provides medical staff and resources for medical coach buses, ambulances and Ambuses as appropriate.
- Deploys evacuation triage teams (ETT) to assist local jurisdictions with evacuation as appropriate.
- Assists local jurisdictions with locating destinations for medical evacuees in hospitals, nursing homes, and medical shelters.
- Activates established contracts for oxygen support.
- Deploys EMTF mobile medical units to support air hubs, embarkation points, reception centers, and other locations as necessary.
- Works with TDEM to Initiate EMAC agreements with neighboring states to fill gaps in ambulances and medical teams.
- Works with TDEM to request FEMA support for additional ground ambulances.
- Works with TDEM to request support from Texas Military Department and NDMS for large military air medical transportation assets in extreme situations.
- Monitors and tracks patient movement in WebEOC ETN throughout the incident, including the return of medical evacuees.

Note: all of the above would be requested through established resource request procedures (STAR). For details on the process see the Standard Operating Guidelines for Medical Evacuation.[8]

Texas Emergency Tracking Network (ETN)

The Emergency Tracking Network (ETN) was developed to ensure accountability of all state transported evacuees and their animals during the evacuation process and to assist with locating and reuniting evacuees with their families. Additionally, ETN can be used for local accountably as well. ETN is the state evacuee, evacuee asset and pet tracking system for emergency response operations.[1]

The evacuation tracking component of the network is composed of the evacuation tracking systems used by jurisdictions in Texas. The system is comprised of WebEOC and an iOS and Android application. Additionally, ETN has an application

[8] For more information, refer to the Standard Operating Guide by the Texas Department of State Health Services.

[1] For more information, refer to the Emergency Tracking Network (ETN) Advisory Group by The Texas Department of Public Safety - Emergency Management.

programming interface (API) that allows other products to connect and bi-directionally transfer data if a local jurisdiction has another solution.

The tracking system is used to support all populations displaced by an emergency response operation including hurricane evacuations and other large incidents. It is initiated at air and ground evacuation embarkation hubs and shelters as needed to track evacuees and their associated items and pets. All evacuees and their animals that travel on state or local transportation resources, including hospital patients, are registered in ETN.

Buses are tracked by GPS, through a component of ETN. Manifests are maintained real-time to cross reference buses and passengers.

The information obtained by ETN is provided to evacuating and sheltering jurisdictions and to organizations that specialize in locating family members as determined by TDEM on an incident by incident basis.

Fuel Availability

In preparation for a possible hurricane evacuation, the state works with the fuel industry to maximize commercial fuel availability on designated hurricane-evacuation routes. The fuel coordination team includes representatives from the Texas Oil and Gas Association (TxOGA), the Texas Petroleum Marketers and Convenience Store Association (TPCA), supply terminals, distributors and retailers. The team works to ensure that commercial filling stations are resupplied to meet potential increases in the demand for fuel for evacuating traffic and to assist the state in recovering the fuel network as quickly as possible following a hurricane.

Temporary Fuel Locations (TFL) may be established as needed at designated locations to provide refueling to government evacuation vehicles and responders. TDEM works with TxDOT to identify locations for TFLs. Potable water and oxygen cylinder exchange may also be available at TFLs for distribution to state-transported evacuees.

Evacuation Route Monitoring

The Texas Highway Patrol Division (THP), TxDOT and local law enforcement agencies monitor hurricane evacuation routes. Traffic control devices and equipment used in the evacuation are collected and stored as the storm approaches, prior to the onset of hurricane hazards.↗

Mass Care

TDEM is the primary agency for coordinating Mass Care. A catastrophic hurricane can cause the evacuation of multiple coastal regions. While many evacuees plan to stay in commercial lodging or with relatives and friends, some may require public shelter and other mass care services. These services may include the provision of temporary shelter, water, food, ice, short-term medical care, clothing, disaster survivor identification services, crisis counseling, pastoral care, functional needs

↗ For more information on hurricane evacuation routes, refer to the **State Evacuation Annex (E)**.

support services (FNSS) and other essential assistance to people who have been displaced from their homes.

Mass Care Planning

The state works closely with local jurisdictions to pre-identify sufficient shelter capacity to provide short-term emergency shelters for the maximum estimated number of hurricane evacuees and their service and assistive animals and household pets.

Pre-Landfall Shelter Demand

As the storm approaches, evacuee occupancy in shelter hubs is expected to steadily increase until the onset of hazards. In catastrophic situations shelter populations may increase or remain substantial for many days.

Timeframe	Shelter Demand
H-120 to H-72	A limited number of evacuees leave the coast and do not typically seek public shelter.
H-72 to H-36	Spontaneous evacuation is expected to begin.
H-36 to H-24	Increased forecast certainty allows jurisdictions to open additional shelters in areas with high demand.

Sheltering Coordination

ARC chapters provide shelter information to the Emergency Management Coordinator (EMC) for entry by the EMC into WebEOC ETN.

Each DDC reviews shelter reports pertaining to their disaster district, in order to submit shelter status reports to the SOC. These reports are used in part to determine the need to open additional shelters throughout the state.

Local emergency management offices are asked to submit daily shelter status reports. TDEM tracks shelter activity at the local level using WebEOC and through coordination with the ARC state program manager.

Shelters

Shelter hubs are established along evacuation routes in areas with adequate infrastructure and resources to provide mass care support for large numbers of evacuees. Shelter hub sites are pre-identified and opened in advance of coastal evacuation orders.

Point-to-point (PTP) shelters are a component of the shelter hub system that are reserved for evacuees traveling on government transportation from pre-designated coastal jurisdictions and are not announced to the general public. PTP shelters are pre-identified and documented by memoranda of understanding (MOUs) between evacuating coastal jurisdictions and inland host communities.

Reception Centers

Reception centers are used by some shelter hubs to receive evacuees in host jurisdictions. The physical address of the reception center is provided to evacuating

jurisdictions prior to evacuee embarkation. Upon arrival, evacuees may be triaged, registered and assigned to a shelter. Reception centers provide evacuees with directions to the shelter facility and a registration form to fill out.

Reception centers work with local EOCs to track daily operational status of shelters, occupancy for each shelter and number of evacuees processed by the reception center. The information is forwarded to the DDC and is compiled into shelter reports that are forwarded to the State Operations Center (SOC).

Shelter Logistics

Proper resource management is essential for successful shelter and care of evacuees and their animals before, during and after hurricane landfall. Shelter resources are provided by a combination of government and voluntary organizations. The governor may direct the use of state resources to support shelter and mass care operations.

Each shelter hub is supported by a pre-identified resource staging area (RSA) with the capacity to receive and store pre-positioned catastrophic shelter push packages. RSAs remain under the control of the Disaster District Committee (DDC) chair and may be operated by Texas Forest Service (TFS) incident management teams (IMTs)

Medical Shelter

Medical shelters are facilities specifically designed to care for individuals who require active monitoring, oversight or intervention by a medical professional short of requiring hospitalization. San Antonio is the primary location for consolidated medical sheltering in Texas. Austin, Bryan/College Station, Laredo and Tyler are secondary locations opened as needed. DSHS supports medical sheltering efforts by:

- Prioritizing incident demands for critical or competing resources, acting as a conduit for state assets and resources regarding medical sheltering.
- Facilitating communication between local, regional, tribal, state and federal entities to meet medical shelter needs.
- Establishing state supported medical shelters in primary and secondary locations, as required.
- Deploying medical resources and personnel.
- Monitoring shelter disease and public health surveillance reports.
- Initiating resource request forms (RRF) for federal medical stations (FMS).

Considerations for People with Access and Functional Needs

The State of Texas is committed to providing functional needs support services (FNSS) to help ensure children and adults with or without disabilities who have access and functional needs maintain their health, safety and independence in hurricane response to include evacuation, mass care and shelter operations. Texas supports the right of people with access and functional needs to access services

during emergency incidents. The State of Texas FNSS Integration Committee has created a toolkit in support of these objectives.[9]

Service and Assistive Animals and Household Pets

Many evacuees arrive with service and assistive animals and household pets, so it is essential that officials make arrangements to care for animals. Activities to provide for the safety and well-being of animals during evacuation, transportation and sheltering are coordinated by the Texas Animal Health Commission (TAHC), through nongovernment animal care organizations.

Prior to embarkation on state resources, each service and assistive animal and household pet is identified, tagged, provided the same tracking number as its owner and entered into the Texas Evacuation Tracking Network (ETN).Upon arrival at the host jurisdiction, one or more of the following types of shelters may be established for the animals:

- A shelter that houses evacuees in close proximity to their household pets, so owners can care for them.
- A shelter located separately from the evacuation shelters in which transportation is provided for evacuees to visit and care for household pets.

Service animals must accompany their owners at all times during evacuation and while in public shelters. With the exception of service animals, the American Red Cross (ARC) does not allow animals into shelters.

Hazardous Material and Oil Spill Response

Texas coastal areas contain petrochemical and energy production infrastructure of national significance, as well as dozens of ports and transfer facilities where raw and processed hazardous materials are staged for shipment. Tropical cyclones create hazards for these facilities that can have cascading impacts that result in hazardous materials (HAZMAT) incidents.

When a tropical cyclone approaches the state, HAZMAT response personnel perform response operations that are proportional to the severity of the storm. If a release or discharge of hazardous materials or oil does occur, the Texas Commission on Environmental Quality (TCEQ) coordinates with the Texas General Land Office (TGLO) and the Railroad Commission of Texas (RRC) as well as the US Coast Guard (USCG) and the US Environmental Protection Agency (USEPA) to perform assessment, cleanup and remediation.

Radiological Emergency Management

Nuclear power plants (NPP) are required by the Nuclear Regulatory Commission (NRC) to have radiological emergency response plans and procedures in place to provide protection of the public and to coordinate response to a radiological emergency resulting in a release of radioactive materials from NPPs.

[9] For more information, refer to the Functional Needs Support Services (FNSS) Toolkit by the Texas Department of Public Safety.

Prior to hurricane landfall, the SOC coordinates with the South Texas Project Electrical Generating Station (STPEGS), located in Matagorda County and Comanche Peak Nuclear Power Plant (CPNPP), located in Somervell County, to determine if support is required and to check the status of reactor shutdown procedures. Historically, due to diminishing hurricane impacts in Somervell County, CPNPP has not been forced to shut down due to hurricanes. If hurricane hazards are forecast to impact the site, CPNPP follows the same shutdown procedures as STPEGS.

DSHS ensures that emergency contact information and security measures are in place to regulate increased control licensees who possess certain radioactive materials in quantities of concern. Licensees are required to report any lost radioactive sources and to provide a status update to DSHS after they reenter the affected area following a hurricane.

The 6th Civil Support Team (CST) is an immediately deployable, active duty, Texas National Guard unit that may be requested to support local emergency responders, as well as state and federal agencies. The 6th CST normally operates as a state asset under the command and control of the governor, but upon deployment the unit provides direct support to a civilian Incident Commander (IC).

The 6th Civil Support Team deploys to an area of operations to:

- Support civil authorities with suspect CBRNE event.
- Identify potential hazards.
- Assess associated current and projected hazards.
- Advise and assist civilian responders on appropriate actions.
- Facilitate requests for assistance of additional state and Department of Defense (DOD) assets to help save lives and prevent human suffering.
- Mitigate property damage.

Animals and Agriculture

Texans have an emotional and financial investment in the health and well-being of their agricultural resources. The livestock industry is a key segment of the state's economy, as Texas exports more than $1.5 billion in animals and animal products annually. Tropical cyclone impacts to animals and agriculture have far reaching economic impacts both within the state and nation.

As a storm approaches, evacuees choose whether to evacuate their livestock, or to shelter them in place. Some communities have established livestock shelters, but owners may have to shelter their livestock in place. After the storm, these animals may be displaced due to damage or injured due to hazardous conditions. Consequently, tropical cyclones can cause large scale livestock deaths and displaced livestock can be a hazard to public safety and first responders.

In addition to managing carcass disposal, which is a function of debris management, the state recognizes that following the storm people will wish to quickly reenter disaster affected areas in order to access animals that could not be evacuated.

Coordination and Animal Care

At the state level, the Texas Animal Health Commission (TAHC) coordinates emergency management activities related to animals and agriculture. In the preparedness phase, TAHC assists local jurisdictions with animal planning efforts. In the response phase, TAHC helps local jurisdictions find resources to fill the need, provide guidance to address animal issues, and lead the state animal response team.

Firefighting

High winds and water from cyclones may blow down power lines and flood buildings, leaving communities vulnerable to fire risk. Reentry personnel may require fire suppression resources to deal with ongoing fires.

Because first responders in affected coastal jurisdictions are often personally impacted by the storm, fire service personnel from outside jurisdictions are often needed to augment response efforts. Augmentation of fire service resources during a hurricane response is coordinated through the Texas Intrastate Fire Mutual Aid System (TIFMAS).↗

Search and Rescue

The objective of state search and rescue (SAR) operations is to rescue individuals and stray abandoned, and/or injured animals and move them to a safer location in the immediate area. These operations usually start before a hurricane makes landfall. Some citizens and their animals do not evacuate and may request evacuation assistance as conditions worsen due to an approaching storm. Once a storm makes landfall, these requests are expected to increase, as survivors and their animals may require rescue and transport to medical care and shelters. ↗

The state pre-positions teams in the potential impact area prior to landfall in order to conduct SAR operations before and after the storm. Pre-landfall SAR operations are suspended when conditions are no longer safe to fly or drive due to tropical storm force winds or coastal inundation. Post-landfall SAR efforts begin as soon as conditions permit.

State SAR Resources include but are not limited to the following:

- Texas Task Force 1.
- Texas Military Department.
- Texas Department of Public Safety.
- Texas Parks and Wildlife.
- Texas General Land Office Watercraft.
- Department of State Health Services (DSHS) Medical Teams.
- Texas Animal Health Commission/TAMU Veterinary Emergency Team.

Law Enforcement

↗ For more information on firefighting function, refer to the **State Firefighting Annex (F)**.
↗ For more information on search and rescue functions, refer to the **State Search and Rescue Annex (R)**.

Law enforcement personnel play a critical role in evacuation traffic management, security and reentry access control. The state is prepared to provide assistance to coordinate large-scale public evacuations and support local response operations following a hurricane landfall.

The Texas Highway Patrol (THP) Division coordinates with local law enforcement agencies and the Texas Department of Transportation (TxDOT) to develop and maintain evacuation traffic management plans. Prior to a hurricane, THP executes traffic management plans as required to ensure the flow of evacuation traffic on hurricane evacuation routes.

As soon as it is safe, THP coordinates through the Disaster District Committee (DDC) to provide security and assist in establishing access control points that limit public access and exposure to dangerous conditions. As first responders, state law enforcement personnel may be required to assist with search and rescue responsibilities during the initial phases of responder reentry.

Security resources may also be requested to escort commodities in transport, or to maintain security at staging areas, temporary refueling points and points of distribution (PODs). Security checkpoints, traffic direction and general police patrol responsibilities are assigned as needed. When required, Texas Parks and Wildlife Division (TPWD) can provide additional state law enforcement personnel to assist with law enforcement activities.

Post-Storm Reentry

Successful reentry operations are necessary to rapidly restore infrastructure and services in an impacted area. Phased reentry allows for the quick deployment of resources, minimizes public exposure to hazardous conditions and provides timely access to affected areas for local residents, businesses and industry.

Reentry initially involves deploying emergency responders and equipment into impacted areas as quickly as possible in order to:

- Search for survivors.
- Provide essential medical and veterinary treatment.
- Evacuate patients and their animals.
- Conduct assessments of immediate threats or hazards.
- Establish access control points to limit access to areas with significant life safety or public health threats.
- Lessen the most significant health and safety conditions within impact areas.
- Restore life-sustaining medical care and veterinary services to support returning evacuees and their animals.
- The State of Texas is prepared to assist with reentry operations and the restoration of critical services of government; however, local emergency management directors (EMDs) are responsible for decisions regarding:
- The timing and implementation of reentry plans.
- Access granted to individuals.
- Search for stray, abandoned, and/or injured animals.

Energy

Critical infrastructure and key resources (CIKR) depend upon electricity; restoration of power is a crucial step towards disaster recovery.

The Public Utility Commission (PUC) coordinates with power companies to prioritize power restoration in the disaster area. Most major utilities provide a liaison to the SOC. A priority restoration plan is developed in the SOC and adjusted as requirements change. This plan is developed in coordination with impacted utilities and jurisdictions in order to determine facilities essential for the continuity of operations.

The state works with FEMA and the U.S. Army Corps of Engineers to assess installation requirements for the deployment of generators. The generators are used to provide temporary power for critical operations based on priority of need.

Public Works and Utilities

Damage from winds, flooding and loss of power can cause critical public works and utility infrastructure components to be out of service for days or weeks. Disruption of services impacts the ability of key businesses to reopen and citizens to return.

Requests for public works and engineering support are expected to routinely occur during hurricane response and recovery operations. When public works assistance is requested by local officials through a disaster district committee, the SOC coordinates the deployment of public works response resources to affected areas.

Volunteer and Donations Management

After a tropical cyclone impacts the state, unaffiliated volunteers and both solicited and unsolicited donations typically travel to or move within the state toward the impacted area. When managed correctly, these resources can speed response and recovery operations by providing resources and services at little to no cost. When managed incorrectly, however, these resources can create a disaster within the disaster by diverting the attention of first responders and taking time and resources away from the response effort.

TDEM is responsible for coordinating state volunteer and donations management functions. TDEM deploys a voluntary agency representative to the impacted area as soon as conditions are safe. If requested by local officials, TDEM can assist with establishing a donations coordination team (DCT) with local/state VOAD members to review incoming offers on Aidmatrix and work with the warehouse to identify support needs and pull daily reports on incoming and outgoing resources.

Recovery

Planning for the recovery phase begins prior to landfall, as soon as a tropical cyclone threat is identified. Recovery personnel develop disaster declaration requests and deploy to areas impacted by hurricanes as soon as conditions are safe to begin damage assessments and establish disaster recovery centers.

Disaster Declarations

Federal assistance for pre-landfall hurricane response is dependent upon the issuance of a presidential declaration. TDEM's recovery section develops and submits the disaster declaration request as early as possible to ensure enough time remains for the activation of federal resources to assist in pre-landfall operations, prior to the onset of hazards.

According to The Stafford Act (§401), any request for a presidential declaration of disaster must be made by the governor.[10] TDEM prepares the declaration request for the governor's office which then makes the request through FEMA Region VI.

Tribal groups are not required to coordinate through states to declare disasters affecting tribal lands.

In addition to presidential disaster declarations, the US Secretary of Agriculture is authorized to designate counties as disaster areas and make emergency loans to producers suffering losses in those counties and adjoining counties. These disaster designations are also used by the Farm Service Agency (FSA) as a requirement for eligibility.

[10] For more information, refer to the Stafford Disaster Relief and Emergency Assistance Act, 06/2007.

Summary of Responsibilities

This section specifies the responsibilities of stakeholders with capabilities during hurricane preparedness, response and recovery.

All state Emergency Management Council (EMC) agencies and organizations that support hurricane response are responsible for the tasks listed below.

Agency Checklist

Use the following checklist to ensure all EMC responsibilities are addressed.

Phase	Task
Preparedness	▪ Determine staff requirements. ▪ Identify specific personnel who can fill extended emergency duty positions in the state operations center (SOC), agency emergency operation centers (EOCs), state medical operations center (SMOC), Disaster District emergency operations center, multi-agency coordination centers (MACCs), the Joint Field Office (JFO), field command posts, traffic control and/or reentry points. Ensure that the number of personnel identified is adequate. ▪ Train representatives in accordance with National Incident Management System (NIMS) requirements and ensure that these representatives are made aware of the capabilities of their parent organization to provide assistance and support and be prepared to provide recommendations. ▪ Ensure appropriate action guides and standard operating guides are developed and maintained. ▪ Develop and maintain contact lists and notification procedures. ▪ Develop and maintain procedures for identifying, locating, committing, deploying and accounting for agency emergency support resources.
Response	▪ Assist with fulfilling intrastate and interstate mutual aid when possible. ▪ Provide situational and operational status reports in accordance with existing procedures and/or as requested by the primary agency. ▪ Support and coordinate accessibility and functional needs support services. ▪ Capture costs associated with response.

Agency/Organization Responsibilities

Some agencies provide personnel and/or equipment, while other agencies offer knowledge and expertise in working with response agencies, the vendor community, commercial organizations or associations that supply or restore services.

The following table shows stakeholder responsibilities organized by function. Stakeholders are listed in alphabetical order.

American Red Cross (ARC)

Phase	ARC Responsibilities
Response	▪ Provide staffing to local and State EOCs. ▪ Provide relief operations management. ▪ Conduct shelter and mass care operations. ▪ Provide welfare inquiry services, using the "Safe and Well" website. ▪ Assist in locating a source to procure, transport, store, prepare and distribute emergency food, water and ice supplies. ▪ Provide mobile and fixed feeding capabilities. ▪ Position resources to distribute mass care supplies. ▪ Provide advocacy and referral services for individual clients and families. ▪ Provide volunteer support for mass care. ▪ Conduct emotional and spiritual care activities. ▪ Provide shelter information to local EOCs the DDC or SOC. ▪ Provide blood services. ▪ Provide first aid at feeding sites and shelters.

Department of Aging and Disability Services (DADS)

Phase	DADS Responsibilities
Preparedness	▪ In accordance with existing Health and Human Services (HHS) Memorandum of Agreement (MOA), agencies work cooperatively to provide staff, facilities and resources to fulfill public health, medical and human services Emergency Support Function responsibilities, including staffing the State Medical Operations Center (SMOC), during disaster response and recovery. ▪ Regulate long-term care facilities and services, including nursing facilities, intermediate care facilities for persons with intellectual and developmental disabilities, assisted living facilities, home health care, adult day care and adult foster care. ▪ Regulate long-term medical and supportive services for children and adults with developmental disabilities, individuals in residential, patient care and institutional settings, recipients of home health care services, meals-on-wheels recipients, recipients of guardianship services and recipients of in-home family support services. ▪ Ensure licensed facilities' Emergency Preparedness and Response Plan includes evacuation procedures. ▪ Support DSHS with information on the potential needs of

Phase	DADS Responsibilities
	individuals with medical, access and functional needs. ▪ Assist in developing, maintaining and implementing plans to address the evacuation and sheltering needs of individuals with medical, access and functional needs. ▪ Participate in disaster response exercises and post-event AARs.
Response	▪ Provide and facilitate clarification on policies and procedures during disaster. ▪ Support providers' work in relocating residents/patients by furnishing information on provider contact names and numbers. ▪ Provide data regarding provider location and capacity to ensure that services can continue to be delivered. ▪ Respond to the SOC and/or DSHS SMOC as applicable. ▪ Gather and analyze situation information. ▪ Submit status reports to the SOC. ▪ Facilitate communications between DADS, the SMOC and the SOC. ▪ Regional staff assists local providers with evacuation efforts and call providers in disaster zones to check status of evacuation. ▪ Regional staff assists local DDCs with processing transportation requests and the identification of evacuation destinations. ▪ Provide clarification on policies and procedures during disaster. ▪ Respond to questions regarding reimbursement. ▪ Track and report the status of tasked mission assignments and expenditures. ▪ Assist in the identification of nursing home facilities.
Recovery	▪ Ensures that facilities damaged meet Life Safety Code (LSC) requirements prior to re-occupancy. ▪ Relay information to providers regarding status of reentry. ▪ Identify personnel to staff the Joint Field Office (JFO).

Department of Family and Protective Services (DFPS)

Phase	DFPS Responsibilities
Preparedness	▪ Child Protective Services (CPS) requires children's caregivers to have a disaster plan that ensures the children's safety and includes a requirement to notify CPS of each child's whereabouts and condition as soon as practical after evacuation. ▪ Adult Protective Services (APS) distributes materials on disaster preparedness to APS clients and families, as well as assists in planning for an evacuation. ▪ Assist in developing, maintaining and implementing plans to address the evacuation and sheltering needs of individuals with medical, access and functional needs. ▪ Maintain plans designating roles for ensuring business continuity/continuation of the department's mission essential functions. ▪ Train personnel and conduct annual exercises in all regions to test DFPS' ability to manage emergency incidents and events. ▪ Licensing staff review General Residential, Residential Treatment Center and Child Placing Agency foster home plans and procedures

Phase	DFPS Responsibilities
	for handling disasters and emergencies, including evacuation procedures, supervision of children and contacting emergency help.
Response	▪ Serve in the SOC and SMOC as an HHSC resource. In accordance with the existing HHSC MOA, HHSC agencies work cooperatively to provide staff, facilities and other resources to fulfill public health, medical and human services Emergency Support Function responsibilities during disaster response and recovery. ▪ Assist local Law Enforcement with temporary placement of children whose parents/guardians have become incapacitated by the disaster. ▪ Activate appropriate personnel to assist in shelter locations and assume responsibility for placing unaccompanied minors into safe environments. ▪ Serve as subject matter expert for sheltering operations in the area of child care/day care safety. ▪ Work with local staff to ensure continuity of service during disasters. ▪ Maintain a website for disseminating pertinent information to clients. ▪ APS community engagement staff provides disaster information to regional management and staff members as needed.
Recovery	▪ Participate in AARs to evaluate the effectiveness and efficiency of preparedness and response activities. ▪ Review AARs, evaluate methodology and update plans and procedures.

Department of State Health Services (DSHS)

Phase	DSHS Responsibilities
Preparedness	▪ Lead statewide planning for the evacuation and sheltering of persons with significant medical needs. ▪ Establish and maintain public health surveillance networks and protocols to ensure rapid disease reporting and identification. ▪ Identify regulatory statutes and rules that can be modified or waived in the event of a disaster declaration. ▪ Ensure disaster response plans reflect current law regarding public health and medical. ▪ Ensure that jurisdictions without a local public health infrastructure have public health regional support and collaboration. ▪ Provide public information and education related to public health and medical preparedness and response activities. ▪ Coordinate public health and medical services, equipment, supplies and personnel to meet public health and medical needs. ▪ Provide oversight in the provision of Emergency Medical Services (EMS) resources at evacuation route comfort stations. ▪ Maintain and provide lists of EMS providers who have signed memoranda of agreement and are currently licensed. ▪ Assist in developing and maintaining state emergency plans

Phase	DSHS Responsibilities
	relating to persons with medical needs. ▪ Maintain business continuity plans supporting agency essential functions.
Response	▪ Facilitate and monitor the evacuation, sheltering and reentry of medical evacuees. ▪ Deploy staff and resources as necessary to supplement regional and local capabilities and medical, EMS, and public health activities. ▪ Coordinate EMAC, private, contract and federal medical, behavioral health and mortuary resources. ▪ Coordinate utilization of transportation resources to include securing adequate medical transportation resources for the evacuation of state-operated medical facilities. ▪ Develop public health messages for communicating in emergency incidents in conjunction with the Joint Information System (JIS). ▪ Perform enhanced public-health surveillance activities. ▪ Coordinate public health issues relating to food safety. ▪ Coordinate with health and human service agencies and private health associations for the identification, transportation, treatment and sheltering requirements for evacuees requiring health care services during large-scale evacuation and shelter operations. ▪ Use ETN information track medical evacuees. ▪ Deploy and coordinate mass fatality resources. ▪ Coordinate and perform mass fatality management responsibilities as appropriate.
Recovery	▪ Demobilize state, EMAC and/or federal assets. ▪ Assist with repopulation of state-transported evacuees by coordinating medical transportation assets and providing assistance with case management services. ▪ Provide public health messages as appropriate. ▪ Conduct a post-event evaluation of the legal decisions made and identify gaps in law or rules that would have improved the state's response to the event. ▪ Participate in After-Action Reports (AARs) of the effectiveness and efficiency of preparedness and response activities. Review after-action reports and evaluation methodology and approve appropriate changes to plans and procedures. ▪ Demobilize medical shelters and other ESF-8 resources.

Texas Health and Human Services Commission (HHSC)

Phase	HHSC Responsibilities
Preparedness	▪ Share information about emergency preparedness education and training opportunities with staff and stakeholders. ▪ Encourage those who may need assistance during a disaster to register in the State of Texas Emergency Assistance Registry, by calling 2-1-1. ▪ Assist in developing, maintaining and implementing comprehensive emergency management programs and planning materials to

Phase	HHSC Responsibilities
	address Functional Needs Support Service (FNSS). ▪ Provide subject matter expertise and coordination with stakeholder groups to support integration of disability issues and access or functional needs into the emergency management cycle. ▪ Maintain continuity plans supporting agency essential functions. ▪ Assist in developing and maintaining state emergency plans. ▪ Participate in disaster response exercises and AARs.
Response	▪ In accordance with the existing HHS MOA, HHS agencies work cooperatively to provide staff, facilities and other resources to fulfill public health, medical and human services Emergency Support Function responsibilities during disaster response and recovery. ▪ Coordinate contract services for sign language interpreters. ▪ Respond, to the information needs of the SOC and SMOC to maintain constant and consistent communication. ▪ Work with regional and local staff to ensure continuity of agency essential functions. ▪ Operate 2-1-1 which provides disaster-related information and referral for the public during all phases of the incident. ▪ Serve as primary agency to coordinate Food and Water ESF 11 activities. ▪ Administer the Disaster Supplemental Nutrition Assistance Program (D-SNAP), if approved, following a major disaster declaration.
Recovery	▪ Facilitate response and recovery-related information between HHSC internal and external partners to ensure timely and accurate information is shared. ▪ Identify personnel to staff the Joint Field Office (JFO) and Disaster Recovery Centers (DRC), if applicable. ▪ Administer the Other Needs Assistance (ONA) Program, following a major disaster declaration. ▪ Administer the Disaster Case Management (DCM) Program, following a major disaster declaration. ▪ Help disaster survivors understand the ONA and DCM programs and assist in the application process. ▪ Coordinate the LMHA and state application(s) for the Crisis Counseling Assistance and Training Program (CCP) grants following a major disaster declaration for Individual Assistance. ▪ Coordinate Disaster Behavioral Health/Critical Incident Stress Management Network services as requested. ▪ Provide trained staff to act as state representative for Damage Assessment Teams. ▪ Continue community outreach and education to consumers. ▪ Restore agency essential functions to pre-disaster levels and support community recovery efforts.

Health and Human Services Commission (HHSC) 2-1-1

Phase	HHSC 2-1-1 Responsibilities
Hurricane Preparedness	Provide hurricane preparedness information and referral.

Phase	HHSC 2-1-1 Responsibilities
Preparedness	Register callers in the State of Texas Emergency Assistance Registry (STEAR).
Hurricane Response	Use 2-1-1 statewide database to store storm-related information, to provide disaster-related referrals and for reporting throughout the incident.
Response	▪ Provide disaster-related information and referral to the public during all phases of the incident. ▪ Assist in locating additional information and referral resources to support caller needs via contracted regional staff (Area Information Centers). ▪ Provide a representative at the SOC to monitor STEAR activity and unmet needs and potential issues. ▪ Research event-related resources and enter into 2-1-1 statewide database. ▪ Provide reassurance to frightened callers. ▪ Receive and document escalations regarding shelter needs, medical concerns, transportation issues, lack of fuel, lack of essential items, the presence or lack of shelter space, spontaneous shelters and other pertinent concerns from 2-1-1 Area Information Centers and report to the SOC. ▪ Receive escalations from 2-1-1 Area Information Centers regarding stranded individuals in need of rescue or emergency evacuation assistance if / when 911 services are not available. ▪ Document and forward escalations to the local EOC/DDC or to Search and Rescue, as appropriate.
Recovery	▪ Provide recovery-related Information and referral. ▪ Provide information to the SOC and SMOC regarding availability of resources or needs. ▪ Receive escalations from 2-1-1 Area Information Centers regarding medical welfare checks; document and forward to local EOC/DDC personnel.

Public Utility Commission (PUC)

Phase	PUC Responsibilities
Hurricane Preparedness	Ensure utility companies regulated by the PUC that serve counties in the hurricane evacuation zones include hurricane preparedness and evacuation-related public awareness information in monthly billing statements prior to and during hurricane season.
Response	▪ During preparations for a hurricane disaster, alert all major telecommunications and electric utilities along the coast and initiate a review of emergency plans, inventories and preparations for an approaching hurricane. ▪ Issue waivers for certain service area certificate requirements to permit emergency work activities. ▪ Provide accurate utility outage information and restoration dates to the SOC. ▪ Contact impacted utilities, request presence at the SOC and work with

Phase	PUC Responsibilities
	them to minimize outages during and after an event. ▪ Work with SOC staff and impacted utilities to establish restoration priorities.

Railroad Commission of Texas (RRC)

Phase	RRC Responsibilities
Preparedness	▪ Maintain an Emergency Process for the Oil and Gas Division, Pipeline Safety Division, Gas Services Division and Alternate Energy (e.g., liquefied petroleum gas) Division, that defines the chain of command and emergency procedures, and includes interaction with district and regional Offices throughout the state. ▪ Maintain phone lists. ▪ Maintain geospatial maps with operator, facility and location information on oil and gas wells, pipelines, gas processing plants, LPG facilities, above and underground storage, refineries and electric power generators. ▪ Provide training and problem solving exercises to SOC Team members.
Response	▪ Communicate with the Texas Energy Reliability Council, private industry, state agencies, RRC Divisions, RRC Districts and RRC Regional offices regarding natural gas and petroleum supply disruption, reallocation and augmentation of production. ▪ Keep TDEM and RRC Executive Staff informed of supply disruption developments with respect to damaged infrastructure

The Salvation Army (TSA)

Phase	TSA Responsibilities
Response	▪ Provide assistance for administration and supervision of disaster-relief operations. ▪ Provide volunteer mass care support and resources for fixed site mass feeding, mobile feeding, pastoral counseling, spiritual ministry, burial assistance, distribution facilities, donations centers and on-site assistance to disaster survivors, responders and evacuees. ▪ Assist in locating, procuring, transporting, storing, preparing and distributing emergency food, water and ice supplies. ▪ Coordinate Salvation Army team member actions appropriate to the disaster situation. ▪ Assist in the provision of and operation of emergency shelter facilities. ▪ Assist in the registration and identification of survivors and emergency workers. ▪ Assist with establishment of RSAs for provision of basic needs supplies (e.g., food, water, clothing). ▪ Serve as a member agency of the DDCs and State Emergency Management Council.

Phase	TSA Responsibilities
	▪ Act as a liaison with state agencies and departments and other recognized voluntary VOADs.

Texas A&M AgriLife Extension Service (AGRILIFE)

Function	AGRILIFE Responsibilities
Preparedness	▪ Provide education and learning resources for landowners, residents, businesses, communities and county government in the fields of disaster mitigation, preparedness, recovery and public health. ▪ Provide evacuation and shelter-in-place information to the public. ▪ Provide educational materials at: http://texashelp.tamu.edu
Response	▪ Support TAHC as member of their State Animal Response Team during reentry operations. ▪ Mobilize County Extension Agent Ag Strike Teams to support assessment, livestock care and animal supply points (ASP) if necessary. ▪ Conduct agricultural disaster loss and damage assessments in support of the County Emergency Board of the USDA. ▪ Respond to food-related disasters affecting landowners, farmers, ranchers, manufacturers, wholesalers, retailers, or consumers.

Texas Task Force 1 (TX-TF1)

Phase	TX-TF1 Responsibilities
Preparedness	▪ Conduct Search and Rescue (SAR) planning. ▪ Conduct SAR training and exercises in coordination with Texas Military Department (TMD) and response partners. ▪ Develop and maintain hurricane response deployment plans for TX-TF1 teams.
Response	▪ Maintain deployment schedules for responding TX-TF1 teams. ▪ Conduct wide area searches of impacted areas. ▪ Integrate response resources with operations of local incident command structures. ▪ Locate and rescue survivors, and transport them to safe areas. ▪ Coordinate requested EMAC and Federal SAR resources. ▪ Coordinate locations for Survivor Collections Points with response partners, as needed. ▪ As requested, locate and geomark fatalities, and report information to the authority having jurisdiction.

Texas A&M Forest Service (TFS)

Phase	TFS Responsibilities
Preparedness	▪ Provide incident management training to state regional Type 3 incident management teams (IMT). ▪ Provide requested training to local first responders.

Phase	TFS Responsibilities
	▪ Maintain a roster of qualified Type 3 IMT members for activation and deployment.
Response	▪ Provide IMTs that can be deployed to either manage or assist in emergency response operations. ▪ Provide Planning Support and Staging area support for DDCs. ▪ Provide incident management support to local EOCs. ▪ Provide staging support for TIFMAS resources. ▪ Provide management of RSA, CSA and POD.

Texas Animal Health Commission (TAHC)

Phase	TAHC Responsibilities
Preparedness	▪ Assist in developing, maintaining and coordinating the implementation of local plans to address the evacuation, transportation and sheltering needs of individuals with service and assistive animals, household pets and large animals. ▪ Assist in developing and maintaining plans relating to people with access and functional needs who are traveling with animals. ▪ Provide local jurisdictions with procedures on how to establish an animal issues committee.
Response	▪ Identify additional resource requirements to carry out assigned animal evacuation, sheltering and health support missions. ▪ Provide advice and planning assistance to local communities regarding the transportation, rescue, identification, sheltering and care of service and assistive animals, household pets and livestock as well as appropriate donations management for those activities through its personnel. ▪ Provide TDEM with information on the types of vehicles that would be appropriate for transporting animals out of the evacuation zone(s). ▪ Provide TDEM with information on the types of supplies that would be needed to control and care for animals on pet-friendly transportation vehicles. ▪ Advise local jurisdictions regarding sources for information and procedures for evacuating animals and establishing and operating various types of animal shelters. ▪ Provide guides to assist local jurisdictions in developing their individual animal-related emergency plans. ▪ Provide affected DDCs and the SOC with a TAHC or USDA-APHIS-VS staff member to handle and provide overall coordination of the animal evacuation, transportation and sheltering issues. ▪ Provide updated information to the SOC regarding the status and issues related to large and small animals being evacuated, transported and sheltered. ▪ Activate the Animal Response Operations Coordination Center. Animal Response Team(s), and/or Mission Ready Packages (MRPs) to coordinate and/or conduct animal SAR operations, damage assessments, support to the veterinary community and carcass disposal operations.

Phase	TAHC Responsibilities
	▪ Activate partner agencies and organizations.
Recovery	▪ Coordinate and/or conduct damage assessments, support to the veterinary community, and carcass disposal operations.

Texas Commission of Environmental Quality (TCEQ)

Phase	TCEQ Responsibilities
Hurricane Preparedness	▪ 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	▪ 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.

Texas Department of Agriculture (TDA)

Phase	TDA Responsibilities
Response	▪ Provide USDA commodities to assist local governments and voluntary agencies in emergency mass feeding operations through the Food and Nutrition Program. ▪ Coordinate with other animal-agriculture agencies and stakeholders to support animal response.

Texas Department of Criminal Justice (TDCJ)

Phase	TDCJ Responsibilities
Hurricane Preparedness	Maintain hurricane evacuation plans for state correctional facilities in hurricane evacuation zones.
Response	▪ Ensure inmates are appropriately evacuated to safe facilities in accordance with applicable laws, TDCJ directives and operational

Phase	TDCJ Responsibilities
	procedures. ▪ Provide available TDCJ personnel and their trustees for support. ▪ Provide equipment to assist in the provision, transportation, storage and distribution of food, water and/or ice supplies. ▪ Conduct emergency feeding operations where required by mission.

Texas Department of Information Resources (DIR)

Phase	DIR Responsibilities
Response	▪ Serve as the designated lead state agency for communications support. ▪ Provide statewide leadership and oversight for management of government information and communications technology. ▪ Leverage 2-1-1 to provide hazard and emergency information to the public. ▪ Provide additional bandwidth on the TEX-AN IPSG communications network to support increased 2-1-1 traffic during an emergency. ▪ Maintain contact with affected state agencies to determine the need to store back-up files in a secure location or to back up agency data to one of the State Data Centers. ▪ Facilitate emergency procurement and delivery of technological resources. ▪ Maintain the Texas Online Emergency Preparedness Portal to provide the public with coordinated, up-to-date disaster information.

Texas Department of Public Safety (DPS) – Texas Division of Emergency Management (TDEM)

Phase	DPS – TDEM Responsibilities
Hurricane Preparedness	▪ Coordinate with federal agencies as well as local and regional partners to develop hurricane evacuation planning and decision aids. ▪ Collect, maintain and distribute information for the development of comprehensive hurricane response plans. ▪ Conduct hurricane preparedness training in coastal areas. ▪ Coordinate with the Public Utilities Commission to ensure utility companies serving residential customers in hurricane evacuation zones distribute public awareness information during hurricane season. ▪ Coordinate with shelter hubs to meet expected mass care requirements. ▪ Coordinate point-to-point evacuation plans with coastal and host jurisdictions. ▪ Develop, maintain and distribute this annex.
Preparedness	▪ Develop planning aids and templates. ▪ Conduct emergency management training and exercises.

Phase	DPS – TDEM Responsibilities
	▪ Assist partners with actions to develop and implement mutual aid programs. ▪ Develop plans and agreements with independent school districts, public colleges, universities and university systems to provide transportation assets and facilities that enable the execution of state and local evacuation and mass care operations. ▪ Develop policies and procedures to reimburse school districts and public colleges, universities and university systems for evacuation, mass care or transportation-related expenses. ▪ Maintain procedures to reimburse local governments and other support entities for evacuation-related fuel costs. ▪ Facilitate the maintenance of a statewide database to assist in the evacuation of critical transportation needs evacuees including those with medical, access and functional needs. ▪ Coordinate and maintain plans to address evacuation and sheltering needs of evacuees with service and assistive animals, household pets and livestock. ▪ Maintain contingency contracts and MOUs with private sector partners to assist with evacuation and sheltering operations. ▪ Assist in the development of regional response and evacuation plans throughout the state. ▪ Encourage local jurisdictions and MACCs to review evacuation plans maintained by in-patient health care facilities within their jurisdictions. ▪ Provide planning assistance, sample planning documents, staff visits and state standards for evacuation and mass care planning. ▪ Provide DC interface with local jurisdictions during the selection of potential RSA, CSA and POD locations. ▪ Maintain vendor contracts for RSA, CSA and POD support equipment. ▪ Ensure that state-contracted evacuee transportation vehicles are as pet-friendly as possible.
Response	▪ Collect, analyze and report information. ▪ Continually operate the SOC. ▪ Interface with local and regional jurisdictions and DDCs. ▪ Coordinate resource needs to assist local governments in conducting response operations. ▪ Identify and coordinate staffing requirements appropriate to the emergency situation. ▪ Process requests for assistance and present recommendations to designated direction and control authorities. ▪ Assess mass care needs, coordinate the activation and deployment of volunteer resources, and coordinate the assignment of state resources to provide disaster assistance to evacuees. ▪ Provide additional SITREPs as required by operational procedures, directives and as requested by the appropriate direction and control authority. ▪ Activate or organize shelter teams to open large, initial shelters. ▪ Provide TMD with estimated requirements for trained shelter teams and their projected deployment locations.

Phase	DPS – TDEM Responsibilities
	▪ Coordinate assistance to register evacuees at shelters. ▪ Coordinate deactivation of shelter hubs when they are no longer needed. ▪ Monitor commodity reports submitted by RSAs. ▪ Estimate critical transportation requirements. ▪ Provide animal-transport vehicles and drivers to evacuate animals that are not permitted to board state-contracted buses. ▪ Review and implement prioritized fuel distribution procedures during an emergency. ▪ Coordinate activation of shelter hub reception centers and initial shelters with local governments and VOADs. ▪ Approve the release of emergency public information materials on shelter hub reception centers. ▪ Coordinate with local EMCs to fill initial shelters to capacity prior to opening additional shelter hubs. ▪ Ensure that appropriate water and related equipment (e.g., soft-sided animal confinement bags or other carriers, leashes, muzzles) are provided for service and assistive animals and household pets at evacuation hubs. ▪ Coordinate with designated state agencies and local jurisdictions along evacuation routes to identify and assist in staffing rest or comfort stops that can be used for animals and their owners.
Recovery	▪ Prepare pre-landfall hurricane disaster declarations to facilitate federal assistance. ▪ Prepare disaster declarations to facilitate federal assistance.

Texas Department of Public Safety (DPS) – Texas Highway Patrol

Phase	DPS – THP Responsibilities
Preparedness	▪ DDC Chairs maintain awareness regarding the availability of supplies, materials and capabilities that could be used in a disaster situation. ▪ Develop and maintain comprehensive statewide traffic-management plans to support large-scale inter-jurisdictional evacuations. ▪ Assist in planning to accommodate increased volume at border checkpoints during evacuations. ▪ Develop, maintain and distribute appropriate evacuation guidance and SOGs.
Response	▪ Provide uniformed law enforcement personnel and equipment. ▪ Provide communications resources and support. ▪ Assume responsibility for command, control and communications, as well as other operational tasks during evacuations, and other disaster response operations. ▪ Provide a representative to local MACCs or multi-jurisdictional EOCs. ▪ Collect information from support agencies and provide SITREPs. ▪ Identify and coordinate resources to fill evacuation staffing

Phase	DPS – THP Responsibilities
	requirements. ▪ Provide for the safe and expeditious flow of traffic out of threatened areas and through adjacent jurisdictions. ▪ Assume traffic-management authority over designated evacuation routes during multi-jurisdictional evacuations. ▪ Monitor the status of all evacuations and report the status of movements and problems affecting expedited traffic flow. ▪ Take immediate actions as needed to ensure continued, expeditious traffic movements out of areas of risk, to include emergency rerouting of evacuating vehicles. ▪ Provide operational status reports on the evacuation traffic flow to the SOC. ▪ Work with DHS and US Border Patrol to coordinate the flow of traffic through checkpoints on major hurricane evacuation routes. ▪ DDC Chairs work with jurisdictions in the disaster district to ensure all evacuation, transport and sheltering operations are being carried out efficiently and effectively.
Recovery	▪ Driver's License Division (DLD) provides driver license and identification card assistance to card holders evacuated to shelter facilities. ▪ Utilizing mobile equipment, process and issue a temporary DPS driver license or identification card to evacuees meeting requirements, who lost their driver license or identification card, or who are in need of other driver license assistance. ▪ Within capabilities, provide a liaison to coordinate with the SOC when mobile Driver License and ID card support is activated.

Texas Department of Transportation (TxDOT)

Phase	TxDOT Responsibilities
Mitigation	▪ Prioritize infrastructure projects that address obstructions on evacuation routes. ▪ Conduct highway development planning to implement short- and long-term solutions to reduce congestion on evacuation highway routes.
Hurricane Preparedness	Coordinate with THP to develop and maintain contraflow plans for major hurricane evacuation routes as identified by the Task Force on Evacuation, Transportation and Logistics.
Preparedness	▪ Conduct traffic analysis and/or other studies to identify the most appropriate highways that meet evacuation requirements. ▪ Assist TDEM in establishing emergency fuel distribution priorities.
Hurricane Response	▪ Support the fuel operations function in the SOC as it coordinates the distribution of fuel prior to and during evacuation operations. ▪ Partner with the Fuel Coordination Team (TXOGA and other fuel industry representatives) to release public service announcements that encourage the filling of fuel tanks and promote fuel availability. ▪ Install hurricane evacuation route signage along highways that are

Phase	TxDOT Responsibilities
	hurricane evacuation routes in accordance with the Manual for Uniform Traffic Control Devices, ▪ Perform emergency highway repairs to allow evacuation routes to remain open as long as weather conditions permit. ▪ Assign locations for comfort stations along major evacuation routes and assist in their setup and operation. ▪ Keep evacuation routes open for as long as prudent to ensure evacuees can exit the evacuation zones safely.
Response	▪ Provide information on the availability of highways for evacuation operations. ▪ Monitor traffic conditions via detectors, cameras and personnel observations. ▪ Install temporary barricades, traffic cones and other traffic control devices to assist law enforcement in effective evacuation traffic management on state highway routes. ▪ Respond to and resolve immediate traffic road-hazard problems along evacuation routes.

Texas Education Agency (TEA)

Phase	TEA Responsibilities
Response	▪ Provide support for lost school days and school closures due to evacuations. ▪ Provide support for the care of children in disasters, and for other critical educational missions.

Texas General Land Office (TGLO)

Phase	TGLO Responsibilities
Preparedness	▪ Establish protocols, to assess prioritize and respond to coastal oil spills and hazardous material releases during a state or federally declared coastal natural disaster. ▪ Train response officers and support staff in accordance with NIMS/Hazwoper and train on the standard operating guidelines during for this type of disaster. ▪ Maintain procedures for staffing and equipment deployment. ▪ Maintain emergency contact list with notification procedures to support mission. ▪ Train responders to assist with development of mission assignments under Texas Task Force 1.
Response	▪ Monitor predicted path of storm and activate trained response personnel and response equipment as appropriate. ▪ Coordinate immediate response to provide search and rescue support, oil and hazardous material spills response and

Phase	TGLO Responsibilities
	humanitarian assistance. ▪ Deploy major equipment to prepositioned locations outside the targeted areas. ▪ Provide boats and operations to transport SAR responders and/or provide humanitarian assistance during non-swift waterborne USAR missions. ▪ Provided one trained planner to assist with development of mission assignments, in conjunction with Texas Task Force 1. ▪ Provide GIS Analysts to support digital mapping requests in support of mission assignments, as requested or tasked by Texas Task Force 1. ▪ Deploy trained staff and resources as needed to support the SOC. ▪ Conduct rapid needs assessment in conjunction with NDOW partners (TCEQ, TPWD, USCG & EPA) utilizing RESPONSE MANAGER data management system. ▪ Assess, prioritize and respond to coastal oil spills and hazardous material releases during a state or federally declared coastal natural disaster. ▪ Coordinate response efforts with USCG to begin oil and hazmat assessment and cleanup of coastal spills. ▪ Establish communication with the CCG for communication support in the field.

Texas Military Department (TMD)

Phase	TMD Responsibilities
Preparedness	▪ Develop/maintain plan to meet response phase requirements, update and submit to TDEM. ▪ Develop/maintain push packages to meet response phase requirements, update and submit to TDEM annually. ▪ Conduct necessary training and/or exercises to successfully execute response phase requirements. ▪ Coordinate with relevant inter-agency partners to successfully execute response phase requirements. ▪ Provide military support as requested by the SOC.
Response	▪ Support SOC operations with multi-function administrative personnel. ▪ Support CCG with communication force packages as directed. ▪ Support CCG with network operations center located at Camp Mabry. ▪ Support CCG with Tactical Refuel Force Packages for cell phone tower generators in the impact area. ▪ Support ground and air evacuation HUB operations. ▪ Support air evacuation operations with airlift aircraft. ▪ Support incident command with aerial situational awareness assets of the evacuation corridor(s), reentry corridor(s) and incident area. ▪ Support evacuation fuel point operations.

Phase	TMD Responsibilities
	▪ Manage ETN registration operations. ▪ Support organizations managing shelters with shelter operations. ▪ Support point-of-distribution (POD) operations. ▪ Support law enforcement static checkpoints with soldier and/or airmen teams. ▪ Support law enforcement security operations during civil disturbance situations with escorts for EMS and firefighting crews into and out of the incident area. ▪ Support law enforcement security operations during civil disturbance situations with escorts for critical infrastructure teams into and out of the incident area. ▪ Support Texas Task Force 1 (TX-TF1) search and rescue operations with ground SAR team(s). ▪ Support TX-TF1 search and rescue operations with aerial (rotary and fixed wing) SAR capabilities. ▪ Support CBRNE recovery efforts with certified CBRNE search and extraction team(s). ▪ Support CBRNE reconnaissance operations with certified CBRNE reconnaissance team(s). ▪ Support CBRNE recovery operations with certified CBRNE decontamination Team(s). ▪ Support CBRNE recovery operations with certified CBRNE medical triage team(s).

Texas Office of Attorney General (OAG)

Phase	OAG Responsibilities
Preparedness	▪ Provide guidance for individuals who may face door-to-door contractors. ▪ Provide guidance and information on charitable donation scams.
Response	▪ Issue warnings to businesses about price gouging in times of disaster. ▪ Monitor and processes complaints on fly-by-night door-to-door contractors and bogus charities during hurricanes or other catastrophic incidents. ▪ Exercise authority to prosecute any business that engages in price gouging after a disaster has been declared by the governor.

Texas Parks and Wildlife (TPWD)

Phase	TPWD Responsibilities
Preparedness	▪ Train, equip, and exercise Search and Rescue Special Teams/Strike Teams. ▪ Coordinate with relevant inter-agency partners to successfully

Phase	TPWD Responsibilities
	execute response phase requirements. ▪ Work with local jurisdictions and TAHC to prepare for and house animals in the state parks division and on state park lands.
Response	▪ Provide watercraft, 4 X 4 vehicles and game wardens for search and rescue missions and provide trained search and rescue strike teams. ▪ Provide law enforcement personnel, equipment and support for reentry operations and police response to local jurisdictions for patrol, security and law enforcement interdiction operations. ▪ Provide representatives to local MACC's or multi-jurisdictional EOC's. ▪ Identify available state park lands to temporarily house large animals and livestock to TAHC and local jurisdictions. ▪ Provide parking and lodging in state parks and on state lands for response personnel, disaster survivors and their vehicles.

Texas Procurement and Support Services (TPASS)

Phase	TPASS Responsibilities
Preparedness	Establish statewide contracts for bus transportation services, bus staging site management and coordination services, forklifts, pallet jacks, generators, base camp support services, portable restrooms, showers, portable lighting units, delivery services (dry van and refrigerated trailers) and fuel transportation/distribution services to be administered by TPASS staff during emergencies in conjunction with the SOC.
Response	Secure vendors for certain commodities and services to meet expected requirements along with anticipated demand.

Authority

Strategic planning guidance and authorities governing the enactment and implementation of this annex are summarized below.

Source	Relevance	Link
Texas Government Code Section 418.042	Describes provisions to be kept current by TDEM in the comprehensive state emergency management plan.	http://www.statutes.legis.state.tx.us/Docs/GV/htm/GV.418.htm#418.050
RP57—Relating to implementing recommendations from the Governor's Task Force on Evacuation, Transportation and Logistics	Directs TDEM to develop a statewide hurricane evacuation and shelter plan for persons with critical transportation needs including medical patients and those with access and functional needs.	http://governor.state.tx.us/news/executive-order/3631/

Record of Changes

This section describes changes made to this document: when they were made, what they were and who authorized them.

TDEM authorizes and issues changes to this document until such time as it is superseded. This document and all attachments are living documents. Council member representatives are responsible for participating in plan reviews and are required to provide information concerning capability changes that impact their emergency management responsibilities. TDEM coordinates the plan updating process and maintains the plan after receiving feedback and updates from partner agencies.

Lead and support agencies must ensure all records necessary for emergency management operations are obtainable and that duplicate records are held at alternate locations.

Use this table to record the following information:

- Change number, in sequence, beginning with 1
- Date change was made to the document
- Description of change and rationale if applicable
- Initials of person who made the change

Number	Date	Description	Initials
1	7/21/2014	Added individuals to Contributors and Sources list.	CRM
2	8/15/2014	Standardized terminology for critical transportation. Minor formatting changes.	CRM
3	9/26/2014	Changed "WebEOC Shelter Board" to "WebEOC ETN".	DA
4	9/26/2014	Standardized language for state Search and Rescue entities.	DA
5	9/26/2014	Changed Texas A&M Engineering Extension Service (TEEX) tasks to Texas Task Force 1 (TX-TF1) p.64.	DA
6	1/26/2015	Updated TX-TF1 responsibilities at their request to clarify local jurisdiction support.	CRM
7	12/19/16	Updated cover, removed the "Using this Document" section, removed the preface page, added new introduction page, added new paragraph into CONOPS, added new language to "exhausted all resources" references, removed the Maintenance Page, removed the Reference Page and move appendices to the end of the document.	DA

8	12/19/16	Removed Dept. of Assistive and Rehabilitative Services (DARS) references and updated Health and Human Services Commission (HHSC) roles and responsibilities.	WP
9	01/29/17	Updated template style (color, title page, bullets).	DA
10	04/25/17	Removed H-hour tables and several images.	WP
11	05/11/17	Updated information provided by AGRILIFE on Animal Supply Points and agricultural equipment evacuations notification.	WP
12	05/15/17	Updated watch/warning information; Storm Surge Warning/Watch information; per Hurricane Program Manager.	WP
13	05/15/17	Updated HHSC agency responsibilities provided by HHSC.	WP
14	05/15/17	Updated DSHS-specific information provided by DSHS.	WP
15	05/15/17	Updated ETN section with information provided by TDEM-CIS	WP

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This section provides a list of organizations and individuals who contributed to the development of this document.

This annex could not have been developed without the participation and collaboration of representatives from multiple organizations.

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