Texas Marine Debris Emergency Response Guide: Comprehensive Guidance Document

NOAA Marine Debris Program
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List of Acronyms

ACP	Area Contingency Plan
BMP	Best Management Practice
CBRA	Coastal Barrier Resources Act
CBRS	John H. Chafee Coastal Barrier Resources System
C&D	Construction and Demolition Debris
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COTP	Captain of the Port (of USCG)
DoD	Department of Defense
DPS	Texas Department of Public Safety
DSHS	Texas Department of State Health Services
EFH	Essential Fish Habitat
EMC	Emergency Management Coordinator
EMD	Emergency Management Director
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESF	Emergency Support Function
EWP	Emergency Watershed Protection (of NRCS)
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FOSC	Federal On-Scene Coordinator
GBAN	Galveston Bay Action Network (of Galveston Bay Foundation)
GIS	Geographic Information Systems
GLO	Texas General Land Office
GRP	Geographic Response Plan
HHM	Household Hazardous Material
HHW	Household Hazardous Waste
ICS	Incident Command System
LIDAR	Light Detection and Ranging
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NDOW	Natural Disaster Operational Working Group
NEPA	National Environmental Policy Act
NERR	National Estuarine Research Reserve
NMFS	NOAA's National Marine Fisheries Service (also known as NOAA Fisheries)
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRC	National Response Center
NRCS	Natural Resources Conservation Service
NWR	National Wildlife Refuge (of USFWS)
ROV	Remotely Operated Vehicle
RP	Responsible Party
RRC	Railroad Commission of Texas
SHPO	State Historic Preservation Office
SOC	State Operations Center
SUPSALV	U.S. Navy Supervisor of Salvage and Diving
TAHC	Texas Animal Health Commission
TCEQ	Texas Commission on Environmental Quality

TDCJ	Texas Department of Criminal Justice
TDEM	Texas Division of Emergency Management (of DPS)
TFS	Texas Forest Service
THC	Texas Historical Commission
TPWD	Texas Parks and Wildlife Department
TxDOT	Texas Department of Transportation
UAV	Unmanned Aerial Vehicle
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USFWS	U.S. Fish and Wildlife Service
UTMSI	University of Texas Marine Science Institute
VTIP	Vessel Turn-In Program

Definitions

Abandoned structure/vessel – Derelict structures (e.g., piers, docks, pilings, debris, duck blinds, floating cabins) and vessels (e.g., boats, barges) that have been abandoned in coastal waters and on state-owned lands (Texas General Land Office [GLO], 2017i).

Acute waterway debris incident – An incident that results in the release of large amounts of waterway debris. This may include natural incidents such as severe storms or anthropogenic incidents such as maritime disasters.

Area Contingency Plan (ACP) – Reference document prepared by an Area Committee for the use of all agencies engaged in responding to environmental emergencies in a defined geographic area. The purpose of the ACP is to define the roles, responsibilities, resources, and procedures necessary to address oil and hazardous substance incidents. An ACP also encompasses the processes for development and management of Geographic Response Plans. For coastal Texas, these documents are the *Southeast Texas and Southwest Louisiana ACP*, the *Central Texas Coastal ACP*, and the *South Texas Coastal Zone ACP* (U.S. Coast Guard [USCG], 2016b; USCG, 2016a; USCG, 2017).

Archeological site – Any land or marine-based place containing evidence of prehistoric or historic human activity (13 Tex. Admin. Code § 26.3(5)).

Captain of the Port (COTP) – U.S. Coast Guard Captains of the Port and their representatives enforce within their respective areas port safety and security and marine environmental protection regulations, including, without limitation, regulations for the protection and security of vessels, harbors, and waterfront facilities; anchorages; security zones; safety zones; regulated navigation areas; deepwater ports; water pollution; and ports and waterways safety (33 C.F.R. § 1.01-30). U.S. Coast Guard COTP zones in coastal Texas include COTP Port Arthur and COTP Houston-Galveston in Sector Houston-Galveston and COTP Corpus Christi in Sector Corpus Christi.

Chemical, Biological, Radiological and Nuclear-Contaminated debris – Debris contaminated by chemical, biological, radiological, or nuclear materials (Federal Emergency Management Agency [FEMA], 2018).

Coastal zone (Area Contingency Plan [ACP] coastal zone) – U.S. Coast Guard area of responsibility for response under the National Contingency Plan, with geographic boundaries defined in the *Southeast Texas and Southwest Louisiana ACP*, the *Central Texas Coastal ACP*, and the *South Texas Coastal Zone ACP* (USCG, 2016b; USCG, 2016a; USCG, 2017).

Coastal zone (under Texas Coastal Management Program) – The Texas Coastal Management Program boundary area that the Texas General Land Office is required to regulate through state and federal laws (GLO, 2017i). Texas's coastal zone is delineated by the coastal management program boundary and generally includes the area seaward of the Texas coastal facility designation line which roughly follows roads that are parallel to coastal waters and wetlands generally within one mile of tidal rivers. The boundary encompasses all or portions of 18 coastal counties (Cameron, Willacy, Kenedy, Kleberg, Nueces, San Patricio, Refugio, Aransas, Calhoun, Victoria, Jackson, Matagorda, Brazoria, Galveston, Harris, Chambers, Jefferson, and Orange). The seaward reach of the boundary extends into the Gulf of Mexico to the limit of state title and ownership under the Submerged Lands Management Act (43 U.S.C. § 1301 et seq.), that is, 3 marine leagues (9 nautical

miles; GLO, 2016; National Oceanic and Atmospheric Administration [NOAA], 2012b; 31 Tex. Admin. Code § 503.1).

Construction and demolition debris (C&D) – Components of buildings and structures, such as lumber and wood, gypsum wallboard, glass, metal, roofing material, tile, carpeting and other floor coverings, window coverings, pipe, concrete, asphalt, equipment, furnishings, and fixtures (FEMA, 2018).

Cultural resource – Any building, site, structure, object, artifact, historic shipwreck, landscape, location of historical, archeological, educational, or scientific interest, including, but not limited to, prehistoric and historic Native American or aboriginal campsites, dwellings, and habitation sites, archeological sites of every character, treasure embedded in the earth, sunken or abandoned ships and wrecks of the sea or any part of the contents thereof, maps, records, documents, books, artifacts, and implements of culture in any way related to the inhabitants' prehistory, history, government, or culture. Examples of cultural resources include Native American mounds and campgrounds, aboriginal lithic resource areas, early industrial and engineering sites, rock art, early cottage and craft industry sites, bison kill sites, cemeteries, battlegrounds, all manner of historic buildings and structures, local historical records, cultural landscapes, etc. (13 Tex. Admin. Code § 26.3(18)).

Debris management site – A location where debris is sorted, processed, reduced in volume, and/or disposed of (if debris management activities take place at a permanent disposal site). A debris management site requires Texas Commission on Environmental Quality approval, Texas Historical Commission approval, and other permitting prior to use (GLO, 2017a).

Derelict structure/vessel – A structure or vessel that is inoperable or in a state of disrepair (GLO, 2017i). A vessel that is either wrecked or in a substantially dismantled condition (GLO, 2017a).

Disaster – An occurrence of a natural catastrophe, technological accident, or human-caused incident that has resulted in severe property damage, deaths, and/or multiple injuries (Texas Division of Emergency Management [TDEM], 2012).

Electronic waste (e-waste) – Electronics that contain hazardous materials, such as computer monitors, televisions, cell phones, and batteries (FEMA, 2018).

Eligible applicant – Entities who may receive public assistance reimbursement funding from the Federal Emergency Management Agency under the Stafford Act. Eligible applicants include state and territorial governments, Indian Tribal Governments, local governments, and private nonprofit organizations that serve a public function and have the legal responsibility to remove the debris (FEMA 2018; 44 C.F.R. § 206.222).

Eligible debris – Debris that is a direct result of a major disaster declared by the president, in the designated disaster area, and whose removal is necessary to eliminate the immediate threat to life, public health and safety, or improved property (FEMA, 2018).

Emergency (National Oceanic and Atmospheric Administration Fisheries definition) – A situation involving an act of God, disasters, casualties, national defense or security emergencies, etc., and includes response activities that must be taken to prevent imminent loss of human life or property (NOAA, n.d.-a).

Emergency (Stafford Act definition) – Any occasion or instance for which, in the determination of the president, federal assistance is needed to supplement state and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States (42 U.S.C. § 5122(1)).

Emergency (state definition) – Any incident, whether natural or human-caused, that requires responsive action to protect life or property (TDEM, 2012).

Emergency (U.S. Army Corps of Engineers definition) – For emergency permitting, a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures (33 C.F.R. § 325.2(e)(4)).

Emergency operations center (EOC) – The physical location at which the coordination of information and resources to support incident management (on-scene operations) activities normally takes place. Emergency operations centers may be organized by major functional disciplines (e.g., fire, law enforcement, medical services), by jurisdiction (e.g., federal, state, tribal, regional, city, county), or by some combination thereof (TDEM, 2012).

Emergency operations plan – The ongoing plan maintained by various jurisdictional levels for responding to a wide variety of potential hazards. It describes how people and property will be protected; details who is responsible for carrying out specific actions; identifies the personnel, equipment, facilities, supplies, and other resources available; and outlines how all actions will be coordinated (TDEM, 2012).

Emergency support function (ESF) – Used by the Federal Government and many state governments as the primary mechanism at the operational level to organize and provide assistance. ESFs align categories of resources and provide strategic objectives for their use. ESFs use standardized resource management concepts such as typing, inventorying, and tracking to facilitate the dispatch, deployment, and recovery of resources before, during, and after an incident (TDEM, 2012).

Environmental Sensitivity Index map – Maps produced by the National Oceanic and Atmospheric Administration that provide a concise summary of coastal resources that are at risk if an oil spill occurs nearby. Examples of at-risk resources include biological resources (such as birds and shellfish beds), sensitive shorelines (such as marshes and tidal flats), and human-use resources (such as public beaches and parks; NOAA, 2018a).

Federally maintained waterways and channels – A waterway that has been authorized by Congress, and which U.S. Army Corps of Engineers operates and maintains for general (including commercial and recreational) navigation.

Geographic Response Plan (GRP) – Geographic maps which are part of the Area Contingency Plans for oil spills to water and serve as the primary tool used during an initial phase of a response. They are created after identifying the most ecologically sensitive areas, local area knowledge on locations most likely to encounter an oil spill, and economic impact to the community if a location were to be oiled. GRP working groups determine priorities, and GRPs include response strategies (USCG, 2017).

Hazard to navigation – An obstruction, usually sunken, that presents sufficient danger to navigation so as to require expeditious, affirmative action such as marking, removal, or re-definition of a designated waterway to provide for navigational safety (33 C.F.R. § 64.06).

Hazardous substance – (A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress), (D) any toxic pollutant listed under section 307(a) of the Federal Water Pollution Control Act, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act, and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas; 42 U.S.C. § 9601(14)).

Hazardous waste – Regulated under the Resource Conservation and Recovery Act and contains properties that make it potentially harmful to human health or the environment. A hazardous waste is a waste that appears on one of the four hazardous waste lists in 40 C.F.R. § 261 or exhibits at least one of the following four characteristics: ignitability, corrosivity, reactivity, or toxicity (FEMA, 2018).

Historic property – A district, site, building, structure or object significant in American history, architecture, engineering, archeology or culture (13 Tex. Admin. Code § 26.3(32)).

Historic time period – For the purposes of landmark designation, this time period is defined as extending from A.D. 1500 to 50 years before the present (13 Tex. Admin. Code § 26.3(33)).

Household hazardous waste/material (HHW/HHM) – Hazardous product or material used and disposed of by residential consumers, including some paints, stains, varnishes, solvents, pesticides, and other products or materials containing volatile chemicals that catch fire, react, or explode under certain circumstances, or that are corrosive or toxic (FEMA, 2018).

Improved property – Any structure, facility, or equipment that was built, constructed, or manufactured. Examples include buildings, levees, roads, and vehicles. Land used for agricultural purposes is not improved property (44 C.F.R. § 206.221(d)).

Incident Command System (ICS) – A standardized on-scene emergency management construct specifically designed to provide an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure and designed to aid in the management of resources during incidents (TDEM, 2012).

Incident waterway debris – See definition for Waterway debris.

Infectious waste – Waste capable of causing infections in humans and can include contaminated animal waste, human blood, blood products, medical waste, pathological waste, and discarded sharp objects (needles, scalpels, or broken medical instruments; FEMA, 2018).

Inland zone (Area Contingency Plan [ACP] inland zone) – U.S. Environmental Protection Agency area of responsibility for response under the National Contingency Plan, with geographic boundaries defined in the *Southeast Texas and Southwest Louisiana ACP*, the *Central Texas Coastal ACP*, and the *South Texas Coastal Zone ACP* (USCG, 2016b; USCG, 2016a; USCG, 2017).

Major disaster – Any natural catastrophe (including any hurricane, tornado, storm, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought), or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the president causes damage of sufficient severity and magnitude to warrant major disaster assistance under this Act to supplement the efforts and available resources of states, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby (42 U.S.C. § 5122(2)).

Marine debris – Any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment or Great Lakes (33 U.S.C. § 1956(3)).

Mean high tide – Mean elevation of historical high tides (GLO, 2017i).

Mean high water – The average elevation of all successive normal high tides at a given geographic point or station over a 19-year period. This is typically the boundary between private land and state-owned submerged land. The mean high water may be estimated in the field by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or drift debris on the foreshore or berm, vegetation lines, the location of the densest concentration of barnacles upon a hard substrate, or other suitable means that delineate the general height reached by a normal rising tide (GLO, 2017a).

National Oil and Hazardous Substances Pollution Contingency Plan (National Contingency Plan, NCP) – Federal Government's blueprint for responding to both oil spills and hazardous substance releases (U.S. Environmental Protection Agency, 2018).

Natural waterway – A waterway that is not improved or maintained (FEMA, 2018).

Navigable waterways – Navigable waterways include both those waterways which are federally maintained and those waterways which are not federally maintained. U.S. Army Corps of Engineers defines navigable waters of the United States as those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity (33 C.F.R. § 2.36; 33 C.F.R. § 329.4).

Obstruction – Anything that restricts, endangers, or interferes with navigation (33 C.F.R. § 64.06).

Oil – Oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil (33 U.S.C. § 1321(a)(1)).

Outer continental shelf – The submerged lands, subsoil, and seabed, lying between the seaward extent of the states' jurisdiction and the seaward extent of federal jurisdiction. The outer continental shelf is subject to the jurisdiction and control of the Federal Government (Bureau of Ocean Energy Management, n.d.).

Pollutant or contaminant – Includes, but not limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring; except that the term "pollutant or contaminant" shall not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of paragraph (14) and shall not include natural gas, liquefied natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas; 42 U.S.C. § 9601(33)).

Public beach easement – An access easement generally extending from mean low tide to the natural line of vegetation along Gulf facing beaches as described in the Texas Open Beaches Act (GLO, 2017a).

Putrescent debris – Debris that will decompose or rot, such as animal carcasses and other fleshy organic matter (FEMA, 2018).

Recoverable waterway debris – Generally any documented vessel, vehicle, recreational vehicle, or shipping container traceable to an owner (U.S. Army Corps of Engineers [USACE], 2010).

Severe marine debris event – An atypically large amount of marine debris caused by a natural disaster, including a tsunami, flood, landslide, or hurricane, or other source (33 U.S.C. § 1956(6)).

Soil, mud, and sand – Soil, mud, and sand deposited after floods, landslides, winds, and storm surges on improved public property and public rights-of-way (FEMA, 2018).

Stafford Act – The Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, provides the authorities and funding for federal support to state, local, tribal, and territorial entities in responding to presidential major disaster and emergency declarations (U.S. Department of Homeland Security, 2016).

State Antiquities Landmark – An archeological site, archeological collection, ruin, building, structure, cultural landscape, site, engineering feature, monument or other object, or district that is officially designated as a landmark or treated as a landmark under the interim protection described in §26.8(d) of this title (relating to Designation Procedures for Publicly Owned Landmarks; 13 Tex. Admin. Code § 26.3(65)).

State-owned submerged lands – The area below the mean high water (or mean higher high water) out to 10.3 miles offshore, including state-owned islands and filled areas, that is dedicated to the Permanent School Fund, all naturally formed tidally influenced areas that have not been conveyed to another entity (e.g. navigation districts; GLO, 2017a). All the beds and bottoms and the products of the beds and bottoms of the public rivers, bayous, lagoons, creeks, lakes, bays, and inlets in this state and of that part of the Gulf of Mexico within the jurisdiction of this state are the

property of this state. The state may permit the use of the waters and bottoms and the taking of the products of the bottoms and waters (Tex. Parks and Wild. Code § 1.011(c)).

State seaward boundary (Gulfward boundary) – Texas's seaward boundary is 3 marine leagues (9 nautical miles; NOAA, 2012b; Tex. Nat. Res. Code § 11.0111; Tex. Nat. Res. Code § 11.012).

Submerged land – Land extending from the boundary between the land of the state and the littoral owners seaward to the low-water mark on any saltwater lake, bay, inlet, estuary, or inland water within the tidewater limits, and any land lying beneath the body of water, but for the purposes of this chapter only, shall exclude beaches bordering on and the water of the open Gulf of Mexico and the land lying beneath this water (Tex. Nat. Res. Code § 33.004(11)).

Texas waters – For vessels, defined as coastal waters, on public or private lands or at a public or private port or dock (GLO, 2017a).

Vegetative debris – Whole trees, stumps, trunks, branches, limbs, and other leafy material (FEMA, 2018).

Vehicles and vessels – Vehicles and vessels damaged, destroyed, displaced, or lost as a result of a disaster. These vehicles and vessels may eventually be abandoned because of the damage incurred or because the original owners have relocated. Vehicles and vessels may be classified as debris if they block public access and critical facilities (FEMA, 2018).

Vessel management storage site – Site used for the purpose of providing a means of dry-land access to vessels for removal from state waters, temporary storage, and disposal offsite after appropriate processing of the vessel (GLO, 2017a).

Waterway debris (Incident waterway debris) – Any solid material, including but not limited to vegetative debris and debris that could be exposed to or release oil, hazardous substances, pollutants, or contaminants, that enters a waterway following an acute incident and poses a threat to the natural or man-made environment. This may include shoreline and wetland debris and debris in some inland, non-tidal waterways.

White goods – Discarded household appliances such as refrigerators, freezers, air conditioners, heat pumps, ovens, ranges, washing machines, dryers, and water heaters. May contain refrigerants, mercury, or compressor oils that must be removed before disposal (FEMA, 2018).

1. Introduction

1.1 Purpose

The purpose of this document is to improve preparedness for response and recovery operations following an acute waterway debris incident in coastal Texas. The term acute waterway debris incident is used to describe an incident—either natural or anthropogenic—that results in the release of large amounts of waterway debris. This document outlines existing response structures at the local, state, and federal levels to facilitate a coordinated, well-managed, and immediate response to waterway debris incidents impacting coastal areas in the state of Texas.

Individual organization roles and responsibilities are presented in text form as well as in a consolidated one-page flowchart which functions as a decision tree for waterway debris response. The document also includes an overview of permitting and compliance requirements that must be met before waterway debris removal work begins. This information is synthesized in a one-page reference handout.

Determining responsibility for waterway debris response and removal can be complicated and may involve multiple agencies and overlapping jurisdictions. Additionally, the removal lead may change depending on the type of incident and the debris location. Because all incidents are different, some aspects of waterway debris response are subjective and not solely dependent on prevailing roles and authorities. This is especially true following a major, catastrophic, or unprecedented incident. This document seeks to capture the most likely response structure and actions with the understanding that flexibility is an inherent component of an effective response.

The *Texas Marine Debris Emergency Response Guide: Comprehensive Guidance Document* (*Guide*) serves as a complete reference for waterway debris response in Texas. The accompanying *Field Reference Guide* only includes the most pertinent information for quick reference in the field and during emergency response operations.

1.2 Scope of *Guide*

The *Guide* addresses potential acute waterway debris incidents affecting Texas's coastal areas with a focus on the 18 counties within the Texas coastal zone boundary. Throughout this document, the term waterway debris (or incident waterway debris) is used in lieu of the term marine debris. In 33 U.S.C. § 1956(3), marine debris is defined as any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment or Great Lakes. Although vegetative debris is not included in the legal definition for marine debris, stakeholders have identified it as a common debris stream of concern following natural disasters. To account for both marine debris and vegetative debris in this document, the term waterway debris is used to describe any solid material, including but not limited to vegetative debris and debris that could be exposed to or release oil, hazardous substances, pollutants, or contaminants, that enters a waterway following an acute incident and poses a threat to the natural or man-made environment. This may include shoreline and wetland debris and debris in some inland, non-tidal waterways. The intent of this *Guide* is to address waterway debris resulting from acute episodic incidents, such as disaster debris, rather than chronic waterway debris issues.

1.3 *Guide* Maintenance

The *Texas Marine Debris Emergency Response Guide* is a living document subject to change as additional information becomes available and updates are needed. The *Guide* will be maintained by the National Oceanic and Atmospheric Administration's (NOAA) Marine Debris Division in coordination with Texas stakeholders. Contact information will be verified annually, and the *Guide* will undergo a formal review every three years. The *Texas Marine Debris Emergency Response Guide* and subsequent versions will be posted on NOAA's Marine Debris Division website at https://marinedebris.noaa.gov/ (National Oceanic and Atmospheric Administration [NOAA], 2018c).

2. Incident Waterway Debris in Texas

2.1 Foreseeable Waterway Debris Incidents in Texas

Texas is the second largest state in the United States with 367 miles of coastline along the Gulf of Mexico and 3,359 miles of tidal shoreline (U.S. Census Bureau, 2011). The coastal area is home to nearly 25% of the state's population and contains diverse natural resources such as barrier islands, wetlands, and sandy beaches (Texas General Land Office [GLO], 2017j). These coastal resources provide habitat for wildlife and recreational opportunities for both residents and visitors while also protecting coastal communities from storm surge and flooding. In addition to the state's abundant natural resources, the Texas coast supports waterborne commerce and industry. Texas leads the nation in energy production, and the Texas coastal area contains petrochemical and energy production infrastructure of national significance (GLO, 2017i; Texas Division of Emergency Management [TDEM], 2017). Additionally, Texas Gulf Coast ports handle approximately 22% of all U.S. port tonnage and the Port of Galveston is the fourth-largest cruise market in the country (Texas Department of Transportation [TxDOT], 2017).

Although Texas's proximity to the Gulf of Mexico allows for diverse economic and natural resources, it also makes the region particularly vulnerable to disasters which could generate debris throughout the state's network of coastal rivers, bays, estuaries, and Gulf shorelines. Texas has had more federally declared disasters than any other state, and on average, there are approximately 400 floods in Texas each year, more than double the average of the second-highest state (TDEM, 2012; TDEM, 2013). Table 1 presents the probable frequency of occurrence of natural and technological hazards that could result in debris entering Texas waterways. Additionally, Figure 1 maps Texas's top hazards of concern for mitigation—with floods, hurricanes, and tropical storms being the primary hazards within the coastal area (TDEM, 2013).

Table 1. Probability of natural and technological hazards that could generate waterway debris in Texas. Data adapted from Texas Division of Emergency Management, 2013.

Hazard Type	Frequency of Occurrence
Flooding	Highly likely: Event probable in next year
Windstorm	Highly likely: Event probable in next year
Hurricanes/Tropical Storms	Likely: Event probable in next 3 years
Tornadoes	Likely: Event probable in next 3 years
Dam and Levee Failure	Occasional: Event possible in next 5 years
Severe Winter Storm	Occasional: Event possible in next 5 years
Earthquake	Unlikely: Event possible in next 10 years

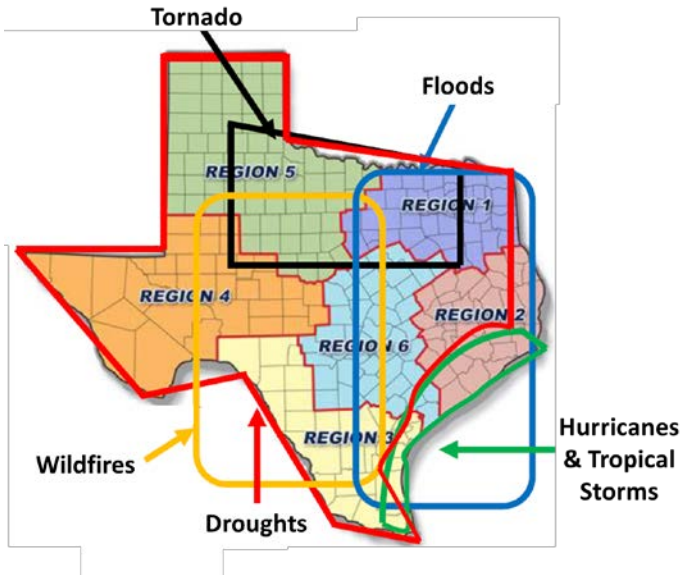


Figure 1. Texas's top hazards of concern for mitigation overlain with Department of Public Safety regions. Data adapted from Texas Division of Emergency Management, 2013.

Texas's coastal area is at risk of both floods and tropical storms, and shallow depths offshore mean storm surge is a major threat even from low category hurricanes (TDEM, 2017). In 2008, Hurricane Ike made landfall as a category two storm but brought storm surges of 15-20 feet (TDEM, 2017). Marine debris was a significant problem, and within a year after the storm more than 28,000 cubic yards of debris and 131 vessels were removed from state-owned submerged lands (NOAA, 2015). Then in 2017, Hurricane Harvey made landfall along the middle Texas coast and became the most significant tropical cyclone rainfall event in U.S. history. The category four hurricane dropped more than 60 inches of rain over southeastern Texas resulting in catastrophic flooding and at least 68 deaths (NOAA, 2018d). Removal of waterway debris from Hurricane Harvey is still underway as of this publication, and it is estimated that the storm will rank as the second costliest weather disaster on record for the nation, second only to Hurricane Katrina (NOAA, 2018b).

2.2 Prominent Debris Types

Some agency authorities are dependent on both the location and type of debris. Therefore, response to debris in Texas's coastal waterways may vary depending on the debris type to be removed. Primary debris types generated after a disaster as defined by the Federal Emergency Management Agency (Federal Emergency Management Agency [FEMA], 2018) include the following:

- Chemical, biological, radiological, and nuclear-contaminated
- Construction and demolition (C&D)
- Electronic waste (e-waste)
- Hazardous waste
- Household hazardous waste/material (HHW/HHM)
- Infectious waste
- Putrescent debris
- Soil, mud, and sand
- Vegetative debris
- Vehicles and vessels
- White goods

A description of each debris type is included in the Definitions section of this document. While it is difficult to predict the exact mix of waterway debris that will be generated after a disaster, different types of hazard incidents generally result in different debris types. Table 2 includes an overview of typical debris streams for several natural hazards. Although Table 2 only covers natural hazards, man-made hazards such as an accident during waterway commerce are also concerns.

Table 2. Typical debris streams for different types of hazard incidents. Data adapted from Federal Emergency Management Agency, 2007.

		Typical Debris Streams								
		Vegetative	Construction and Demolition (C&D)	Hazardous Waste	Household Hazardous Waste (HHW)	White Goods	Soil, Mud, and Sand	Vehicles and Vessels	Putrescent	Personal Property, Household Items
Natural Hazards	Floods	X	X	X	X	X	X	X	X	X
	Hurricanes/Tropical Storms	X	X	X	X	X	X	X	X	X
	Tornadoes/Wind Storms	X	X	X	X	X		X	X	X
	Winter/Ice Storms	X			X					
	Earthquakes		X	X	X	X	X			X
	Tsunamis	X	X	X	X	X	X	X	X	X

The type and quantity of waterway debris generated after a disaster is highly dependent on land use and existing infrastructure along Texas's waterways. For example, protected undeveloped areas within Aransas National Wildlife Refuge are likely to generate vegetative debris, while developed areas along Galveston Island are likely to generate construction and demolition debris. A land cover map for Texas's coastal zone is depicted in Figure 2 and illustrates the distribution of land use types along the Texas coast. Increased development in the floodplain will increase the likelihood of waterway debris following a natural hazard event.

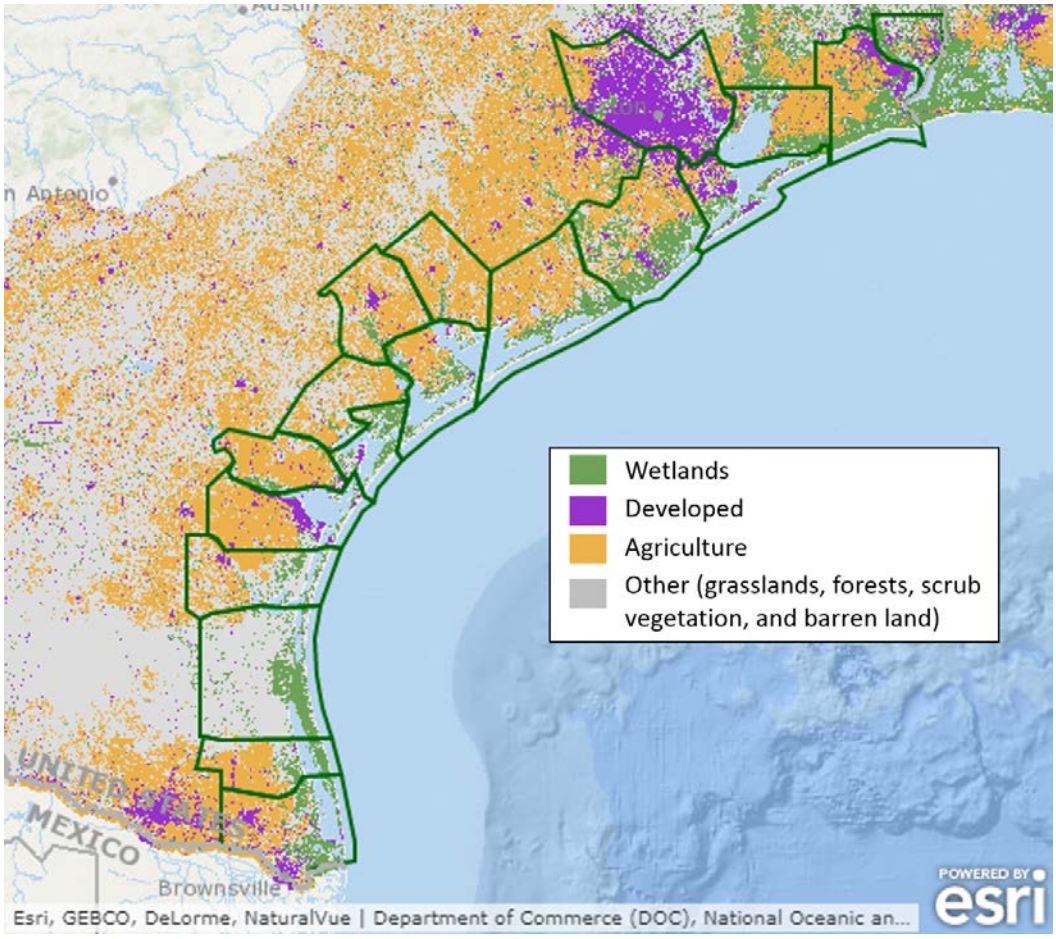


Figure 2. Land cover map for Texas's coastal zone (National Oceanic and Atmospheric Administration, 2017b).

Figure 3 depicts the relative marine debris risk (for storm-generated anthropogenic debris) for the Texas coast based upon assumed storm wind speed and surge, the distribution of on-shore infrastructure likely to generate debris, and the historical likelihood of tropical storm exposure. This NOAA study shows a direct correlation between developed lands and relative marine debris risk; therefore, one can infer that areas with increased development have an increased risk of storm-generated marine debris.

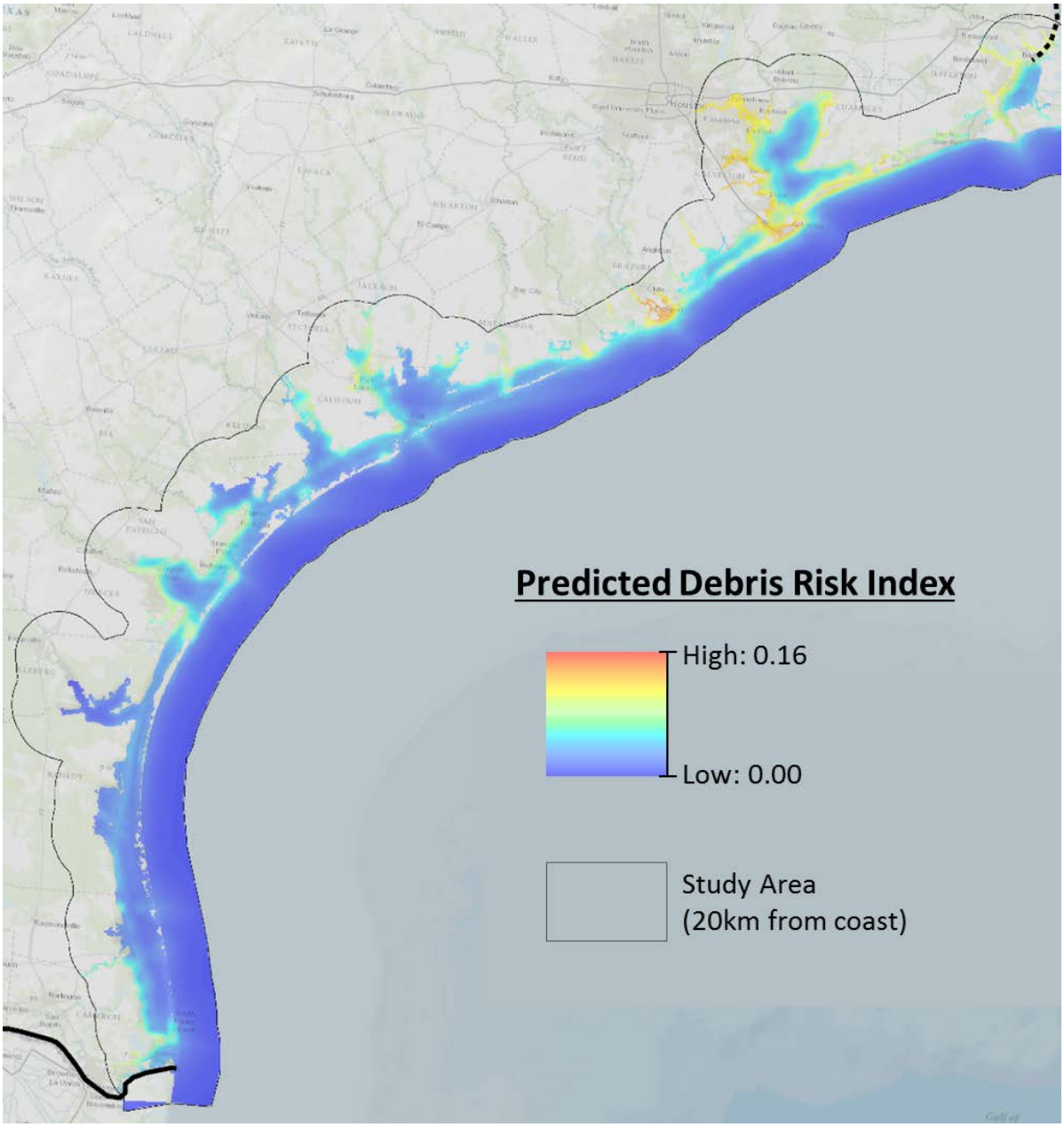


Figure 3. Relative marine debris risk for storm-generated anthropogenic waterway debris on Texas's coast (National Oceanic and Atmospheric Administration, 2013).

3. Texas Waterway Debris Response Flowchart

The "Texas Waterway Debris Response Flowchart" provides a visual one-page representation of organization roles and responsibilities. The flowchart functions as a decision tree for waterway debris response with color-coded endpoints. Yellow endpoints represent response to waterway debris that could be exposed to or release oil, hazardous substances, pollutants, or contaminants. Blue endpoints represent response to waterway debris that is not exposed to and does not have the potential to release oil, hazardous substances, pollutants, or contaminants. Endpoints within the green shaded area indicate that response may occur under Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) authorities and/or funding.

The intent of the flowchart is to outline the most likely response structure with the understanding that flexibility is an inherent component of an effective response. For detailed information regarding individual organization roles and responsibilities, see Section 4. Select agency authorities are presented in Appendix 8.3.

Texas Waterway Debris Emergency Response Flowchart

Flowchart Key

- Response to waterway debris that could be exposed to or release oil, hazardous substances, pollutants, or contaminants
- Response to waterway debris that is not exposed to and does not have the potential to release oil, hazardous substances, pollutants, or contaminants
- Indicates response may occur under Stafford Act authorities and/or funds

Acronyms

ACP – Area Contingency Plan
DoD – Department of Defense
DSHS – TX Department of State Health Services
EPA – U.S. Environmental Protection Agency
ESF – Emergency Support Function
EWP – Emergency Watershed Protection
FEMA – Federal Emergency Management Agency
GLO – TX General Land Office
NCP – National Oil & Hazardous Substances Contingency Plan
NDOW – Natural Disaster Operational Working Group
NPS – National Park Service
NRC – National Response Center
NRCS – Natural Resources Conservation Service
RP – Responsible Party (Owner, Operator, Lessee)
RRC – Railroad Commission of TX
SOC – TX State Operations Center
TCEQ – TX Commission on Environmental Quality
TDEM – TX Division of Emergency Management
THC – TX Historical Commission
TPWD – TX Parks and Wildlife Department
TxDOT – TX Department of Transportation
USACE – U.S. Army Corps of Engineers
USCG – U.S. Coast Guard
USFWS – U.S. Fish and Wildlife Service

Confirm Compliance

Consult with appropriate authorities to determine whether permits or other approvals are needed prior to debris removal. Debris may be historic property and/or debris response may impact archaeological sites or other protected resources. See *Section 5 Permitting and Compliance Requirements in Texas* for details.

START → Is waterway debris in a USACE federally maintained waterway or channel, or immediately adjacent thereto?

- **Yes** → Could waterway debris be exposed to or release oil or hazardous substances?
  - **Yes** → **Debris in federally maintained waterway (pollution threat)**
    - Report to NRC 1-800-424-8802
    - Removal authorized under NCP
    - USCG oversees response by RP. If vessel with no RP, USCG removes pollution threat (battery, oil) and USACE removes vessel.
  - **No** → **Debris in federally maintained waterway**
    USACE removes waterway debris that poses a navigation hazard or oversees removal by RP
- **No** → Is waterway debris on private property or in private canals?
  - **No** → Is waterway debris in federal waters or on federal lands?
    - **No** → Is waterway debris a direct result of a major disaster declared by the president?
      - **Yes** → Does debris removal meet all NRCS EWP eligibility criteria? *See criteria in Section 4.3 Federal Agencies.*
        - **No** → Is waterway debris located in the designated disaster area?
          - **Yes** → **Eligibility Determination by FEMA:** Is removal necessary to eliminate the immediate threat to life, public health and safety, or improved property? Made on case-by-case discretionary basis in coordination with eligible applicant, state, and other federal agencies. *See guidelines for debris removal from navigable and non-navigable waterways in Section 4.3 Federal Agencies and in FEMA Public Assistance Program and Policy Guide FP 104-009-2.*
          - **No** → Is waterway debris an abandoned or derelict vessel?
        - **Yes** → **Debris eligible for NRCS EWP funding**
          NRCS funds removal by eligible sponsor under EWP program if funds are available. Cost share is typically 75% NRCS, 25% sponsor.
      - **No** → Is debris a direct result of an NRCS State Conservationist declared disaster and does removal meet all NRCS EWP eligibility criteria? *See criteria in Section 4.3 Federal Agencies.*
        - **Yes** → Is waterway debris an abandoned or derelict vessel?
        - **No** → Is waterway debris located in the designated disaster area?
    - **Yes** → Is waterway debris exposed to or does it have the potential to release oil or hazardous substances?
      - **No** → **Debris in federal waters/lands**
        - In coastal TX, federal waters/lands owned by NPS, USFWS, and DoD who are responsible for debris removal on their property
        - Debris beyond 3 marine leagues (9 n.mi.) is generally not removed unless it is a pollution threat or in a USACE federally maintained waterway or channel
      - **Yes** → Is waterway debris an abandoned or derelict vessel?
  - **Yes** → Is waterway debris an abandoned or derelict vessel?
    - **No** → **Debris on private property**
      Refer to homeowner insurance policy and check for NRCS EWP eligibility in *Section 4.3 Federal Agencies*. If debris could be exposed to or release oil or hazardous substances, see *Pollution threat, no Stafford Act declaration* box. After a Stafford Act declaration, FEMA typically does not provide funding unless debris threatens public health and safety and removal is in the public interest.
    - **Yes** → **Abandoned or derelict vessel, no Stafford Act declaration**
      - Derelict Structure and Vessel Removal Program: GLO documents and may remove derelict and abandoned vessels in coastal waters and on public or private lands (Nat. Res. Code § 40.108, H.B. 1625)
      - A person may apply to TPWD for a certificate of title for an abandoned vessel left on the person's property for more than seven days
      - USCG may remove pollution threat (battery, oil)
- Could waterway debris be exposed to or release oil or hazardous substances?
  - **Yes** → **Pollution threat, no Stafford Act declaration**
    - Report to NRC 1-800-424-8802 and State Spill Reporting Hotline 1-800-832-8224
    - Response managed at lowest jurisdictional level capable of handling the removal: Local → State → Federal
    - State response led by GLO (oil-coastal), TCEQ (oil-inland, hazmat), RRC (oil/gas exploration and production), or DSHS (radioactive)
    - If federal assistance required and there is a substantial threat, USCG or EPA oversees response by RP. Generally, response led by USCG in ACP Coastal Zone and by EPA in Inland Zone.
    - Unlike response under Stafford Act declaration, under NCP USCG/EPA may respond without a request from local, state, or tribal governments
  - **No** → **Debris in Texas waters, no Stafford Act declaration, no pollution threat**
    - Report to SOC 512-424-2208. Response, if any, managed at lowest jurisdictional level capable of handling the removal: Local → State
    - GLO has debris removal authority and contracting capabilities for debris on tidally influenced state-owned submerged lands below mean high water
    - Navigation districts have debris removal authority within their jurisdictions
    - TPWD has debris removal authority in state parks and wildlife management areas
    - TxDOT is responsible for channel clearing and removal of debris impacting bridges and ferries/landings at Port Aransas and Galveston-Port Bolivar
    - Derelict Structure and Vessel Removal Program: GLO identifies and removes derelict and abandoned structures in coastal waters and on state-owned submerged lands
    - Abandoned and Derelict Petroleum Production Structure Removal Program: GLO removes abandoned or unauthorized petroleum production structures in coastal waters and on state-owned lands
    - Adopt-A-Beach Program: GLO's all-volunteer program to clean TX beaches
    - Abandoned Crab Trap Removal Program: 10-day TPWD crab trap closure in February when traps left in the water may be disposed of
    - Note: Waters and submerged lands beneath public rivers, bayous, lagoons, creeks, lakes, bays, and inlets and from mean higher high water to 3 marine leagues (9 n.mi) in the Gulf of Mexico are property of the state (Nat. Res. Code § 11.012, Parks and Wild. Code § 1.011)

Stafford Act Declaration

Could waterway debris be exposed to or release oil or hazardous substances?

- **Yes** →
  - Report to NRC 1-800-424-8802 and State Spill Reporting Hotline 1-800-832-8224
  - FEMA funds may be used if not at pre-existing site under NCP. If RP is known, must apply insurance proceeds first.
  - Note: NDOW maintains standard operating procedures for response to orphan containers and vessels

  If FEMA funds not used, removal authorized under NCP
  - Response managed at lowest jurisdictional level capable of handling the removal: Local → State → Federal
  - State response led by GLO (oil-coastal), TCEQ (oil-inland, hazmat), RRC (oil/gas exploration and production), or DSHS (radioactive)
  - If federal assistance required and there is a substantial threat, USCG or EPA oversees response by RP. Generally, response led by USCG in ACP Coastal Zone and by EPA in Inland Zone.
  - During Stafford Act declarations, USCG/EPA retain authority to respond under the NCP without a request from local, state, or tribal governments

  If FEMA funds used → Has the state/local government demonstrated to FEMA that they lack the capability to perform or contract the debris removal work?
  - **No** → **FEMA Public Assistance Funding**
    Reimbursement to eligible applicant to remove and dispose of hazardous waterway debris using their own forces or contract labor
    - Funding from FEMA to TDEM then to eligible applicant
    - If state is eligible applicant, response led by GLO (oil-coastal), TCEQ (oil-inland, hazmat), RRC (oil/gas exploration and production), or DSHS (radioactive)
  - **Yes** → **FEMA Direct Federal Assistance**
    FEMA mission assignment to another federal agency to perform or contract the debris removal work
    - USACE typically disposes of building debris hazmat, such as household hazardous materials under ESF 3
    - USCG or EPA typically lead hazardous waste disposal under ESF 10
- **No** → Is the waterway debris recoverable (traceable to an owner), i.e. a vessel with a Hull Identification Number?
  - **Yes** → **Recoverable debris in TX waters, Stafford Act declaration, no pollution threat**
    - GLO or eligible applicant may identify and contact owners using TPWD's registration data
    - If owner is found, apply insurance and owner takes property
    - If no owner is found and vessel blocks access to a public-use area, FEMA may reimburse applicant or mission assign another federal agency for removal
  - **No** → Has the state/local government demonstrated to FEMA that they lack the capability to perform or contract the debris removal work?
    - **No** → **FEMA Public Assistance Funding**
      Reimbursement to eligible applicant to remove and dispose of waterway debris using their own forces or contract labor in compliance with 2 CFR 200
      - Funding from FEMA to TDEM then to eligible applicant
      - If state manages response, GLO leads response on public beaches and tidally influenced state-owned submerged lands outside of established navigation districts
    - **Yes** → **FEMA Direct Federal Assistance**
      FEMA mission assignment to another federal agency to perform or contract the debris removal work
      - USACE typically leads eligible debris removal under ESF 3

If meets FEMA criteria

4. Roles and Responsibilities

Determining responsibility for waterway debris response and removal can be complicated and may involve multiple agencies and overlapping jurisdictions. The response lead may change depending on the type of incident, the magnitude of the incident, and the debris location. Emergency response in Texas is generally managed at the local level, with local jurisdictions requesting assistance from adjacent jurisdictions and the state when their capabilities are exceeded (TDEM, 2012). The Texas Division of Emergency Management (TDEM) supports local response efforts by coordinating state resources and statewide emergency response. The state is divided geographically into disaster districts, which serve as regional emergency management organizations and the initial source of state emergency assistance for local governments (TDEM, 2017).

The Federal Government may supplement state and local response actions when their resources have been exceeded or when unique capabilities are needed. Under the Stafford Act, the governor may request a presidential disaster declaration if the state's capabilities are exceeded. After the president issues a declaration that a major disaster exists, it authorizes the Federal Emergency Management Agency (FEMA) to provide financial assistance to the state, local governments, and private nonprofit organizations that serve a public function.

The *State of Texas Emergency Management Plan* describes how the state will respond and recover from natural disasters and other emergency situations (TDEM, 2012). Emergency support function (ESF) annexes supplement the state plan and assign specific responsibilities to each agency or organization. ESFs most commonly applied during response to a waterway debris incident are Annex K Public Works and Engineering (federal ESF 3) and Annex Q Hazardous Materials and Oil Spill Response (federal ESF 10). Table 3 outlines agencies responsible for supporting Annex K (federal ESF 3) and Annex Q (federal ESF 10).

Table 3. State annex and corresponding federal emergency support function responsibility chart. Data adapted from Texas Division of Emergency Management, 2012.

State Annex	**Primary State Agency** Support Agencies	Federal Emergency Support Function (ESF)	Primary Federal Agency
Annex K Public Works and Engineering	**Texas Department of Transportation (TxDOT)** Texas Animal Health Commission (TAHC) Texas Commission on Environmental Quality (TCEQ) Texas Department of Criminal Justice (TDCJ) Texas Forest Service (TFS) Texas Procurement and Support Services	ESF 3 Public Works and Engineering	Federal Emergency Management Agency (FEMA) U.S. Army Corps of Engineers (USACE)
Annex Q Hazardous Materials and Oil Spill Response	**Texas Commission on Environmental Quality (TCEQ)** Railroad Commission of Texas (RRC) Texas Department of Public Safety (DPS) Texas Department of State Health Services (DSHS) Texas Department of Transportation (TxDOT) Texas General Land Office (GLO) Texas Military Forces Texas Parks and Wildlife Department (TPWD)	ESF 10 Oil and Hazardous Materials Response	U.S. Coast Guard (USCG) U.S. Environmental Protection Agency (EPA)

After Hurricane Ike in 2008, marine debris was a substantial problem. Because waters and submerged lands beneath public rivers, lakes, and bays, and from mean higher high water to 3 marine leagues in the Gulf of Mexico are property of the state, the Texas General Land Office (GLO) was designated as the responsible state agency (NOAA, 2015; Tex. Nat. Res. Code § 11.012; Tex. Parks & Wild. Code § 1.011(c)). This enables GLO to pre-position workers and equipment before a storm. Generally, GLO is responsible for removing and disposing of debris on public beaches after a disaster declaration and is also authorized to remove debris and derelict vessels or structures from most tidally influenced areas, including state-owned submerged lands outside of established navigation districts (Tex. H.B. 2096; Tex. Nat. Res. Code § 51.3021; Tex. Nat. Res. Code § 61.067). After a state or presidential disaster declaration, the governor may also direct any state agency to remove debris or wreckage from public or private land or water if it threatens public health, safety, or property (TDEM, 2012).

Local, state, and federal agency roles and responsibilities as they relate to waterway debris response are outlined in the following sections followed by responsibilities of private landowners and other organizations. For a visual one-page representation of the most likely response structure, see "Texas Waterway Debris Response Flowchart" in Section 3. A list of select agency authorities applicable to waterway debris response is presented in Appendix 8.3, and a map of agency jurisdictional authorities can be found in Section 4.6. Additionally, contact information and response capabilities of key organizations is included in Appendix 8.1 and Appendix 8.2, respectively.

4.1 Local Governments

- Responsible for carrying out emergency response, short-term recovery actions, and requesting assistance from TDEM when disaster response and recovery exceed local capabilities (TDEM, 2017)
- Local incident commander typically directs operations while emergency operations center (EOC) provides resource support, coordinates with other jurisdictions and agencies, and provides emergency public information (TDEM, 2012)
- Develop local emergency management plans and hazard mitigation plans (TDEM, 2012; TDEM, 2013)
- May develop and implement local debris management plans
- Mayors and county judges
    - Serve as the designated emergency management directors (EMD) of their jurisdictions and direct, control, and coordinate city and county emergency response operations (TDEM, 2012; TDEM, 2017)
    - May declare local states of disaster and order mandatory evacuations in their jurisdictions (TDEM, 2012; TDEM, 2017; Tex. Gov't Code § 418.108; Tex. Gov't Code § 418.185)
    - May appoint an Emergency Management Coordinator (EMC) to implement decisions made by the EMD (TDEM, 2017)
- Following a Stafford Act declaration, may serve as eligible applicant and receive technical assistance or public assistance reimbursement funding from FEMA to perform or contract waterway debris removal
    - Coordinates with TDEM to request public assistance funding
    - As applicant (subgrantee), responsible for identifying debris locations, types, and quantities; demonstrating the pre-disaster condition and capacity of waterways;

determining ownership of recoverable waterway debris; and providing a staging area for temporary storage of recoverable waterway debris (FEMA, 2018)

- May serve as project sponsor and/or receive debris removal funding from the Natural Resources Conservation Service (NRCS) Emergency Watershed Protection (EWP) program if specific criteria are met. See Section 4.3 Natural Resource Conservation Service for EWP eligibility criteria.

Navigation Districts

- Twenty-four navigation districts statewide are political subdivisions of the state of Texas (Kruse, 2016). Note that in some cases, a navigation district may also be known as a port authority.
- Authorized to issue bonds, levy taxes, operate port facilities, and exercise the powers of eminent domain
- Construct, improve, and preserve inland and coastal waterways for navigation and have debris removal authority within their jurisdictions
- Following a Stafford Act declaration, may serve as eligible applicant and receive technical assistance or public assistance reimbursement funding from FEMA to perform or contract waterway debris removal
    - Leads response to debris within navigation district boundaries
    - As applicant (subgrantee), responsible for identifying debris locations, types, and quantities; demonstrating the pre-disaster condition and capacity of waterways; determining ownership of recoverable waterway debris; and providing a staging area for temporary storage of recoverable waterway debris (FEMA, 2018)
- GLO and Texas Commission on Environmental Quality (TCEQ) maintain map viewers of navigation districts statewide (Texas Commission on Environmental Quality [TCEQ], n.d.)

4.2 State Agencies

Railroad Commission of Texas (RRC)

- Support agency for Hazardous Materials and Oil Spill Response (Annex Q; TDEM, 2012)
- Lead agency for spills or discharges from activities associated with the exploration, development, or production of oil, gas, and geothermal resources (TCEQ, 2017d)
    - Coordinates with GLO, TCEQ, and other relevant entities during response efforts
    - After a responsible operator has been identified, works as a liaison to notify operator and initiate cleanup and remediation
    - Conducts follow up inspections to ensure all repairs have been performed and remediation is complete and in compliance with applicable regulations
- Operates 24-hour emergency reporting line for environmental emergencies, discharges, spills, or air releases from oil and gas facilities, pipelines, or alternative fuels (Railroad Commission of Texas, 2017)
    - See Appendix 8.1 for contact information.

Texas Animal Health Commission (TAHC)

- Support agency for Public Works and Engineering (Annex K; TDEM, 2012)
- Coordinates emergency management activities related to animals and agriculture, including assisting local jurisdictions and coordinating and/or conducting livestock evacuation, damage assessments, and carcass disposal operations (TDEM, 2017)

Texas Commission on Environmental Quality (TCEQ)

- Primary agency for Hazardous Materials and Oil Spill Response (Annex Q) and support agency for Public Works and Engineering (Annex K; TDEM, 2012)
- Participates in the Natural Disaster Operational Working Group (NDOW), which is a coordination mechanism between state and federal agencies operating under ESF 3 and ESF 10 to establish an operational structure and common planning framework
- Lead state agency for response to oil and hazardous substance spills except oil spills in coastal waters (TCEQ, 2017d)
- Supports operation of multi-agency 24-hour Texas emergency oil spill and hazardous substance reporting hotline to report spills and unpermitted discharges or releases to the environment (TCEQ, 2017e)
    - See Appendix 8.1 for contact information.
- Operates non-spill emergencies hotline to report environmental emergencies and complaints that are not spills (TCEQ, 2017e)
    - See Appendix 8.1 for contact information.
- Provides oversight and guidance for debris management and disposal (TDEM, 2017)
    - Authorizes temporary debris management sites for declared state or federal disasters (TCEQ, 2015b)
    - Maintains list of temporary debris management sites and active municipal solid waste landfills (TCEQ, 2017a)
    - Operates debris management hotline when needed to address and process requests regarding temporary debris management sites
    - Provides debris management/disposal guidance and publishes *Managing Debris from Declared Disasters* (TCEQ, 2017c)
    - Ensures proper separation of HHW and white goods
    - Provides guidance and assists with animal carcass disposal issues (TCEQ, 2017b)
    - Provides guidance for outdoor debris burning and issues burn authorizations to local jurisdictions (TCEQ, 2015a)
- Reviews federal permit applications for discharges of dredged or fill material into waters of the United States, including wetlands, to determine whether a proposed discharge will comply with state water quality standards (TCEQ, 2018)
- For additional information on TCEQ compliance requirements, see Section 5.

Galveston Bay Estuary Program

- Non-regulatory program administered by TCEQ
- Coordinates stakeholders within the Galveston Bay watershed and supports partner organizations who manage volunteer-based litter cleanups in the Houston-Galveston region (Galveston Bay Estuary Program, 2018)

Texas Department of Criminal Justice (TDCJ)

- Support agency for Public Works and Engineering (Annex K; TDEM, 2012)
- Provides offender labor to state agencies, local governments and entities, and non-profit organizations (TDEM, 2012)

Texas Department of Public Safety (DPS)

- Support agency for Hazardous Materials and Oil Spill Response (Annex Q; TDEM, 2012)
- Serves as state's police authority

Texas Division of Emergency Management (TDEM)

- Administers statewide program of comprehensive emergency management, provides guidance and technical assistance, and coordinates emergency management activities at the state, local, and federal levels to mitigate, prepare, respond, and recover from emergencies and disasters (TDEM, 2012)
- Operates the State Operations Center (SOC), coordinates state resources, authorizes mission assignments to state agencies, activates Debris Task Force, and coordinates resource needs to assist local governments in conducting response operations (TDEM, 2012)
- Following a Stafford Act declaration, serves as coordination point between FEMA and state and local eligible applicants
    - serves as FEMA grantee and administers public assistance funding to eligible applicants (subgrantees)
    - coordinates damage assessment and needs assessment process with local and federal assessment teams
    - assists state agencies and local governments in the preparation and submission of federal disaster assistance applications
- Provides technical assistance and conducts emergency management training and exercises, including hurricane preparedness training in coastal areas (TDEM, 2012; TDEM, 2017)
- Develops and maintains the *State of Texas Emergency Management Plan* (TDEM, 2012; Tex. Gov't Code § 418.042 et seq.)
- Maintains the *State of Texas Hazard Mitigation Plan* and reviews local mitigation plans (TDEM, 2013)

Texas Department of State Health Services (DSHS)

- Support agency for Hazardous Materials and Oil Spill Response (Annex Q; TDEM, 2012)
- Operates a statewide laboratory network for chemical and biological testing
- Lead state agency for response to debris contaminated with radioactive material

Texas Department of Transportation (TxDOT)

- Primary agency for Public Works and Engineering (Annex K) and support agency for Hazardous Materials and Oil Spill Response (Annex Q; TDEM, 2012)
- Oversees the maintenance of state highway and ferry systems (TDEM, 2012)
    - Responsible for channel clearing and removal of debris impacting bridges and ferries/landings at Port Aransas and Galveston-Port Bolivar (TxDOT, 2011)
- Following a Stafford Act declaration, may serve as eligible applicant and receive technical assistance or public assistance reimbursement funding from FEMA to perform or contract waterway debris removal
    - Leads response to debris that threatens TxDOT infrastructure
    - As applicant (subgrantee), responsible for identifying debris locations, types, and quantities; demonstrating the pre-disaster condition and capacity of waterways; determining ownership of recoverable waterway debris; and providing a staging area for temporary storage of recoverable waterway debris (FEMA, 2018)

Texas Forest Service (TFS)

- Support agency for Public Works and Engineering (Annex K; TDEM, 2012)
- Provides support and assistance in search and rescue, law enforcement, hazardous materials, evacuation, reconnaissance, communications, and coordination and control as needed (TDEM, 2012)

Texas General Land Office (GLO)

- Support agency for Hazardous Materials and Oil Spill Response (Annex Q; TDEM, 2012)
- Participates in NDOW
- Manages state-owned land—including state-owned submerged land—from the shoreline to 3 marine leagues (9 nautical miles or 10.35 miles) in the Gulf of Mexico (TDEM, 2012; Tex. Nat. Res. Code § 11.0111)
    - Responsible for debris removal on tidally influenced state-owned lands and authorized to remove derelict vessels from Texas waters (outside of established navigation districts)
    - Responsible for debris removal on public Gulf facing beaches from mean low tide to the landward extent of the public beach easement after a declared disaster
- Specific waterway debris removal responsibilities and authorities include:
    - Responsible for removing and disposing of debris on public beaches in areas where a disaster has been declared and are accessible by a public road or ferry (GLO, 2017d; TDEM, 2012; Tex. Nat. Res. Code § 61.067)
    - Authorized to remove and dispose of a facility or structure on land owned by the state, including most tidally influenced areas, if the Texas Land Commissioner finds it to be an imminent and unreasonable threat to public health, safety, or welfare (GLO, 2017d; Tex. Nat. Res. Code § 51.3021)
    - Texas Land Commissioner authorized to remove wrecked, derelict, or substantially dismantled vessels and structures in Texas coastal waters (GLO, 2017h; Tex. H.B. 2096)
- Manages the following waterway debris removal programs:
    - Derelict Structure and Vessel Removal Program to identify and remove derelict and abandoned vessels or structures in coastal waters and on public or private lands, including state-owned submerged lands (GLO, 2017i; Tex. H.B. 1625; Tex. Nat. Res. Code § 40.108(b); Tex. Nat. Res. Code § 51.3021(k))
    - Abandoned and Derelict Petroleum Production Structure Removal Program to remove abandoned or unauthorized petroleum production structures in coastal waters and on state-owned lands (GLO, 2017i; Tex. Nat. Res. Code § 40.108(b); Tex. Nat. Res. Code §51.3021)
    - Vessel Turn-In Program (VTIP) to allow boat owners to relinquish unwanted vessels at no cost during scheduled turn-in events (GLO, 2017h)
    - Adopt-A-Beach program to preserve and protect Texas beaches through all-volunteer debris cleanup events (GLO, n.d.)
- Develops and maintains a list of pre-qualified debris removal contracts for debris removal and disposal (GLO, 2017a)
- Develops and maintains an agency-specific *Debris Management Plan* which outlines agency roles and is approved by FEMA (GLO, 2017a)
- Following a Stafford Act declaration, may serve as eligible applicant and receive technical assistance or public assistance reimbursement funding from FEMA to perform or contract waterway debris removal
    - If state manages response, GLO leads debris response and removal on public beaches and tidally influenced state-owned submerged lands outside of established navigation districts
    - As applicant (subgrantee), responsible for identifying debris locations, types, and quantities; demonstrating the pre-disaster condition and capacity of waterways; determining ownership of recoverable waterway debris; and providing a staging area for temporary storage of recoverable waterway debris (FEMA, 2018)

- Lead state agency for response to oil spills that enter, or threaten to enter, coastal waters (TCEQ, 2017d; Tex. Nat. Res. Code § 40.004)
    - Oil Spill Prevention and Response team on call 24 hours a day and maintains array of pre-staged equipment and certified cleanup contractors (GLO, 2017e)
    - Supports operation of multi-agency 24-hour Texas emergency oil spill and hazardous substance reporting hotline to report spills and unpermitted discharges or releases to the environment. See Appendix 8.1 for contact information.
    - Assesses, prioritizes, and responds to coastal oil spills during a state or federally declared coastal natural disaster (TDEM, 2017)
    - Maintains the Oil Spill Planning and Response Toolkit website, which includes U.S. Coast Guard District Eight Area Contingency Plans, maps, guidance documents, environmental data, etc. (GLO, 2017f)
    - Maintains searchable database of vessels over 400 gross tons registered with GLO (GLO, 2017k)
- Maintains geographic information system (GIS) maps and data including locations of natural and human-made resources, such as state-owned submerged lands, navigation districts, beach access points, known abandoned and derelict vessels, etc. (GLO, 2017c)
- Issues authorizations for work performed on state-owned land
- Permit Service Center provides permitting assistance for small businesses, private individuals, and local governments within the Texas coastal zone (GLO 2016; GLO, 2017g)
- For additional information on compliance requirements, see Section 5.

Texas Historical Commission (THC)

- Administers duties of the State Historic Preservation Office (SHPO) and ensures compliance with the National Historic Preservation Act and the Antiquities Code of Texas
- For additional information on compliance requirements, see Section 5.

Texas Parks and Wildlife Department (TPWD)

- Support agency for Hazardous Materials and Oil Spill Response (Annex Q; TDEM, 2012)
- Participates in NDOW
- Protects and manages wildlife habitat and resources (TDEM, 2012)
    - May assist with coordination and provide technical assistance to protect resources at risk during vessel removal and significant marine debris removal operations
    - Manages Abandoned Crab Trap Removal Program, a 10-day crab trap closure in February when traps left in the water may be disposed of (Texas Parks and Wildlife Department [TPWD], n.d.-a)
- Acquires and oversees public lands including wildlife management areas, state parks, and historic sites (TDEM, 2012)
    - May conduct waterway debris assessment and cleanup within the state's wildlife management areas and state parks as needed
    - Following a Stafford Act declaration, may serve as eligible applicant and receive technical assistance or public assistance reimbursement funding from FEMA to perform or contract waterway debris removal
- Enforces game, fish, and water-safety laws (TDEM, 2012)
    - Manages vessel registration and titling processes and may assist with identifying vessel owners
    - After a six-month public notice period, may issue a bonded title to applicants for abandoned vessels left on private property without the consent of the property owner for more than seven days (TPWD, n.d.-b; Tex. Parks & Wild. Code § 31.0466)

Texas Sea Grant College Program

- Coordinates statewide Texas Monofilament Recovery and Recycling Program educate the public and encourage recycling through a network of line recycling bins and drop-off locations (Texas Sea Grant College Program, 2013)

University of Texas Marine Science Institute (UTMSI)

- Responsible for clearing and securing UTMSI (and National Estuarine Research Reserve headquarters) property including piers and associated structures

Amos Rehabilitation Keep

- Largest sea turtle rehabilitation facility in the state that rescues and rehabilitates marine birds and turtles, including many injured as a result of marine debris ingestion or entanglement

Mission-Aransas National Estuarine Research Reserve (NERR)

- Manages reserve property in cooperation with property owners and partner organizations
- Conducts waterway debris assessment and coordinates debris removal, when necessary, from within the NERR boundaries
- Secures and/or clears any equipment or structures in the field (i.e., System Wide Monitoring Program platforms and Surface Elevation Table scaffolding)
- Host and facilitate trainings and workshops to meet identified needs

4.3 Federal Agencies

Animal, Plant and Health Inspection Service

- Veterinary Services program provides for removal and burial of diseased animal carcasses
- Manages Plant Protection and Quarantine program to reduce the risk of introduction and spread of invasive species through planning, surveillance, quick detection, and containment

Bureau of Safety and Environmental Enforcement

- Manages Marine Trash and Debris Program to eliminate debris associated with oil and gas operations on the outer continental shelf
- Regulates marine trash and debris for oil and gas operations and renewable energy development on the outer continental shelf
- Enforces requirement that items be clearly marked to identify the owner and items lost overboard be recorded, reported, and retrieved if possible
- Requires annual training of offshore oil and gas workers to reduce marine debris

Federal Emergency Management Agency (FEMA), Region 6

- Under the Stafford Act, provides reimbursement funding for eligible debris removal from navigable waterways (non-federally maintained) or natural waterways (not improved or maintained) during presidential major disaster declarations when another federal agency does not have authority to fund the activity (FEMA, 2018)
    - FEMA provides funding but does not conduct debris removal work
    - Provides public assistance funding for eligible debris removal to eligible applicants at a typical cost share of 75% FEMA, 25% state/applicant
- FEMA eligible applicants must have legal responsibility to remove debris and include state and territorial governments, Indian Tribal Governments, local governments, and private nonprofit organizations that serve a public function

- Issues mission assignments to other federal agencies for technical assistance, federal operations support, or to perform or contract debris removal when local and state capabilities are exceeded
- Makes eligibility determinations for debris removal on a case-by-case discretionary basis in coordination with the eligible applicant, state, and other federal agencies
    - Debris removal must be necessary to eliminate the immediate threat to life, public health and safety, or improved property (FEMA, 2018).
    - For navigable waterways, debris removal is limited to a max depth of 2 feet below the low tide draft of the largest vessel that used the waterway prior to the incident. Any debris below this zone is not eligible unless it is necessary to remove debris extending upward into an eligible zone (FEMA, 2018).
    - For non-navigable waterways, including natural waterways, debris removal is only eligible to the extent that it is necessary to eliminate an immediate threat including the following: if the debris obstructs, or could obstruct, intake structures; if the debris could cause damage to structures; or if the debris is causing, or could cause, flooding to improved property during the occurrence of a 5-year flood (a flood that has a 20% chance of occurring in any given year; FEMA, 2018).
- Employs debris specialists that can be mobilized to assist eligible applicants with debris management
- FEMA must ensure compliance with federal laws, regulations, and executive orders prior to funding debris removal work. For additional information on permitting and compliance requirements, see Section 5.

National Oceanic and Atmospheric Administration (NOAA)

National Marine Fisheries Service (NMFS or NOAA Fisheries)

Office of Habitat Conservation and Office of Protected Resources

- Reviews proposed debris removal activities that involve a federal agency (directly or through funding and/or issuance of a federal permit) for compliance with Magnuson-Stevens Fisheries Conservation and Management Act and Endangered Species Act (ESA)
- For additional information on NOAA Fisheries compliance requirements, see Section 5.

National Ocean Service

- Participates in NDOW

Office of Coast Survey

- Mobilizes navigation response teams to survey ports and near-shore waterways for sunken debris, changes in water depth, and hazards to navigation following a disaster

Office of National Geodetic Survey

- Acquires and rapidly disseminates spatially-referenced remote-sensing datasets to support national emergency response. Imagery is obtained using high resolution digital cameras, film-based aerial camera systems, Light Detection and Ranging (LIDAR), and thermal and hyperspectral imagers.

Office of National Marine Sanctuaries, Flower Garden Banks National Marine Sanctuary

- Legislation prohibits discharging or depositing materials or other matter into the sanctuary, altering the sea floor, or abandoning any structure or material on the sea floor.
- Assesses the accumulation and impacts of marine debris with the sanctuary (NOAA, 2012a)
- Identifies and removes marine debris when feasible (NOAA, 2012a)

- Maintains boundary/regulatory buoys and mooring buoys within the sanctuary
- Issues permits for conducting research within the sanctuary and consults with other agencies who conduct or have regulatory authority over activities that may occur within the sanctuary
- For a map of Flower Garden Banks National Marine Sanctuary boundaries, see Section 4.6.

Office of Response and Restoration, Emergency Response Division

- Serves as scientific support coordinators to coordinate application of NOAA assets and services during emergencies to help the federal on-scene coordinator (FOSC) make timely operational decisions

Office of Response and Restoration, Marine Debris Division

- Funds marine debris assessment and removal projects through grants or congressional supplemental funding
- Facilitates inter-agency coordination of planning and execution of responses to marine debris events
- Provides scientific support for debris response planning and operations, including baseline information, debris behavior, debris impact, debris survey and detection protocols, removal best management practices (BMPs), disposal guidance, and information management
- Develops external communications such as talking points appropriate for the public, informational graphics, intuitive interactive web content, and educational videos to ensure the public and partner agencies understand and act on sound science and information critical to response and recovery operations
- For events determined by the NOAA Administrator to be severe marine debris events, may develop interagency plans, assess composition volume and trajectory of associated marine debris, and estimate potential impacts to the economy, human health, and navigation safety

National Weather Service

- Predicts, forecasts, and issues official watches and warnings of severe weather, including hurricanes
- Provides operational tools and briefings to federal, state, and local officials for emergency management awareness and preparedness and to provide decision support services

National Park Service (NPS)

- Conducts waterway debris assessment and cleanup within Big Thicket National Preserve and Padre Island National Seashore, in coordination with county, state, and other federal partners
- Organizes volunteer cleanups on NPS lands when possible
- Provides BMPs to protect NPS lands and associated resources
- For a map of NPS lands in coastal Texas, see Section 4.6.

Natural Resources Conservation Service (NRCS)

- When funding is available, provides emergency financial and technical assistance through the Emergency Watershed Protection (EWP) program for the following: to protect from additional flooding or soil erosion; to reduce threats to life or property from a watershed impairment, including sediment and debris removal in floodplains and uplands; and to restore the hydraulic capacity to the natural environment to the maximum extent practical
    - Help communities address watershed impairments that pose imminent threats to lives and property as a result of natural disasters

    - Typical cost share of 75% NRCS and 25% project sponsor
    - Public and private landowners are eligible for assistance but must be represented by a project sponsor, including state government; legal subdivisions of the state, such as a city, county, water management district, drainage district; or any Native American tribe or tribal organization.
    - EWP program eligibility criteria include the following:
        - Waterway debris is a direct result of either a major disaster declared by the president or of an NRCS State Conservationist declared natural disaster
        - Waterway debris is a threat to life and/or property
        - Imminent threat was created by this event
        - Recovery measures are for runoff retardation or erosion prevention
        - Event caused a sudden impairment in the watershed
        - Have economic, environmental, and social documentation adequate to warrant removal action
        - Proposed removal action is technically viable and environmentally defensible
        - Note: EWP program in Texas is mainly focused on debris above the mean water line and generally does not fund debris removal projects on state-owned submerged lands and tidally influenced areas
- Assists in the location of burial pits for animal mortality

U.S. Army Corps of Engineers (USACE), Galveston District

- Maintains regional pre-event contracting capabilities for all U.S. states and territories
- May request assistance from NOAA's navigation response team to survey ports and near-shore waterways

Emergency Operations

- Serves as lead federal agency under ESF 3 Public Works and Engineering
- Following a Stafford Act declaration, may provide technical support or lead eligible debris removal from navigable waterways (non-federally maintained) and wetlands under a FEMA mission assignment to perform or contract debris removal and surveying
    - Fort Worth District serves as backup for mission assignments when Galveston has been impacted by a disaster event
- Responds within their authority under the Flood Control and Coastal Emergency Act (33 U.S.C. § 701n)

Navigation

- Responsible for operation, maintenance, and debris removal from authorized federally maintained waterways and channels. For a map of USACE federally maintained waterways and channels, see Section 4.6.
- May remove or oversee removal by a responsible party (RP) of sunken vessels (wrecks) or other obstructions if they are determined by USACE and U.S. Coast Guard (USCG) to be hazards to navigation on or near a federal waterway (33 C.F.R. § 245). May remove trees, brush, and other debris from navigable waterways if they are determined to promote flooding or be obstructions to navigation.
- Authorized to clear snags in specified small waterways (33 C.F.R. § 263.24)
- May provide assistance for debris removal from flood control structures (33 U.S.C. § 701n)
- May study and undertake projects to remove and dispose of derelict objects such as sunken vessels, waterfront debris and derelict structures, and other sources of drift that may

damage vessels or threaten public health, recreation, or the environment at publicly maintained commercial boat harbors (33 U.S.C § 426m)
- Reviews permit applications when activities intersect with federally maintained waterways and channels, including levee systems

Regulatory Program
- Issues permits for debris removal within waterways and wetlands in coastal Texas
- For additional information on USACE permitting and compliance requirements, see Section 5.

U.S. Coast Guard (USCG), District 8, Sector Houston-Galveston and Sector Corpus Christi
- USCG Captain of the Port (COTP) zones in Texas include COTP Port Arthur and COTP Houston-Galveston in Sector Houston-Galveston and COTP Corpus Christi.
- In most cases, removal of waterway debris by USCG is not authorized.
- Responds to oil and hazardous material releases or threats of release that pose a substantial threat in waterways within the coastal zone as defined in the USCG Area Contingency Plans (ACP; U.S. Coast Guard [USCG], 2016a; USCG, 2016b; USCG, 2017)
    - Removal actions generally limited to removing oil and other hazardous substances while leaving vessels in place
    - May coordinate with state or local agencies to have vessel removed after abating pollution threat
    - Responds to pollution threats in federally maintained waterways in coordination with USACE
- Serves as lead federal agency (FOSC) under ESF 10 Oil and Hazardous Materials Response in the ACP coastal zone
    - Directs response in accordance with the National Contingency Plan (NCP)
    - Coordinates with state, tribal, and territorial governments and oversees response by RP
    - Unlike response under a Stafford Act declaration, USCG may respond without a request from local, state, or tribal governments under the NCP. During Stafford Act declarations, USCG retains the authority to act under the NCP.
- Maintains a year-round, 24-hour telephone watch through the National Response Center (NRC) for reporting of oil and hazardous material releases. See Appendix 8.1 for contact information.
- Establishes a safety zone around hazards to navigation and broadcasts maritime safety warnings including the broadcast notice to mariners and the local notice to mariners to warn of wrecked vessels obstructing watercourse or creating hazards to navigation
- Following a Stafford Act declaration, may lead removal of waterway debris under a FEMA mission assignment to perform or contract the work
- May request assistance from NOAA's navigation response team to survey ports and near-shore waterways
- Participates in NDOW
- For a map of the USCG COTP boundaries and the ACP coastal-inland zone boundary, see Section 4.6.

U.S. Environmental Protection Agency (EPA), Region 6
- Responds to oil and hazardous substance releases or threats of release in waterways within the inland zone as defined in the USCG ACPs (USCG, 2016a; USCG, 2016b; USCG, 2017). For a map of the ACP coastal-inland zone boundary, see Section 4.6.

- Serves as lead federal agency (FOSC) under ESF 10 Oil and Hazardous Materials Response in the ACP inland zone and during incidents affecting both inland and coastal zones
    - Directs response in accordance with the NCP
    - Coordinates with state, tribal, and territorial governments and oversees response by RP
    - Unlike response under a Stafford Act declaration, EPA may respond without a request from local, state, or tribal governments under the NCP. During Stafford Act declarations, EPA retains the authority to act under the NCP.
- Following a Stafford Act declaration, may lead removal of contaminated waterway debris under a FEMA mission assignment to perform or contract the work
- Participates in NDOW

U.S. Fish and Wildlife Service (USFWS)

- Participates in NDOW

Ecological Services Program

- Reviews proposed debris removal activities that involve a federal agency (directly or through funding and/or issuance of a federal permit) for compliance with Endangered Species Act (ESA) and Coastal Barrier Resources Act (CBRA)
- For additional information on USFWS compliance requirements, see Section 5.

National Wildlife Refuges (NWR)

- Coordinates and manages waterway debris assessment and cleanup in NWRs
    - NWRs in the Texas coastal zone include the Texas Chenier Plain Refuges Complex comprised of Texas Point, McFaddin, and Anahuac NWR; the Texas Mid-coast Refuge Complex comprised of San Bernard, Brazoria, and Big Boggy NWRs; Aransas NWR; Laguna Atascosa NWR; and Lower Rio Grande Valley NWR
- Coordinates with oil and gas operators within NWR boundaries
- Uses lessons learned from past disasters to protect listed threatened or endangered land and freshwater species, certain marine species, and their critical habitat
- For a map of NWRs in coastal Texas, see Section 4.6.

U.S. Navy

Supervisor of Salvage and Diving (SUPSALV)

- Manages and provides technical assistance for salvage, deep search and recovery, towing, and oil spill response operations
- Accesses and coordinates the U.S. Navy's hydrographic survey assets and capabilities
- Maintains an array of remotely operated vehicles, oil spill response, and salvage equipment
- Exercises and manages regional standing emergency salvage contracts to quickly draw upon resources of the commercial salvage industry (U.S. National Response Team, 2014)

4.4 Private Landowners

- May report acute waterway debris incidents to local officials and TDEM's Texas State Operations Center (SOC) to begin a coordinated, proper response. See Appendix 8.1 for contact information.
- May complete right-of-entry agreements with entities conducting private property debris removal or using private property as an access point

- After a Stafford Act declaration, debris removal from private property or privately-owned waterways and banks is generally the responsibility of the property owner and not eligible for FEMA funding unless its removal is necessary to mitigate a health and safety threat and is in the public interest (FEMA, 2018).
- May be eligible for debris removal funding from the Natural Resources Conservation Service (NRCS) Emergency Watershed Protection (EWP) program if represented by a project sponsor and specific criteria are met. See Section 4.3 Natural Resource Conservation Service for EWP eligibility criteria.

4.5 Other Organizations

- Following a Stafford Act declaration, certain private nonprofit organizations that serve a public function and have the legal responsibility to remove the debris may serve as an eligible applicant and receive public assistance reimbursement funding from FEMA to perform or contract waterway debris removal (FEMA, 2018)
- May provide debris removal assistance through funded projects and programs

Coastal Bend Bays and Estuaries Program

- Responsible for debris removal on their lands
- May complete right-of-entry agreements with entities conducting private property debris removal or using private property as an access point
- Hosts volunteer cleanup events

Galveston Bay Foundation

- Manages volunteer Bay Area Response Team that conducts pre-impact beach cleanups for oil spills impacting Galveston Bay and the central Texas coast (Galveston Bay Foundation, 2018b)
- Manages Galveston Bay Action Network (GBAN), an interactive tool for submitting and viewing pollution across the four counties that border Galveston Bay (Galveston Bay Foundation, n.d.)
- Manages large-scale debris removal projects in and around Galveston Bay (Galveston Bay Foundation, 2018a)

Natural Disaster Operational Working Group (NDOW)

- Coordination mechanism between state and federal agencies operating under ESF 3 and ESF 10 to establish an operational structure and common planning framework (Natural Disaster Operational Working Group, 2009)
    - Participating agencies include EPA, GLO, NOAA, USCG, USFWS, TCEQ, and TPWD
- Maintains standard operating procedures for response to orphan containers and vessels
- Established a common database system, training, and exercises

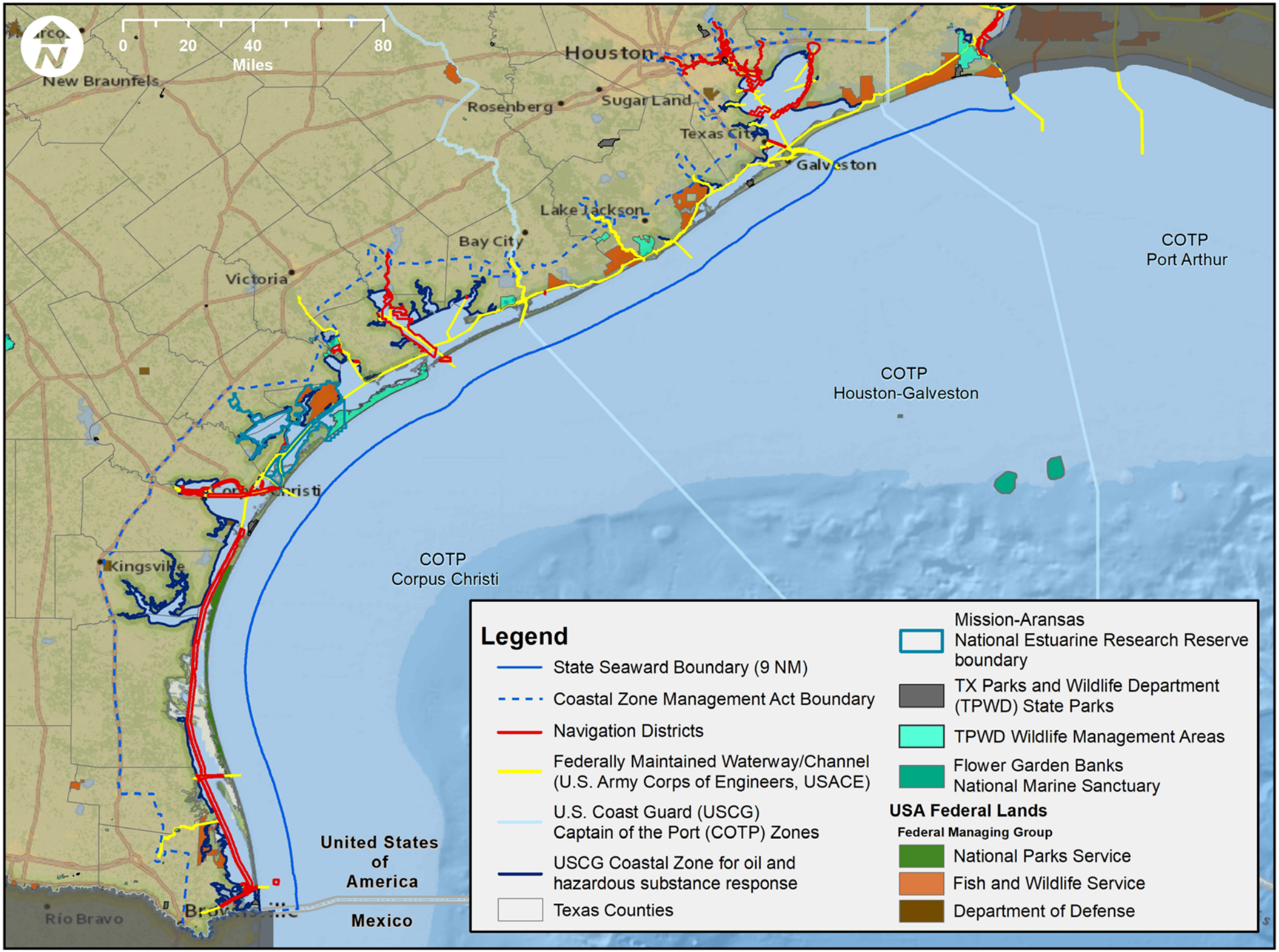
Texas Ports

- Texas has 21 Gulf Coast ports with seven ranked in the top 50 of all U.S. ports in terms of annual tonnage (TxDOT, 2017)
- May remove debris to ensure safe navigation
- May request assistance from NOAA's navigation response team to survey ports and near-shore waterways to identify dangerous objects or changes in water depth following a disaster
- Note that in some cases, a navigation district may also be known as a port authority

4.6 Texas Waterway Debris Response Map

The "Texas Waterway Debris Response Map" displays relevant agency jurisdiction boundaries in Texas's coastal zone. After an acute waterway debris incident, the agency (or agencies) with jurisdiction and authority for removing debris will vary depending on where the debris is located. This map includes information that stakeholders identified as important in determining jurisdiction within the state. For detailed information regarding local, state, and federal agency roles and responsibilities, see Sections 4.1, 4.2, and 4.3, respectively. Select agency authorities applicable to waterway debris response are presented in Appendix 8.3.

Texas Waterway Debris Response Map



5. Permitting and Compliance Requirements in Texas

Before waterway debris removal work can begin, organizations responsible for removal must meet certain permitting and compliance requirements. While the organization or individual conducting the debris removal work is responsible for obtaining necessary permits—such as a U.S. Army Corps of Engineers (USACE) permit—it is the responsibility of the lead federal agency to ensure compliance with the National Environmental Policy Act (NEPA) and to consult with tribal and resource agencies including the Texas Commission on Environmental Quality (TCEQ), Texas Historical Commission (THC), Texas Parks and Wildlife Department (TPWD), U.S. Fish and Wildlife Service (USFWS), and National Oceanic and Atmospheric Administration (NOAA).

During response under a Stafford Act declaration, the Federal Emergency Management Agency (FEMA) provides funding to applicants for debris removal and is therefore considered the lead federal agency responsible for tribal and resource agency coordination. Federal emergency support function (ESF) 11 Agriculture and Natural Resources may be activated for Stafford Act incidents requiring a coordinated federal response to protect natural and cultural resources and historic properties (FEMA, 2008). If waterway debris removal is conducted without federal funding and there are no federal agencies involved in removal activities, USACE is considered the lead federal agency as the permitting agency (if a permit is required).

A description of individual agency requirements and authorities is outlined below and is summarized in the "Permitting and Compliance for Waterway Debris Removal in Texas" handout in Section 5.3. Organization contact information can be found in Appendix 8.1, and select agency authorities are presented in Appendix 8.3.

5.1 State Requirements

Texas Commission on Environmental Quality (TCEQ)

- Provides oversight and guidance for debris management and disposal (TDEM, 2017)
    - Authorizes temporary debris management sites for declared state or federal disasters (TCEQ, 2015b)
    - Operates debris management hotline when needed to address and process requests regarding temporary debris management sites
    - Provides debris management/disposal guidance and publishes *Managing Debris from Declared Disasters* (TCEQ, 2017c)
    - Ensures proper separation of household hazardous waste (HHW) and white goods
    - Provides guidance for outdoor debris burning and issues burn authorizations to local jurisdictions (TCEQ, 2015a)
- Reviews federal permit applications for discharges of dredged or fill material into waters of the United States, including wetlands, to determine whether a proposed discharge will comply with state water quality standards (TCEQ, 2018)

Texas General Land Office (GLO)

- Issues authorizations for debris removal activities on state-owned lands (including state-owned submerged lands) that involve dredging or habitat disturbance
    - Separate applications are submitted to GLO and USACE and both agencies review concurrently.
    - If work is conducted on state-owned lands without authorization, GLO may require mitigation and/or compensation for any permanent impacts to the state's natural

resources that may occur during the removal process (Tex. Nat. Res. Code § 33; Tex. Nat. Res. Code § 51).
    - If a structure is being removed that has or had a lease or easement, then GLO will coordinate with the owner of the structure to ensure there are no objections to the removal.
- Reviews state and federal actions and limited local actions in the Texas coastal zone to ensure consistency with the goals and policies of the Texas Coastal Management Program (GLO, 2016; GLO, 2017b)
- Permit Service Center provides permitting assistance for small businesses, private individuals, and local governments within the Texas coastal zone (GLO 2016; GLO, 2017g)

Texas Historical Commission (THC)

- Administers duties of the State Historic Preservation Office (SHPO) and ensures compliance with the National Historic Preservation Act, which requires federal agencies to take into account an undertaking's potential to affect any district, site, building, structure, or object included in or eligible for the National Register of Historic Places
    - If a waterway debris removal project in Texas involves a federal agency (directly or through funding and/or issuance of a federal permit), it is the responsibility of the lead federal agency to consult with THC if activities could affect historic properties (Texas Historical Commission [THC], 2018b).
- Ensures compliance with the Antiquities Code of Texas to protect historic shipwrecks, archeological sites, and historic buildings on public land and waterways (THC, 2018a; Tex. Nat. Res. Code § 191; 13 Tex. Admin. Code § 26)
    - Political subdivisions of the state (cities, counties, river authorities, municipal utility districts, school districts, etc.) must notify THC prior to debris removal activities on public land that may affect archeological sites and will involve five or more acres of ground disturbance, 5,000 or more cubic yards of earth moving, will occur in a historic district or other designated historic site, or will affect a recorded archeological site. For all projects, the land-owning agency must stop work and notify THC if archeological sites are encountered (THC, 2018a).
    - State agencies must notify THC prior to breaking ground on public land (THC, 2018a).
    - Archeological investigations or monitoring, conducted under a THC-issued permit, may be required for ground-disturbing actions that have the potential to affect archaeological sites.

Texas Parks and Wildlife Department (TPWD)

- Protects and manages wildlife habitat and resources (TDEM, 2012; Tex. Parks & Wild. Code § 12.0011)
- Enforces game, fish, and water-safety laws (TDEM, 2012)

5.2 Federal Requirements

Federal Emergency Management Agency (FEMA)

- Serves as lead federal agency responsible for tribal and resource agency coordination when providing funding to applicants for debris removal under a Stafford Act declaration
    - Ensures applicant's debris removal operations avoid impacts to floodplains, wetlands, federally listed threatened and endangered species and their critical

habitats, and historic properties (including maritime or underwater archaeological resources if waterways are impacted)
    - Requires applicant to stage debris at a safe distance from property boundaries, surface water, wetlands, structures, wells, and septic tanks with leach fields
    - May require site remediation at staging sites and other impacted areas upon completion of debris removal and disposal

National Environmental Policy Act (NEPA)

- NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions.
- If a waterway debris removal project involves a federal agency (directly or through funding and/or issuance of a federal permit), it is the responsibility of the lead federal agency to ensure NEPA compliance. If multiple federal agencies play a major role in the debris removal, then there may be a joint lead agency which shares the lead agency's responsibility for management of the NEPA process (Council on Environmental Quality, 2007).
    - FEMA is provided with statutory exclusions under Section 316 of the Stafford Act which exempts debris removal from the NEPA review process.
    - Therefore, the NEPA review process is not required when FEMA is providing funding for waterway debris removal under a Stafford Act declaration. However, compliance with all other federal, state, and local environmental laws and regulations is still required, even when a project is statutorily excluded from NEPA review.
- For waterway debris removal operations, the impact of removal must be evaluated to minimize environmental and ecological damage to the maximum practical extent. In some cases, debris removal may be more environmentally damaging than leaving the debris in place.

National Oceanic and Atmospheric Administration (NOAA)

National Marine Fisheries Service (NMFS or NOAA Fisheries)

- If a waterway debris removal project in Texas involves a federal agency (directly or through funding and/or issuance of a federal permit), it is the responsibility of the lead federal agency to coordinate with NOAA Fisheries Southeast Regional Office prior to beginning debris removal work to ensure compliance with the Endangered Species Act (ESA) and Magnuson-Stevens Fisheries Conservation and Management Act.
    - ESA directs all federal agencies to ensure the actions they take, including those they fund or authorize, do not jeopardize the continued existence of any listed endangered or threatened species or result in the destruction or adverse modification of designated critical habitat unless an exemption has been granted. Generally, NOAA Fisheries manages marine and anadromous species while USFWS manages land and freshwater species and certain marine species such as manatee. If a federal agency determines their activities or actions will affect listed species or designated critical habitat—even if the effects are expected to be beneficial—they must consult with NOAA Fisheries or USFWS. See NOAA Fisheries Southeast Regional Office's endangered species web page for an up to date Texas ESA-listed marine species list (NOAA, n.d.-d).
    - Magnuson-Stevens Fisheries Conservation and Management Act directs all federal agencies to ensure the actions they take, including those they fund or authorize, do not adversely affect essential fish habitat (EFH). If a federal agency determines their activities or actions may adversely affect EFH, they must consult with NOAA

Fisheries. See NOAA's online essential fish habitat mapper to view maps for EFH (NOAA, 2017a).

- Consultation during emergencies can be expedited so federal agencies can complete their critical missions in a timely manner while still providing protections to listed species and EFH.
    - During emergency waterway debris removal operations, NOAA Fisheries Southeast Regional Office utilizes the same process for initiating contact for both ESA and EFH consultations. Steps to complete the emergency response consultation process are outlined in NOAA (n.d.-a).
- Additional information on ESA and EFH consultation during non-emergencies can be found in NOAA (n.d.-b) and NOAA (n.d.-c), respectively.

U.S. Army Corps of Engineers (USACE), Galveston District

- USACE permit may be required for debris removal within waterways and wetlands if the activity involves dredging, the discharge of dredged or fill material, or involves structures or work impacting the navigability of a waterway. One or more permits may be needed depending on the scope of work to be conducted.
    - Separate applications are submitted to GLO and USACE Galveston District's regulatory office and both agencies review concurrently.
- Permits that may be required include:
    - **General Permit SWG-2010-00605:** Authorizes GLO to conduct work, and temporarily excavate and place dredged and/or fill materials for the purpose of removing debris that presents a physical hazard, derelict vessels, derelict structures, and abandoned pipelines from waters of the United States, including state-owned submerged land and waters of the state of Texas (USACE, 2017)
    - **Nationwide Permit 3: Maintenance.** Authorizes repair, rehabilitation or replacement structures or fills destroyed or damaged by storms, floods, fires or other discrete events. This permit may be issued for removal or maintenance of culverts, sediments, or debris accumulated around outfalls, bridges, etc.
    - **Nationwide Permit 18: Minor Discharges**. Authorizes minor discharges of dredged or fill material
    - **Nationwide Permit 19: Minor Dredging**. Dredging of no more than 25 cubic yards below the plane of the ordinary high water mark or the mean high water mark
    - **Nationwide Permit 22: Removal of Vessels**. Authorizes temporary structures or minor discharges of dredged or fill material required for the removal of wrecked, abandoned, or disabled vessels, or the removal of man-made obstructions to navigation
    - **Nationwide Permit 37: Emergency Watershed Protection and Rehabilitation.** Issued for work conducted under the NRCS EWP Program
    - **Nationwide Permit 38: Cleanup of Hazardous and Toxic Waste**. Issued for the containment, stabilization, or removal of hazardous or toxic waste materials that are performed, ordered, or sponsored by a government agency with legal or regulatory authority, other than activities undertaken entirely on a Superfund (Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA]) site
- In emergency situations, permitting procedures may be expedited and resource agency coordination may occur "after the fact" as opposed to before a permit is issued. This may result in additional work by the applicant once the emergency and immediate threat has been mitigated.

- Navigation Section reviews permit applications when activities intersect with federally maintained waterways and channels, including levee systems.

U.S. Fish and Wildlife Service (USFWS)

Ecological Services Program

- If a waterway debris removal project in Texas involves a federal agency (directly or through funding and/or issuance of a federal permit), it is the responsibility of the lead federal agency to coordinate with USFWS Texas Coastal Ecological Services Field Office prior to beginning debris removal work to ensure compliance with ESA and the Coastal Barrier Resources Act (CBRA).
    - ESA directs all federal agencies to ensure the actions they take, including those they fund or authorize, do not jeopardize the continued existence of any listed endangered or threatened species or result in the destruction or adverse modification of designated critical habitat unless an exemption has been granted. Generally, USFWS manages land and freshwater species and certain marine species such as manatee, while NOAA Fisheries manages marine and anadromous species. If a federal agency determines their activities or actions may affect listed species or designated critical habitat—even if the effects are expected to be beneficial— they must consult with USFWS or NOAA Fisheries. See USFWS's Information for Planning and Consultation website for an up to date list of Texas's threatened and endangered land and freshwater species (U.S. Fish and Wildlife Service [USFWS], n.d.).
    - CBRA restricts federal expenditures and financial assistance that encourage development of coastal barriers so that damage to property, fish, wildlife, and other natural resources associated with the coastal barrier is minimized. The John H. Chafee Coastal Barrier Resources System (CBRS) is a collection of specific units of land and associated aquatic habitats that serve as barriers protecting the Atlantic, Gulf, and Great Lakes coasts. After a Stafford Act declaration, costs for debris removal and emergency protective measures in designated CBRS units may be eligible for reimbursement under FEMA's public assistance program provided the actions eliminate an immediate threat to lives, public health and safety, or protect improved property. A map of CBRS units in Texas can be downloaded from U.S. Fish and Wildlife Service (USFWS, 2015).
- For projects that do not involve federal permits or funding, USFWS consultation is not required, but is recommended. Harassing or harming ("taking") an endangered or threatened species or significantly modifying their habitat is still prohibited under ESA regardless of federal nexus involvement.
- Reviews may be expedited in emergencies, and USFWS staff may embed in response teams.
- Each debris removal project is reviewed individually unless USFWS prepares a programmatic consultation. Under a programmatic consultation, all parties agree on certain conservation measures that must be implemented. If a waterway debris removal project arises that does not fit the programmatic measures, then it must be reviewed individually.
- USFWS may provide BMPs that provide necessary protections while allowing projects to go forward.
- If the proposed waterway debris removal project will not impact listed threatened or endangered species, or if the federal consulting agency agrees to implement USFWS's recommendations, the consultation process is completed at the "informal" stage. However, if debris removal operations will adversely affect a listed species or critical habitat, the federal consulting agency must initiate a "formal" consultation, a process which typically

ends with the issuance of a biological opinion by USFWS (or NOAA Fisheries, if the ESA-listed species affected is under NOAA Fisheries' purview).

5.3 Permitting and Compliance for Waterway Debris Removal in Texas One-Pager

The "Permitting and Compliance for Waterway Debris Removal in Texas" handout on the following page synthesizes permitting and compliance requirements that must be met before waterway debris removal operations begin. The top portion of the one-pager outlines the process to follow to stay in compliance, while the bottom portion highlights specific state and federal agency requirements with general contact information.

For detailed information regarding individual state and federal requirements, see Sections 5.1 and 5.2, respectively.

Permitting and Compliance for Waterway Debris Removal in Texas

- In Texas's coastal zone, a U.S. Army Corps of Engineers (USACE) permit, a Texas General Land Office (GLO) authorization, and/or a Texas Historical Commission (THC) authorization may be required if debris removal involves dredging, the discharge of dredge or fill material, or involves structures or work impacting the navigability of a waterway.
- The **lead federal agency** is responsible for National Environmental Policy Act (NEPA) compliance and consulting with tribal agencies, Texas Commission on Environmental Quality (TCEQ), THC, Texas Parks and Wildlife Department (TPWD), U.S. Fish and Wildlife Service (USFWS), and the National Oceanic and Atmospheric Administration (NOAA) as required.

Compliance Process if USACE Permit or GLO Authorization is Required

Federally Funded Removal
(for example, FEMA funding under Stafford Act declaration)

No Federal Funding
(state, local, or privately funded removal)

Federal Agency Coordination
Coordinate with federal funding agency regarding environmental compliance requirements before applying for USACE permit and/or GLO authorization

Permit Application(s)
Submit separate applications to USACE and GLO and both agencies issue separate permits.

Permit(s) Issued
Review all permit conditions including GLO and resource agency requirements.

Debris Removal
All permit conditions and GLO and resource agency requirements must be followed during debris removal activities.

- Lead federal agency responsible for NEPA compliance, federal coastal consistency, and consultations with tribal agencies, TCEQ, THC, TPWD, USFWS, and NOAA as required.
- FEMA is lead federal agency under Stafford Act declaration
- Debris removal under Stafford Act declaration may trigger emergency permitting process.

As the lead federal agency, USACE ensures NEPA compliance, federal consistency with Texas's Coastal Management Program, and consults with tribal agencies, TCEQ, THC, TPWD, USFWS, and NOAA as required.

About NEPA
The National Environmental Policy Act (NEPA) requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions.

Primary Agency Requirements and Contact Numbers

TX General Land Office (GLO)
Upper Coast Field Office 281-470-1191
Lower Coast Field Office 361-886-1600

- Authorization may be required for debris removal on state-owned lands (including state-owned submerged lands) that involves dredging or other habitat disturbance
- Reviews state and federal actions and limited local actions in the Texas coastal zone

U.S. Army Corps of Engineers (USACE)
Regulatory Division
Galveston District
409-766-3869

- Permit may be required if debris removal involves dredging, the discharge of dredged or fill material, or involves structures or work impacting the navigability of a waterway
- Some permits that may be required for debris removal in waterways/wetlands
  - **SWG-2010-00605** authorizes GLO to temporarily place dredged/fill materials to remove debris, derelict vessels, derelict structures, and abandoned pipelines from waters and state owned submerged land
  - **NWP-3 Maintenance** for removal/maintenance of culverts, sediments or debris accumulated around outfalls, bridges, etc.
  - **NWP-18 Minor Discharges** of dredge or fill material
  - **NWP-19 Minor Dredging** of no more than 25 cubic yards
  - **NWP-22 Removal of Vessels** for removal of wrecked, abandoned, or disabled vessels or other man-made obstructions to navigation

TX Commission on Environmental Quality (TCEQ)
Waste Permits Division 512-239-2335
Water Quality Division 512-239-4671

- Provides oversite and guidance for debris management and disposal
- Authorizes temporary debris management sites for declared state or federal disasters
- Reviews federal permit applications for discharges of dredged or fill material into waters of the United States, including wetlands, to determine whether a proposed discharge will comply with state water quality standards

TX Historical Commission (THC)
TX State Historic Preservation Office (SHPO)
512-463-6100

- Serves as the State Historic Preservation Office and ensures compliance with National Historic Preservation Act and Antiquities Code of Texas
- If waterway debris response involves a federal agency (USACE permit, FEMA funding, etc.), the lead federal agency must consult with THC if activities could affect historic properties
- Consultation required for ground-breaking activities on public land owned or managed by the state or a political subdivision of the state
- Archeological investigations or monitoring, conducted under a THC-issued permit, may be required for ground-disturbing actions that have the potential to affect archeological sites

National Oceanic and Atmospheric Administration (NOAA)
National Marine Fisheries Service (NMFS)
ESA: 727-824-5312
EFH: 409-766-3699

- Consultation required if waterway debris response involves federal permits and/or funding (USACE permit, FEMA funding, etc.) to comply with:
  - Endangered Species Act (ESA) to ensure actions do not jeopardize the continued existence of any listed endangered or threatened marine species or adversely modify designated critical habitat
  - Magnuson-Stevens Fisheries Conservation and Management Act to ensure actions do not adversely affect Essential Fish Habitat (EFH)

U.S. Fish and Wildlife Service (USFWS)
TX Coastal Ecological Services Field Office
281-286-8282 x 237

- Consultation required if waterway debris response involves federal permits and/or funding (USACE permit, FEMA funding, etc.) to comply with:
  - Endangered Species Act (ESA) to ensure actions do not adversely modify designated critical habitat or jeopardize the continued existence of any listed endangered or threatened land or freshwater species and certain marine species such as manatee
  - Coastal Barrier Resources Act to ensure actions do not encourage development on coastal barriers along Texas's coast

6. Texas Waterway Debris Response Needs

Waterway debris response challenges and associated recommendations are outlined below. Response challenges identified by stakeholders will serve as future points of discussion and action for the Texas waterway debris response community. Potential opportunities for addressing these challenges include table-top activities to exercise this *Guide*, response exercises that incorporate debris scenarios, and coordination meetings associated with this document's formal review.

6.1 Response Challenges and Recommended Actions

The following challenges and recommendations have been compiled based on stakeholder input to improve preparedness for response and recovery operations following an acute waterway debris incident in Texas.

6.1.1 Policy and Programs

- Challenge: There is no established procedure or mechanism for reporting a waterway debris incident outside of major disasters.
    - Actions:
        - Establish a procedure for reporting of waterway debris and a mechanism for disseminating this information to local authorities and the public in coastal Texas, such as through the Texas SOC.
        - Expand GLO's Hurricane Harvey debris reporting tool and map to a year-round mechanism to report debris.
        - Evaluate feasibility of using existing applications, such as an expanded version of Galveston Bay Foundation's Galveston Bay Action Network (GBAN) or Gulf of Mexico Alliance's MyCoast to report debris.

- Challenge: Agency policy and program limitations restrict debris removal activities. For example, debris may not meet NRCS eligibility criteria, GLO is restricted to removing debris from state-owned submerged lands, and the Oil Spill Liability Trust Fund only provides funds to remove pollution threats but not debris.
    - Actions:
        - Prior to hurricane season, host workshops for local communities and counties outlining what disaster and debris removal funds are available and how they can apply.
        - Identify debris removal funding mechanisms for private property owners, such as through homeowner's association fees.

- Challenge: There is limited enforcement, including for things such as shrimping debris, floatables off land, and improper fishing line disposal.
    - Action: Improve clarity in existing regulations.

6.1.2 Pre-event Planning, Coordination, and Data

- Challenge: It is difficult to coordinate across agencies and jurisdictions.
  - Actions:
    - Establish a standing interagency debris team with regularly scheduled meetings and refresher courses or expand the Natural Disaster Operational Working Group's (NDOW) focus.
    - Develop a pre-identified state agency contact list. *Note: See Appendix 8.1 for contact information*.

- Challenge: There is a lack of pre-impact vessel information.
  - Actions:
    - Encourage marinas to require vessel insurance policies and document vessel ownership as a best practice.
      - For harbors and marinas leased from GLO, award a discount to marinas that require vessel insurance.
    - Meet with marinas, harbormasters, and navigation districts before hurricane season to obtain vessel ownership information.
    - Use GLO's database of abandoned and derelict vessel information. For example, in another state the public derelict vessel database must be used by counties and local law enforcement to report at-risk, abandoned, and derelict vessels in order to receive state funding.

- Challenge: There is a lack of pre-identified disposal sites.
  - Actions:
    - Historical data of identified disposal sites from past storms should be archived and added to response plans.
    - Encourage county hurricane preparedness plans to pre-identify disposal sites.

- Challenge: There is a need for research on how trash enters local bayous, which communities need education, and what education methods would be most effective.
  - Action: Identify grant opportunities, such as through GLO's Coastal Management Program or FEMA's Hazard Mitigation Grant Program, and apply for funds.

6.1.3 Education and Communication

- Challenge: There is a lack of information/understanding regarding other agency authorities and organization structure for various types of responses.
  - Actions:
    - Establish a standing interagency debris team with regularly scheduled meetings and refresher courses (outside of active disaster response).
    - Expand the Natural Disaster Operational Working Group's focus to include waterway debris response.
    - Better incorporate waterway debris response and removal information into existing trainings and exercises, such as TDEM's debris management course.
    - Develop and share standard operating procedures and host regular trainings, such as TDEM trainings for municipal and county staff.

        - Implement a procedure for retiring or transitioning employees to share information before leaving their positions.
        - Evaluate the feasibility of more frequent updates to the one-pagers contained in this guide.

- Challenge: Debris removal applicants and the public lack an understanding of the waterway debris response and compliance process.
    - Actions:
        - Communicate with potential funding applicants before a storm.
        - Develop and implement outreach on marine debris removal/permitting processes in coordination with non-governmental organizations and Local Emergency Planning Committees. Leverage existing outreach efforts, such as the Galveston Bay Report Card and Galveston Bay Plan.
        - Compile and communicate information regarding permitting and compliance approval timelines.
        - Organizations work together to develop permitting brochures and/or white papers and conduct road shows for targeted audiences prior to hurricane season, possibly as a complement to the Unified Federal Review process.
        - Before hurricane season or after an event, add a brochure into utility bills to concisely explain the debris removal process on public and private lands, how to report debris, and what to do to secure or dispose of private vessels.
        - For all outreach efforts, provide citizens with ways they can help.

- Challenge: It is difficult to maintain good communication between agencies and third-party contractors.
    - Action: Task field project managers with maintaining effective lines of communication throughout the debris removal process.

- Challenge: There is a lack of understanding regarding who is responsible for dredging and sediment removal after storms.
    - Action: Host an interagency, interjurisdictional workshop to discuss dredging and sediment concerns before a disaster.

6.1.4 Resources and Funding

- Challenge: For sustained lengthy response efforts, there is a limit on the amount/availability of trained staff.
    - Actions:
        - Cross-train inland staff outside of potentially impacted areas.
        - Hold periodic refresher courses and encourage staff to participate in training exercises that include a debris response component.
        - Ensure staff are aware of ongoing TDEM trainings and registered with https://www.preparingtexas.org/.
        - Maintain a list of trained staff and their availability for deployment after disasters.

- Challenge: There is a lack of response to waterway debris outside of GLO's area of responsibility and limited local-level abilities to respond.
    - Actions:
        - Prior to hurricane season, identify debris removal funding sources and host workshops for local governments outlining what disaster and debris removal funds are available and how they can apply.
        - Improve coordination between appropriate agencies to include possible cost-sharing after a disaster.
        - Better engage local governments in events such as Trash Bash, Adopt-a-Beach, and crab trap removals.

- Challenge: Post-disaster, it is difficult to find vessels available to access impacted areas.
    - Actions:
        - Establish pre-event vessel contracts and agreements (or expand existing agreements) that include information on vessel sharing and staging areas.
        - Ensure plans, including county hurricane preparedness plans, include information on staging vessels prior to a storm.
        - If vessels are unavailable, coordinate with GLO regarding their post-storm waterway surveys.
        - Continue to maintain vessel information in the response capabilities matrix. *Note: See Appendix 8.2 for additional information*.

- Challenge: After a disaster, debris removal contractors are unavailable or costs are not reasonable.
    - Actions:
        - Establish pre-disaster debris removal contracts with a transparent bid processes and possible mandated cap on cost.
        - Report price gouging to the Office of the Attorney General for prosecution.

- Challenge: There is a lack of funding and/or the availability of timely funding for waterway debris removal.
    - Actions:
        - Establish a waterway debris removal fund supported by vessel registration fees modeled after Florida's emergency response funding source.
        - Identify and make available a list of current debris removal funding sources that includes funding timelines by agency and/or program.

- Challenge: After a Stafford Act declaration, debris removal under a FEMA mission assignment to another federal agency is very costly.

- Challenge: The state's procurement process is challenging

6.1.5 Removal Logistics

- Challenge: After large disaster events like Hurricane Harvey, it is challenging to address the exceptionally large area impacted.
    - Actions:
        - Use aerial surveillance drones to identify and map debris, especially in inaccessible areas.

        - Use GIS collector applications, which allow users to collect and compile data via mobile telephones.
        - Create a volunteer response team, or partner with organizations who already maintain volunteers, to assist with post-event assessment and cleanup.

- Challenge: Accessing and/or getting equipment to debris locations is challenging (including remote/sensitive areas, through soft sand, and in or around private property).
    - Actions:
        - Use habitat maps to identify appropriate equipment types for specified areas.
        - Encourage local governments and state agencies to plan for equipment resource needs and methods, to require that contractors include information on accessing challenging areas as part of the bid process, to have landowner agreements in place for accessing private property, and to pre-stage equipment in advance of a storm.
        - Encourage county hurricane preparedness plans to pre-identify existing boat ramps and disposal sites.
        - Coordinate with NDOW to obtain pre-identified ramps and staging areas.
        - *Note: See Appendix 8.2 for organization response capabilities, including specialized equipment for working in sensitive habitats or accessing remote/challenging areas.*

- Challenge: It is difficult to determine legal authority/responsibility for debris removal, including whether waterways are private or state-owned.
    - Actions:
        - Utilize GLO's Interactive Land Lease Mapping Program website which shows state-owned submerged lands or call local GLO field office to confirm whether a site is private or state-owned.
        - Develop an online version of the Texas Waterway Debris Response Map included in this document.

- Challenge: It is challenging to identify hurricane-caused debris after a disaster. For example, under NRCS EWP program it can be difficult to determine if a watershed impairment is event-related or an operation/maintenance issue.
    - Actions:
        - Use information from GLO's quarterly baseline beach surveys and replicate surveys in other high debris risk areas.
        - Conduct on-site debris surveys as soon as possible after a disaster.

- Challenge: It is difficult to find responsible parties for oil storage tank removal after a hurricane.
    - Action: Increase tank labeling requirements.

- Challenge: Environmental factors including endangered species, critical habitat, and historic resources complicate debris removal logistics.
    - Establish GIS clearinghouse that includes environmental sensitivity information.
    - Develop programmatic agreements (biological opinions) in coordination with USACE and other federal agencies.
    - Require bonds for clean-up efforts and establish a permanent source of funds.

- Challenge: It is difficult to move large debris items (ex. branches/trees).

6.2 Additional Resources

Barnea, N., Michel, J., Bray, B., Nixon, Z., Imahori, G., & Moegling, C. (2009*). Marine debris emergency response planning in the north-central Gulf of Mexico* (Technical Memorandum NOS-OR&R-31). Silver Spring, MD: National Oceanic and Atmospheric Administration. Retrieved from https://marinedebris.noaa.gov/file/2162/download?token=OjWPoFW6

National Oceanic and Atmospheric Administration. (2014). *Best management practices for removal of debris from wetlands and other intertidal areas.* Retrieved from https://marinedebris.noaa.gov/sites/default/files/MDP_Debris_Removal_Intertidal_Areas.pdf

U.S. National Response Team. (2014). *Abandoned vessel authorities and best practices guidance*. Washington, DC: U.S. National Response Team. Retrieved from https://www.nrt.org/sites/2/files/NRT_Abandoned_Vessel_Authorities_and_Best_Practices_Guidance_FINAL.pdf

7. References

Bureau of Ocean Energy Management. (n.d.). *Outer continental shelf*. Retrieved from https://www.boem.gov/Outer-Continental-Shelf/

Council on Environmental Quality. (2007). *A citizen's guide to the NEPA*. Retrieved from https://ceq.doe.gov/docs/get-involved/Citizens_Guide_Dec07.pdf

Federal Emergency Management Agency. (2007). *FEMA 325: Public assistance debris management guide*. Washington, DC: U.S. Government Printing Office. Retrieved from https://www.fema.gov/pdf/government/grant/pa/demagde.pdf

Federal Emergency Management Agency. (2008). *Emergency Support Function #11 – Agriculture and Natural Resources Annex*. Washington, DC: U.S. Government Printing Office. Retrieved from https://www.fema.gov/pdf/emergency/nrf/nrf-esf-11.pdf

Federal Emergency Management Agency. (2018). *Public assistance program and policy guide FP 104-009-2*. Washington, DC: U.S. Government Printing Office. Retrieved from https://www.fema.gov/media-library-data/1525468328389-4a038bbef9081cd7dfe7538e7751aa9c/PAPPG_3.1_508_FINAL_5-4-2018.pdf

Galveston Bay Estuary Program. (2018). *Current projects.* Retrieved from https://gbep.texas.gov/current-projects/

Galveston Bay Foundation. (2018a). *Marine debris removal.* Retrieved from https://galvbay.org/how-we-protect-the-bay/on-the-ground/marine-debris-removal/

Galveston Bay Foundation. (2018b). *Oil spill response.* Retrieved from https://galvbay.org/how-we-protect-the-bay/in-our-communities/oil-spill-response/

Galveston Bay Foundation. (n.d.). *Report pollution anywhere, anytime!* Retrieved from https://galvbay.org/gban-about-this-project/

Kruse, J. (2016). *Overview: Texas Ports and Navigation Districts*. Houston, TX: Texas A&M Transportation Institute. Retrieved from https://static.tti.tamu.edu/tti.tamu.edu/documents/PRC-2016-5.pdf

National Oceanic and Atmospheric Administration. (2012a). *Flower Garden Banks final management plan*. Retrieved from https://nmsflowergarden.blob.core.windows.net/flowergarden-prod/media/archive/document_library/mgmtdocs/fmp2012/fmp2012lores.pdf

National Oceanic and Atmospheric Administration. (2012b). *State coastal zone boundaries*. Retrieved from https://coast.noaa.gov/czm/media/StateCZBoundaries.pdf

National Oceanic and Atmospheric Administration. (2013). *Storm-generated marine debris risk modeling in the Gulf of Mexico*.

National Oceanic and Atmospheric Administration. (2015). *Final evaluation findings: Texas Coastal Management Program*. Retrieved from https://coast.noaa.gov/czm/media/texascmp2015.pdf

National Oceanic and Atmospheric Administration. (2017a). *Essential fish habitat mapper*. Retrieved from https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper

National Oceanic and Atmospheric Administration. (2017b). [Web mapping tool presents spatial land cover data used in the water quality section of the wetland benefits coastal county snapshot]. *Wetland benefits snapshot map*. Retrieved from http://www.arcgis.com/home/item.html?id=f19a213e1a2248ec9f6d3863908bdce9

National Oceanic and Atmospheric Administration. (2018a). *Environmental sensitivity index (ESI) maps*. Retrieved from https://response.restoration.noaa.gov/maps-and-spatial-data/environmental-sensitivity-index-esi-maps.html

National Oceanic and Atmospheric Administration. (2018b). *Fast facts: Hurricane costs*. Retrieved from https://coast.noaa.gov/states/fast-facts/hurricane-costs.html

National Oceanic and Atmospheric Administration. (2018c). *Marine debris program*. Retrieved from https://marinedebris.noaa.gov/

National Oceanic and Atmospheric Administration. (2018d). *National Hurricane Center tropical cyclone report: Hurricane Harvey*. Retrieved from https://www.nhc.noaa.gov/data/tcr/AL092017_Harvey.pdf

National Oceanic and Atmospheric Administration. (n.d.-a). *NOAA Fisheries Southeast Regional Office emergency consultation*. Retrieved from http://sero.nmfs.noaa.gov/protected_resources/section_7/emergency_consultation/index.html

National Oceanic and Atmospheric Administration. (n.d.-b). *NOAA Fisheries Southeast Regional Office ESA section 7: Interagency consultation*. Retrieved from http://sero.nmfs.noaa.gov/protected_resources/section_7/index.html

National Oceanic and Atmospheric Administration. (n.d.-c). *NOAA Fisheries Southeast Regional Office essential fish habitat*. Retrieved from http://sero.nmfs.noaa.gov/habitat_conservation/efh.html

National Oceanic and Atmospheric Administration. (n.d.-d). *Texas' threatened and endangered species*. Retrieved from http://sero.nmfs.noaa.gov/protected_resources/section_7/threatened_endangered/Documents/texas.pdf

Natural Disaster Operational Working Group. (2009). *Natural Disaster Operational Working Group*. Retrieved from http://ndow.net/Default.aspx

Railroad Commission of Texas. (2017). *Accident and incident reporting*. Retrieved from http://www.rrc.state.tx.us/pipeline-safety/enforcement/accidentincident-reporting/

Texas Commission on Environmental Quality. (2015a). *Outdoor burning in Texas: Field operations*. Retrieved from https://www.tceq.texas.gov/assets/public/comm_exec/pubs/rg/rg-049.pdf

Texas Commission on Environmental Quality. (2015b). *Request for approval of temporary debris management site for debris resulting from declared state or federal disaster TCEQ-20660*. Retrieved from https://www.tceq.texas.gov/assets/public/response/TCEQ-20660.pdf

Texas Commission on Environmental Quality. (2017a). *Active municipal solid waste landfills in Texas*. Retrieved from https://www.tceq.texas.gov/assets/public/permitting/waste/msw/msw-landfills-active.pdf

Texas Commission on Environmental Quality. (2017b). *Disposing of animal carcasses left behind by declared disasters*. Retrieved from https://www.tceq.texas.gov/assets/public/response/carcasses-storm-guidance.pdf

Texas Commission on Environmental Quality. (2017c). *Managing debris from declared disasters*. Retrieved from https://www.tceq.texas.gov/assets/public/comm_exec/pubs/rg/rg-518.pdf

Texas Commission on Environmental Quality. (2017d). *Spills: Which state agency has jurisdiction*. Retrieved from https://www.tceq.texas.gov/response/spills/jurisdiction.html

Texas Commission on Environmental Quality. (2017e). *TCEQ toll-free numbers*. Retrieved from https://www.tceq.texas.gov/agency/directory/tollfree.html

Texas Commission on Environmental Quality. (2018). *401 certification reviews*. Retrieved from https://www.tceq.texas.gov/permitting/401certification/401certification_definition.html

Texas Commission on Environmental Quality. (n.d.). [Web mapping tool presents water district boundaries within Texas]. *Water districts map viewer*. Retrieved from https://gisweb.tceq.texas.gov/iWudSpatial/Controller/index.jsp?ccn=&zipCode=

Texas Department of Transportation. (2011). *Environmental assessment: Texas Department of Transportation maintenance program.* Retrieved from http://ftp.dot.state.tx.us/pub/txdot-info/env/mnt-ea.pdf

Texas Department of Transportation. (2017). *Texas ports*. Retrieved from https://www.txdot.gov/inside-txdot/division/maritime/ports.html

Texas Division of Emergency Management. (2012). *State of Texas emergency management plan*. Retrieved from https://www.preparingtexas.org/Resources/documents/State%20and%20Fed%20Plans/2015_02_17_Basic_Plan_with_Appendices_za.pdf

Texas Division of Emergency Management. (2013). *State of Texas hazard mitigation plan*. Retrieved from https://www.dps.texas.gov/dem/Mitigation/txHazMitPlan.pdf

Texas Division of Emergency Management. (2017). *Hurricane annex: State of Texas emergency management plan*.

Texas General Land Office (2016). *Biennial report*. Retrieved from http://www.glo.texas.gov/coast/coastal-management/forms/files/CMP-Biennial-Report-2015-2016.pdf

Texas General Land Office. (2017a). *Debris management plan*.

Texas General Land Office (2017b). *Federal consistency*. Retrieved from http://www.glo.texas.gov/coast/coastal-management/federal-consistency/index.html

Texas General Land Office (2017c). *GIS maps & data*. Retrieved from http://www.glo.texas.gov/land/land-management/gis/index.html

Texas General Land Office (2017d). *Hurricane Harvey debris*. Retrieved from http://www.glo.texas.gov/coast/coastal-management/harvey/debris/index.html

Texas General Land Office (2017e). *Oil spill*. Retrieved from http://www.glo.texas.gov/coast/oil-spill/overview/index.html

Texas General Land Office (2017f). *Oil spill planning and response toolkit*. Retrieved from http://www.glo.texas.gov/ost/

Texas General Land Office (2017g). *Permitting*. Retrieved from http://www.glo.texas.gov/coast/coastal-management/permitting/index.html

Texas General Land Office (2017h). *Programs*. Retrieved from http://www.glo.texas.gov/coast/oil-spill/programs/index.html

Texas General Land Office. (2017i). *Texas coastal resilience master plan*. Retrieved from http://www.glo.texas.gov/coastal-grants/projects/files/Master-Plan.pdf

Texas General Land Office. (2017j). *Texas coastal resilience master plan: Executive summary*. Retrieved from http://www.glo.texas.gov/coastal-grants/projects/files/Executive-Summary.pdf

Texas General Land Office. (2017k). *Vessel registration/vessel search*. Retrieved from http://www.glo.texas.gov/coast/oil-spill/vessel-registration-search/index.html

Texas General Land Office. (n.d.). *Adopt a beach*. Retrieved from http://www.glo.texas.gov/adopt-a-beach/

Texas Historical Commission. (2018a). *Antiquities code of Texas*. Retrieved from http://www.thc.texas.gov/project-review/antiquities-code-texas

Texas Historical Commission. (2018b). *The section 106 review process*. Retrieved from http://www.thc.texas.gov/project-review/national-historic-preservation-act/section-106-review-process

Texas Parks and Wildlife Department. (n.d.-a). *Abandoned crab trap removal program*. Retrieved from https://tpwd.texas.gov/landwater/water/conservation/Crab_trap/Crab_trap.phtml

Texas Parks and Wildlife Department. (n.d.-b). *Boat forms*. Retrieved from https://tpwd.texas.gov/fishboat/boat/forms/

Texas Sea Grant College Program. (2013). *Texas Monofilament Recovery & Recycling*. Retrieved from https://mrrp.tamu.edu/

U.S. Army Corps of Engineers. (2010). *Debris removal from waterways field operations guide*.

U.S. Army Corps of Engineers. (2017). *Department of the Army regional general permit*. Retrieved from http://www.swg.usace.army.mil/Portals/26/docs/regulatory/GPs/SWG201000605_Debris_GP.pdf?ver=2017-05-23-104808-337

U.S. Census Bureau. (2011). *Statistical abstract of the United States*. Retrieved from ftp://ftp.census.gov/library/publications/2010/compendia/statab/130ed/tables/11s0360.pdf

U.S. Coast Guard. (2016a). *Central Texas coastal area contingency plan*. Houston, TX: U.S. Coast Guard. Retrieved from http://www.glo.texas.gov/ost/acp/houston/sectorhoustongalveston_acp.pdf

U.S. Coast Guard. (2016b). *Southeast Texas and southwest Louisiana area contingency plan*. Port Arthur, TX: U.S. Coast Guard. Retrieved from http://www.glo.texas.gov/ost/acp/portarthur/msuportarthuracp.pdf

U.S. Coast Guard. (2017). *South Texas coastal zone area contingency plan*. Corpus Christi, TX: U.S. Coast Guard. Retrieved from http://www.glo.texas.gov/ost/acp/corpus/sectorcorpuschristiacp2017.pdf

U.S. Department of Homeland Security. (2016). *National response framework, third edition*. Retrieved from https://www.fema.gov/media-library-data/1466014682982-9bcf8245ba4c60c120aa915abe74e15d/National_Response_Framework3rd.pdf

U.S. Environmental Protection Agency. (2018). *National oil and hazardous substances pollution contingency plan (NCP) overview*. Retrieved from https://www2.epa.gov/emergency-response/national-oil-and-hazardous-substances-pollution-contingency-plan-ncp-overview

U.S. Fish and Wildlife Service. (2015). *Coastal Barrier Resources System*. Retrieved from https://www.fws.gov/ecological-services/habitat-conservation/cbra/maps/Locator/TX.html

U.S. Fish and Wildlife Service. (n.d.). *IPaC information for planning and consultation*. Retrieved from https://ecos.fws.gov/ipac/

U.S. National Response Team. (2014). *Abandoned vessel authorities and best practices guidance*. Washington, DC: U.S. National Response Team. Retrieved from https://www.nrt.org/sites/2/files/NRT_Abandoned_Vessel_Authorities_and_Best_Practices_Guidance_FINAL.pdf

8. Appendices

8.1 Contact Information

Note: Contact information is only included for organizations who have provided and/or approved information in the following tables.

Local Agencies

Agency	Division	Topic	Point of Contact	Phone	Email
Navigation Districts and Texas Ports	-	-	See https://www.texasports.org/membership-overview/member-roster/ for a Texas Ports Association membership roster	-	-
Chambers-Liberty Counties Navigation District	-	Capability: Docks for wet storage, land with water access to stage	Mary Beth Stengler	-	marybeth@clcnd.org
		Capability: GIS mapping	Pudge Wilcox	-	pudge@clcnd.org
Port of Corpus Christi Authority	-	Capability: ICS trained staff	Danielle Hale	361-885-6612	dhale@pocca.com
		Capabilities	Neal Kunkel	361-885-6161	nkunkel@pocca.com
Port Freeport	-	Capability: Docks for wet storage	Al Durel	979-233-2667 x 5340	durel@portfreeport.com
		Capability: Technology, equipment, workforce/expertise	Chris Hogan	979-373-5911 (O) 979-481-1285 (C)	hogan@portfreeport.com
Port Isabel-San Benito Navigation District	-	Planning and coordination	Steve Bearden, Port Director/General Manager	956-245-9342	steve@pisbnd.com

State Agencies

Agency	Division	Topic	Point of Contact	Phone	Email
Railroad Commission of Texas (RRC)	-	Report environmental emergency, discharge, spill, or air release from oil and gas facilities, pipelines, or alternative fuels	24-Hour Emergency Reporting Line	844-773-0305	-
	Oil and Gas Division	Capabilities	Larry Elliott	512-463-6852	larry.elliott@rrc.texas.gov
TX Commission on Environmental Quality (TCEQ)	-	Report spills, unpermitted discharges, or releases to the environment	24-Hour State Spill Reporting Hotline	800-832-8224	-
		Report environmental emergencies and complaints that are not spills	Non-spill Emergencies Hotline	888-777-3186	-
	Critical Infrastructure Division, Emergency Management Support Team	Planning and coordination	Anthony Buck, Emergency Management Coordinator	512-239-1511	anthony.buck@tceq.texas.gov
		Coordinates authorization of temporary debris management sites through regional office	Michelle Havelka, Homeland Security Coordinator	512-426-6715	michelle.havelka@tceq.texas.gov
		Planning and coordination	Melinda Torres, Assistant Homeland Security Coordinator	-	melinda.torres@tceq.texas.gov

continued on next page

State Agencies Continued

Agency	Division	Topic	Point of Contact	Phone	Email
continued from previous page TX Commission on Environmental Quality (TCEQ)	Critical Infrastructure Division, Emergency Management Support Team	Planning and coordination	Christopher Wiatrek, Emergency Management Support Team	512-239-1514	christopher.wiatrek@tceq.texas.gov
	Galveston Bay Estuary Program	Planning and coordination	Lisa Marshall, Program Manager	281-486-1240	lisa.marshall@tceq.texas.gov
	Waste Permits Division	Debris management and disposal	-	512-239-2335	-
	Water Quality Division	Water quality certifications	-	512-239-4671	-
TX Department of Public Safety (DPS)	TX Division of Emergency Management (TDEM)	State warning point to report emergency situations	24-Hour Texas State Operations Center (SOC)	512-424-2208	SOC@dps.texas.gov
		Contact for debris-related issues	TDEM Debris Email	-	TDEM.debris@dps.texas.gov
		Public Assistance	Valerie Blanton, Recovery Coordinator	512-994-9039	valerie.blanton@dps.texas.gov
TX General Land Office (GLO)	Asset Enhancement, Construction Services	Removal of unauthorized oil/gas structures	John Mesiroff	512-463-4473	john.mesiroff@glo.texas.gov
	Coastal Resources Division	Derelict structure and vessel removal from public beach and state-owned submerged lands; Capabilities	Tony Williams, Senior Director of Planning	512-436-5055	tony.williams@glo.texas.gov
		Adopt-A-Beach Program	Renee Tuggle, Coordinator	512-463-5057	renee.tuggle@glo.texas.gov
		Permit Service Center, Corpus Christi	-	866-894-3578	permitting.assistance@glo.texas.gov
		Permit Service Center, Galveston	-	866-894-7664	permitting.assistance@glo.texas.gov
	Field Offices	General coordination, compliance, and permitting	Lower Coast Field Office	361-886-1600	-
			Upper Coast Field Office	281-470-1191	-
	Oil Spill Prevention and Response	Report spills, unpermitted discharges, or releases to the environment	24-Hour State Spill Reporting Hotline	800-832-8224	-
		Derelict vessel coordinator, oil spill	Michelle Castilleja	-	michelle.castilleja@glo.texas.gov
		Region 1	Mark Underhill, Natural Resource Specialist	409-727-7481	mark.underhill@glo.texas.gov
		Region 2	Jesse Mayorga, Response Officer	281-470-6597	jesse.mayorga@glo.texas.gov
		Region 3	Brent Koza, Manager	361-438-4928	brent.koza@glo.texas.gov
Texas Historical Commission (THC) *TX State Historic Preservation Office (SHPO)	Archeology Division	Marine Archeology Program (waterway and beach debris); Capability: Vessels, sub-surface detection	Amy Borgens, State Marine Archeologist	512-463-9505	amy.borgens@thc.texas.gov
		State and Federal Review (inshore and inland debris)	Bill Martin, Archeologist and Reviewer	512-463-5867	bill.martin@thc.texas.gov
		Capability: Drones	Arlo McKee, Archeologist and Reviewer	-	arlo.mckee@thc.texas.gov
	History Programs	State and Federal Review (aboveground resources)	Caitlin Brashear, Historian	512-463-5851	caitlin.brashear@thc.texas.gov

State Agencies Continued

Agency	Division	Topic	Point of Contact	Phone	Email
TX Parks and Wildlife Department (TPWD)	Coastal Fisheries Division, Ecosystem Resource Program	Capability: Sonar, UAV, vessels	Adriana Leiva, Natural Resource Specialist	361-658-1892	adriana.leiva@tpwd.texas.gov
		Planning and coordination	Heather Biggs	-	heather.biggs@tpwd.texas.gov
		Capability: Sonar, GIS	Emma Clarkson	-	emma.clarkson@tpwd.texas.gov
		Capability: Public outreach	Holly Grand	-	holly.grand@tpwd.texas.gov
		Natural Resource Damage Assessment, Capability: Waterway debris staff, ICS, removal expertise	Johanna Gregory	-	johanna.gregory@tpwd.texas.gov
	Homeland Security and Emergency Management	Planning and coordination	Andrew Alexander, Lieutenant	512-803-6194	andrew.alexander@tpwd.texas.gov
	State Parks Division, Cultural Resources Program	State park cultural and natural resources	Michael Strutt, Director	512-389-4736	michael.strutt@tpwd.texas.gov
University of Texas Marine Science Institute (UTMSI)	Mission-Aransas National Estuarine Research Reserve (NERR)	Response within reserve boundaries; Capability: Environmental or cultural resources, public outreach, volunteers, pre-event contracting	Jace Tunnell, Reserve Director	361-749-3046 361-244-8665	jace.tunnell@austin.utexas.edu
		Capability: Pre-event contracting	Dr. Bob Dickey	-	robt.dickey@austin.utexas.edu
		Capability: Dive support	Frank Ernst	-	frank.ernst@utexas.edu
		Capability: Public outreach	Sally Palmer	361-728-1025	sally.palmer@utexas.edu
		Capability: Volunteers	Nicole Pringle	-	npringle@austin.utexas.edu
		Capability: Staging/off-loading	Salvador Rojos	-	salvadorr@austin.utexas.edu
		Capability: Vessels, debris modeling, marine debris staff, environmental/ cultural resources, GIS, removal expertise, docks for wet storage, staging/off-loading	Katie Swanson, Stewardship Coordinator	361-749-3106 (O) 716-397-8294 (C)	katie.swanson@utexas.edu

Federal Agencies

Agency	Division	Topic	Point of Contact	Phone	Email
Bureau of Safety and Environmental Enforcement	Marine Trash and Debris Program	Planning and coordination	James Sinclair, Marine Ecologist	504-736-2789	james.sinclair@bsee.gov
Federal Emergency Management Agency (FEMA)	Region 6	Environmental and Historic Preservation	Sarah Carrino, UFR Advisor	202-733-7908	sarah.carrino@fema.dhs.gov
			Kevin Jaynes, Regional Environmental Officer	940-383-7224	kevin.jaynes@fema.dhs.gov
		Public Assistance	William "Bill" Boone, Public Assistance Branch Chief	940-898-5353	william.boone@fema.dhs.gov
			Tony Furr, Public Assistance Debris Subject Matter Expert	940-297-0113	tony.furr@fema.dhs.gov
National Oceanic and Atmospheric Administration (NOAA) *continued on next page*	National Marine Fisheries Service (NMFS or NOAA Fisheries)	Emergency ESA/EFH consultation	-	-	nmfs.ser.emergency.consult@noaa.gov
		EFH information	Rusty Swafford	409-766-3699	rusty.swafford@noaa.gov
		ESA information	Rachel Sweeney	727-824-5312	rachel.sweeney@noaa.gov

Federal Agencies Continued

Agency	Division	Topic	Point of Contact	Phone	Email
continued from previous page National Oceanic and Atmospheric Administration (NOAA)	National Ocean Service, Office of Coast Survey	Navigation preparation and response	Alan Bunn, Regional Navigation Manager – Western Gulf Coast	409-621-5151 x 118	alan.bunn@noaa.gov
	National Ocean Service, Office of Response and Restoration, Emergency Response Division	Potential to release oil or hazardous substance	Paige Doelling, Scientific Support Coordinator for U.S. Coast Guard District 8	206-549-7819	paige.doelling@noaa.gov
	National Ocean Service, Office of Response and Restoration, Marine Debris Division	Planning and coordination for marine debris issues	Caitlin Wessel, Gulf of Mexico Regional Coordinator	251-544-5013 (O), 251-222-0276 (C)	caitlin.wessel@noaa.gov
	National Ocean Service, Office of National Marine Sanctuaries, Flower Garden Banks National Marine Sanctuary	Capability: Education	Shelley DuPuy	-	shelley.dupuy@noaa.gov
		Capability: Environment	Emma Hickerson, Research Coordinator	409-621-5151 x 111	emma.hickerson@noaa.gov
		Capability: Dive support, GIS	Marissa Nuttall	-	marissa.nuttall@noaa.gov
		Capability: Vessels	Dustin Picard	-	dustin.r.picard@noaa.gov
		Planning and coordination	George Schmahl, Sanctuary Superintendent	409-621-5151 x 102	george.schmahl@noaa.gov
National Park Service (NPS)	Big Thicket National Preserve	Response in Big Thicket National Preserve	Wayne Prokopetz	409-951-6801	a_wayne_prokopetz@nps.gov
	Padre Island National Seashore	Response in Padre Island National Seashore	Mark Spier	361-949-8173 x 222	mark_spier@nps.gov
		Capability contact	Brian Slate	361-949-8173 x 240	brian_slate@nps.gov
	-	Response on NPS-owned lands	C. Anna Toline, Marine Scientist, Oceans Program Coordinator	843-518-1939	catherine_toline@nps.gov
Natural Resource Conservation Service (NRCS)	-	Emergency Watershed Protection (EWP) Program Information	Texas EWP Program Manager	254-742-9824	mark.northcut@tx.usda.gov
			Salvador Salinas, State Conservationist	254-742-9800	salvador.salinas@tx.usda.gov
			See https://offices.sc.egov.usda.gov/locator/app?agency=nrcs for USDA-NRCS County Field Offices	-	-
		Capability: GIS mapping	Pam Jannise	254-742-9985	pam.jannise@tx.usda.gov
		Capability: Public outreach	Beverly Moseley	979-213-4971	beverly.moseley@tx.usda.gov
		Capability: Environmental or cultural resource expertise	Alan Stahnke	254-742-9857	alan.stahnke@tx.usda.gov
U.S. Army Corps of Engineers (USACE), Galveston District	Emergency Management	Emergency response	Alicia Rea	409-771-6174	alicia.d.rea@usace.army.mil
	Engineering and Construction Division	Capability: Sub-surface detection, vessels, debris modeling, staff, GIS	Matt Duke	409-766-3968	matthew.a.duke@usace.army.mil
		Capability: Aerial photography, LIDAR, specialized equipment, UAV, debris modeling, GIS	Rick Vera	409-766-3142	ricardo.j.vera@usace.army.mil
	Navigation and River Operations	Federally maintained waterway or channel	Christopher Frabotta, Chief of Navigation	409-766-3071	christopher.c.frabotta@usace.army.mil
	Regulatory Program	Compliance and permitting	Regulatory Division	409-766-3869	ceswg-pe-r@usace.army.mil
			Robert Heinly, Deputy Chief	409-766-3992	robert.w.heinly@usace.army.mil

Federal Agencies Continued

Agency	Division	Topic	Point of Contact	Phone	Email
U.S. Coast Guard (USCG)	-	Report potential to release oil or hazardous substance	National Response Center (NRC)	800-424-8802	-
	District 8	Planning and coordination	LCDR Chris Miller, District Response Advisory Team Environmental Specialist	504-671-2235	chris.j.miller@uscg.mil
		Planning and coordination	Dee Oos, Area Contingency Plan Program Manager	504-671-2233	damara.a.oos@uscg.mil
			LT Keyth Pankau	-	keyth.a.pankau@uscg.mil
			Mike Sams, Incident Management Preparedness Advisor	504-671-2234	michael.k.sams@uscg.mil
			Adam Tyndale, Response Equipment Coordinator	504-671-2063	adam.j.tyndale@uscg.mil
	District 8, Sector Corpus Christi	General contact	USCG Sector Corpus Christi Command Center	361-939-0450	-
	District 8, Sector Houston-Galveston	General contact	USCG Sector Houston-Galveston Command Center	281-464-4840	-
		Planning and coordination	Patrick Cuty, Infrastructure Recovery Specialist	281-464-4723	patrick.c.cuty@uscg.dhs.gov
U.S. Environmental Protection Agency (EPA)	Region 6	Report potential to release oil or hazardous substance	National Response Center (NRC)	800-424-8802	-
		General contact	EPA Region 6 Duty Officer	866-372-7745	-
U.S. Fish and Wildlife Service (USFWS)	National Wildlife Refuges (NWR)	Response in Texas NWRs	Kelly McDowell, Area Supervisor	956-566-3664	kelly_mcdowell@fws.gov
		Texas NWRs Oil and Gas Response	Mary Maddux	903-786-2826	mary_maddux@fws.gov
	Texas Coastal Ecological Services Field Office	Compliance and permitting	-	281-286-8282 x 237	-
			Moni Belton	281-212-1512	moni_belton@fws.gov

Academia and Non-Governmental Organizations

Organization	Division	Topic	Point of Contact	Phone	Email
Coastal Bend Bays and Estuaries Program	-	Capabilities: Technology, specialized heavy equipment	Jake Herring	361-244-0258	jherring@cbbep.org
		Capability: Environmental/cultural expertise	Rosario Martinez	361-658-3802	rmartinez@cbbep.org
		Capabilities: Vessels, environmental/cultural expertise	David Newstead	361-834-1484	dnewstead@cbbep.org
		Capability: Public outreach	Kathryn Tunnell	361-779-1803	ktunnell@cbbep.org
Galveston Bay Foundation	-	Capability: Outreach	Claire Everett	281-332-3381	ceverett@galvbay.org
		Capability: Volunteer coordination	Emily Ford	281-332-3381	eford@galvbay.org
		GBAN, water quality	Sarah Gossett, Water Quality Manager	281-332-3381	sgossett@galvbay.org
		Capability: GIS	Haille Leija, Habitat Restoration Manager	281-332-3381	hleija@galvbay.org
		Capability: Environmental resources	Matt Singer	281-332-3381	msinger@galvbay.org
		Capabilities: Heavy equipment, vessels, environmental resources, technical expertise for removal, logistics	Philip Smith, Director of Conservation	281-332-3381	psmith@galvbay.org
		Planning and coordination	Bob Stokes, President	281-332-3381	bstokes@galvbay.org

8.2 Response Capabilities

		Local				State					Federal							Non-Governmental	
	Yes (Y) - Verified In-house Capability Cont. (C) - Contracted capability	Chambers -Liberty Counties Nav. District	Port of Corpus Christi Authority	Port Freeport	Port Isabel-San Benito Nav. District	GLO	RRC, Oil & Gas Division	THC[3]	TPWD, Coastal Fisheries	UTMSI/ Mission-Aransas NERR	FEMA Region 6[5]	NOAA	NPS, Padre Island National Seashore	NRCS[12]	USACE[14]	USCG, Sector Houston-Galveston	USFWS NWRs	Coastal Bend Bays and Estuaries Program	Galveston Bay Foundation
Technology	Aerial photography and video			Yes		Y C						Yes			Yes		Cont.	Cont.	Cont.
Technology	Remote sensing (LIDAR)					C						Yes			Yes		Cont.	Cont.	
Technology	Sub-Surface Detection: Side scan, Single-beam, or Multi-beam sonar		Cont.	Yes		Y C		Yes	Yes	Cont.		Yes			Y C			Cont.	
Equipment	Aircraft					Cont.						Yes				Yes[15]			
Equipment	Heavy equipment: Barge, self-loading barge, crane, knuckleboom crane, environmental clamshell dredge, excavator					Cont.											Yes	Yes	Cont.
Equipment	Remotely Operated Vehicle (ROV)											Yes							
Equipment	Specialized equipment for working in sensitive habitats or accessing remote/challenging areas			Yes		Cont.							Yes[10]		Yes			Y[18] C	
Equipment	Unmanned Aerial Vehicle (UAV)/ Surveillance drone with FAA trained operator	Yes		Yes		Yes		Yes	Yes			Yes			Yes				
Equipment	Vessels	Yes	Yes	Yes[1]		Yes		Yes	Yes	Yes		Yes	Yes[11]		Yes		Yes	Yes	Y C
Workforce/Expertise	Debris modeling expertise (volume, transport, hindcasting, etc.)					Cont.				Yes		Yes			Yes				
Workforce/Expertise	Dedicated waterway/marine debris staff (responders, response team, coordination, etc.)		Y C			Y C			Yes	Yes		Yes	Yes		Yes				
Workforce/Expertise	Dive support (scientific, technical, commercial, etc.)											Yes[7]							
Workforce/Expertise	Environmental or cultural resource expertise (location of sensitive areas, endangered species present, etc.)		Yes			Yes		Yes	Yes	Yes	Yes	Yes[7,8]	Yes	Yes	Yes		Yes	Yes	Yes
Workforce/Expertise	Geographic Information System (GIS) mapping and plotting of imagery	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes		Yes

		Local				State					Federal							Non-Governmental	
	Yes (Y) - Verified In-house Capability Cont. (C) - Contracted capability	Chambers -Liberty Counties Nav. District	Port of Corpus Christi Authority	Port Freeport	Port Isabel-San Benito Nav. District	GLO	RRC, Oil & Gas Division	THC[3]	TPWD, Coastal Fisheries	UTMSI/ Mission-Aransas NERR	FEMA Region 6[5]	NOAA	NPS, Padre Island National Seashore	NRCS[12]	USACE[14]	USCG, Sector Houston-Galveston	USFWS NWRs	Coastal Bend Bays and Estuaries Program	Galveston Bay Foundation
Workforce/Expertise	Incident Command System (ICS) trained staff		Yes	Yes		Yes			Yes		Yes	Yes	Yes			Yes[16]	Yes		
Workforce/Expertise	Legal assistance					Yes													
Workforce/Expertise	Public outreach processes in place		Yes	Yes		Yes			Yes	Yes		Yes[7]		Yes				Yes	Yes
Workforce/Expertise	Technical expertise for removal operations (techniques, BMPs, etc.)		Y C			Y C			Yes	Yes	Yes	Yes	Yes						Yes
Workforce/Expertise	Volunteer manpower/Volunteer coordination					Yes		Yes		Yes						Yes[17]			Yes
Logistics	Contracting: Pre-approved waterway debris removal contractors		Cont.			Yes													
Logistics	Contracting: Pre-event contracts and staged agreements in place		Cont.			Yes				Yes[4]									
Logistics	Docks for wet storage of vessels	Yes	Yes	Yes	Yes	Cont.				Yes									
Logistics	Funding for waterway debris removal		Yes			Yes					Yes[6]	Yes[9]		Yes[13]					
Logistics	Process or team in place to identify responsible parties (for debris that can be traced to an owner)		Yes			Yes	Yes												Yes
Logistics	Staging/Off-Loading: Land with water access to stage, offload debris (has not been evaluated for suitability or officially pre-designated)	Yes	Yes		Yes	Y C[2]				Yes			Yes						
Logistics	Staging/Off-Loading: Pre-designated (pre-approved) staging, off-loading and special handling areas (already evaluated for suitability)		Yes			Yes							Yes						

Note: Capabilities which could be used during waterway debris response in Texas were either identified through research or were self-reported by an organization. Organizations were asked to indicate whether capabilities were in-house or were contracted through a third party. Footnotes refer to additional information provided for a particular capability.

[1]Port Freeport	27' CBRN boat with twin 225-hp
[2]GLO	For ESF-10 response only
[3]THC	Use of services may be limited to cultural resources, but this may be negotiable.
[4]UTMSI	UT Austin has a contractor in place to provide post-disaster response, but this contract is only responsible to clear/respond to events on UT property (i.e., UTMSI campus only).
[5]FEMA	Capabilities contingent upon a presidential major disaster declaration. FEMA capable of mission-assigning other federal support to increase capabilities.
[6]FEMA	May provide reimbursement public assistance funding for eligible debris removal during presidential major disaster declarations when another federal agency does not have authority to fund the activity.
[7]NOAA	Flower Garden Banks National Marine Sanctuary expertise is limited to offshore resources in the northwestern Gulf of Mexico, primarily within the sanctuary, but some regional.
[8]NOAA	Coordinates marine mammal and sea turtle stranding response and reviews proposed debris removal activities for compliance with ESA and Magnuson-Stevens Fisheries Conservation and Management Act.
[9]NOAA	Funding through grant program and possible Congressional supplemental funding.
[10]NPS	Airboat
[11]NPS	Three small watercraft
[12]NRCS	“Marine” debris removal is generally outside NRCS’s normal scope of disaster recovery. USDA-NRCS EWP program is targeted to storm debris (primarily vegetation) blocking natural water flow which could potentially cause flooding impacting public facilities. NRCS typically cannot provide assistance for removal on state-owned submerged lands or beaches.
[13]NRCS	When funding is available, provides emergency financial and technical assistance through the EWP program eligible projects.
[14]USACE	Galveston District, Engineering and Construction Division
[15]USCG	Aircraft provided by Air Station Houston. Aircraft can only be used for aerial identification.
[16]USCG	Sector maintains a National Incident Management System trained Incident Management Team.
[17]USCG	Volunteer coordination is through the volunteer coordination work group of the Area Committee.
[18]CBBEP	4 x 4 utility vehicle

8.3 Select Agency Authorities

8.3.1 Local Government Authorities

- Creation of the Texas Statewide Mutual Aid System, Tex. Gov't Code § 418.111
- Declaration of Local Disaster, Tex. Gov't Code § 418.108
- Gulfward Boundaries of Counties, Cities, Towns, or Villages, Tex. Nat. Res. Code § 11.013
- Mandatory Evacuation, Tex. Gov't Code § 418.185
- Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C § 5121 et seq.
- Use and Maintenance of Public Beaches, Tex. Nat. Res. Code § 61
    - Authority of Local Governments, Tex. Nat. Res. Code § 61.082
    - County Regulation of Public Use of Beaches, Tex. Nat. Res. Code § 61.121 et seq.
    - Duty of Cities, Tex. Nat. Res. Code § 61.065
    - Duty of County, Tex. Nat. Res. Code § 61.066

Navigation Districts

- Navigation Districts, Tex. Water Code § 60 et seq.
- Special Requirements for Certain Districts and Authorities, 30 Tex. Admin. Code § 292
- Water Districts, 30 Tex. Admin. Code § 293

8.3.2 State Agency Authorities

See *State of Texas Emergency Management Plan* (TDEM, 2012), which includes a complete list of authorities.

Railroad Commission of Texas (RRC)

- Duties of Railroad Commission, Tex. Water Code § 26.131
- Oil and Gas Hazardous Waste, Tex. Nat. Res. Code § 91.601 et seq.
- Oil Spill Prevention and Response Act of 1991, Tex. Nat. Res. Code § 40.001 et seq.
    - Railroad Commission Authority, Tex. Nat. Res. Code § 40.008
- Prevention of Pollution, Tex. Nat. Res. Code § 91.101 et seq.

Texas Animal Health Commission (TAHC)

- Emergency Management, Tex. Agric. Code § 161.0416

Texas Commission on Environmental Quality (TCEQ)

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601 et seq.
- Federal Water Pollution Control Act (commonly known as Clean Water Act) as amended by the Oil Pollution Act of 1990, 33 U.S.C. § 1251 et seq.
    - Certification (Section 401), 33 U.S.C. § 1341
    - Oil Pollution Liability and Compensation, 33 U.S.C. § 2701 et seq.
    - Permits for dredged or fill material (Section 404), 33 U.S.C. § 1344
- National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. § 300
- Oil Spill Prevention and Response Act of 1991, Tex. Nat. Res. Code § 40.001 et seq.
- Solid Waste Disposal Act, Tex. Health & Safety Code § 361
- Texas Clean Air Act, Tex. Health & Safety Code § 382
- Texas Hazardous Substances Spill Prevention and Control Act, Tex. Water Code § 26.261 et seq.

Texas Department of Public Safety (DPS)

Texas Division of Emergency Management (TDEM)

- Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C § 5121 et seq.
- State of Emergency, Tex. Gov't Code § 433
- Texas Disaster Act of 1975, Tex. Gov't Code § 418.001 et seq.
    - Texas Division of Emergency Management, Tex. Gov't Code § 418.041-418.053

Texas Department of Transportation (TxDOT)

- Operation of State-Owned Ferries, 43 Tex. Admin. Code § 29.41 et seq.

Texas General Land Office (GLO)

- Coastal Management Program Boundary, 31 Tex. Admin. Code § 503.1
- Coastal Public Lands Management Act of 1973, Tex. Nat. Res. Code § 33.001 et seq.
- Coastal Zone Management Act of 1972, 16 U.S.C § 1451 et seq.
- Land, Timber, and Surface Resources, Tex. Nat. Res. Code § 51
    - Removal of Facility or Structure by Commissioner, Tex. Nat. Res. Code § 51.3021
- Oil Spill Prevention and Response Act of 1991, Tex. Nat. Res. Code § 40.001 et seq.
    - Administration of Hazardous Substance Spill Response and Cleanup, Tex. Nat. Res. Code § 40.005
    - Administration of Oil Spill Response and Cleanup, Tex. Nat. Res. Code § 40.004
    - Derelict Vessels and Structures, Tex. Nat. Res. Code § 40.108
    - General Powers and Duties, Tex. Nat. Res. Code § 40.007
- Pre-event Disaster Response Contracts, Tex. Gov't Code § 418.126
- Property of the State, Parks and Wild. Code § 1.011(c)
- Provisions Generally Applicable to the Public Domain, Tex. Nat. Res. Code § 11
    - Location of Coastal Boundaries, Tex. Nat. Res. Code § 11.0111
    - Gulfward Boundary of Texas, Tex. Nat. Res. Code § 11.012
- Use and Maintenance of Public Beaches, Tex. Nat. Res. Code § 61
    - Duty of the State, Tex. Nat. Res. Code § 61.067

Texas Historical Commission (THC)

- Abandoned Shipwreck Act, 43 U.S.C § 2101 et seq.
- Antiquities Code of Texas, Tex. Nat. Res. Code § 191
    - Notice Required, Tex. Nat. Res. Code § 191.0525
- National Historic Preservation Act, 16 U.S.C § 470 et seq.
- Texas Historical Commission, Historic Shipwrecks, 13 Tex. Admin. Code § 28
- Texas Historical Commission, Practice and Procedure, 13 Tex. Admin. Code § 26

Texas Parks and Wildlife Department (TPWD)

- Administration of the State Park System, 31 Tex. Admin Code § 59.61 et seq.
- Bonded Title--Acceptable Situations, 31 Tex. Admin. Code § 53.100
- Duty of Parks and Wildlife Department, Tex. Water Code § 26.129
- Parks and Wildlife Department, Tex. Parks & Wild. Code § 11.011 et seq.
- Powers and Duties Concerning Parks and Other Recreational Areas, Tex. Parks & Wild. Code § 13
- Resource Protection, Tex. Parks & Wild. Code § 12.0011
- Water Safety, Tex. Parks & Wild. Code § 31
    - Ownership of Vessels and Outboard Motors; Certificates of Title, Tex. Parks & Wild. Code § 31.045

- Title for Abandoned Vessel; Bond, Tex. Parks & Wild. Code § 31.0466

8.3.3 Federal Agency Authorities

Animal, Plant and Health Inspection Service

- Animal Health Protection Act, 7 U.S.C § 8301 et seq.
- Plant Protection Act, 7 U.S.C § 7701 et seq.

Federal Emergency Management Agency (FEMA), Region 6

- Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C § 5121 et seq.
  - Debris Removal, 42 U.S.C. § 5173
  - Essential Assistance, 42 U.S.C. § 5170b
  - Federal Emergency Assistance, 42 U.S.C. § 5192

National Oceanic and Atmospheric Administration (NOAA)

- Coastal Zone Management Act of 1972, 16 U.S.C § 1451 et seq.
- Endangered Species Act, 16 U.S.C. § 1531 et seq.
- Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1801 et seq.
- Marine Debris Research, Prevention, and Reduction Act, 33 U.S.C. § 1951 et seq.
- Marine Mammal Protection Act of 1972, 16 U.S.C § 1361 et seq.
- Marine Protection, Research, and Sanctuaries Act (Ocean Dumping Act), 33 U.S.C. § 1401 et seq.
- National Marine Sanctuaries Act, 16 U.S.C § 1431 et seq.
- National Marine Sanctuary Program Regulations, 15 C.F.R. § 922

Natural Resources Conservation Service (NRCS)

- Emergency Watershed Protection Program, 7 C.F.R. § 624

U.S. Army Corps of Engineers (USACE)

- Authority for snagging and clearing for flood control (Section 208), 33 C.F.R. § 263.24
- Federal Water Pollution Control Act (commonly known as Clean Water Act) as amended by the Oil Pollution Act of 1990, 33 U.S.C. § 1251 et seq.
  - Permits for dredged or fill material (Section 404), 33 U.S.C. § 1344
- Flood Control and Coastal Emergency Act, 33 U.S.C. § 701n (Public Law 84-99)
- Permits for Structures or Work in or Affecting Navigable Waters of the United States, 33 C.F.R. § 322
- Removal of snags and debris, and straightening, clearing, and protecting channels in navigable waters, 33 U.S.C. § 603a
- Removal of Wrecks and Other Obstructions, 33 C.F.R. § 245
- Rivers and Harbors Appropriation Act of 1899 and 1945, 33 U.S.C. § 401 et seq.
  - Obstruction of navigable waters generally; wharves; piers, etc.; excavations and filling in (Section 10), 33 U.S.C. § 403
  - Taking possession of, use of, or injury to harbor or river improvements, 33 U.S.C. § 408
  - Obstruction of navigable waters by vessels; floating timber; marking and removal of sunken vessels, 33 U.S.C. § 409
  - Removal by Secretary of the Army of sunken water craft generally; liability of owner, lessee, or operator, 33 U.S.C. § 414

    - Summary removal of water craft obstructing navigation; liability of owner, lessee, or operator, 33 U.S.C. § 415
    - Collection and removal of drift and debris from publicly maintained commercial boat harbors and adjacent land and water areas (Water Resources Development Act, Section 202), 33 U.S.C § 426m
- Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C § 5121 et seq.

U.S. Coast Guard (USCG), District 8, Sector Houston-Galveston and Sector Corpus Christi

- Abandoned Barge Act of 1992, 46 U.S.C. § 4701-4705
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601 et seq.
- Federal Water Pollution Control Act (commonly known as Clean Water Act) as amended by the Oil Pollution Act of 1990, 33 U.S.C. § 1251 et seq.
    - Oil Pollution Liability and Compensation, 33 U.S.C. § 2701 et seq.
- Marking of structures, sunken vessels and other obstructions, 33 C.F.R. § 64
- National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. § 300
- Ports and Waterways Safety Act, 33 U.S.C. §1221 et seq.
- Saving life and property, 14 C.F.R. § 88

U.S. Environmental Protection Agency (EPA), Region 6

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601 et seq.
- Federal Water Pollution Control Act (commonly known as Clean Water Act) as amended by the Oil Pollution Act of 1990, 33 U.S.C. § 1251 et seq.
- National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. § 300

U.S. Fish and Wildlife Service (USFWS)

- Coastal Barrier Resources Act, 16 U.S.C. § 3501 et seq.
- Endangered Species Act, 16 U.S.C. § 1531 et seq.
- Fish and Wildlife Coordination Act, 16 U.S.C. § 661 et seq.
- Marine Mammal Protection Act of 1972, 16 U.S.C § 1361 et seq.
- Migratory Bird Treaty Act, 16 U.S.C § 703 et seq.
- National Wildlife Refuge System Administration Act of 1966, 16 U.S.C. § 668dd et seq.
- National Wildlife Refuge System Improvement Act of 1997

8.4 Texas Legislation Applicable to Waterway Debris Response

Citation	Title
13 Tex. Admin. Code § 28	Texas Historical Commission, Historic Shipwrecks
Tex. Gov't Code § 418.001 et seq.	Texas Disaster Act of 1975
Tex. Gov't Code § 418.126	Pre-event Disaster Response Contracts
Tex. Nat. Res. Code § 11.0111	Location of Coastal Boundaries
Tex. Nat. Res. Code § 11.012	Gulfward Boundary of Texas
Tex. Nat. Res. Code § 11.013	Gulfward Boundaries of Counties, Cities, Towns, or Villages
Tex. Nat. Res. Code § 33.001 et seq.	Management of Coastal Public Land
Tex. Nat. Res. Code § 40.001 et seq.	Oil Spill Prevention and Response Act of 1991
Tex. Nat. Res. Code § 40.108	Derelict Vessels and Structures
Tex. Nat. Res. Code § 51.3021	Removal of Facility or Structure by Commissioner
Tex. Nat. Res. Code § 61.011 et seq.	Texas Open Beaches Act
Tex. Nat. Res. Code § 61.061 et seq.	Maintenance of the Public Beaches
Tex. Parks and Wild. Code § 1.011(c)	Property of the State

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