



Texas Marine Debris Emergency Response Guide

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Overview

- 1. Background**
- 2. Response Project Status**
- 3. Response Guide Preview**
- 4. Next Steps**

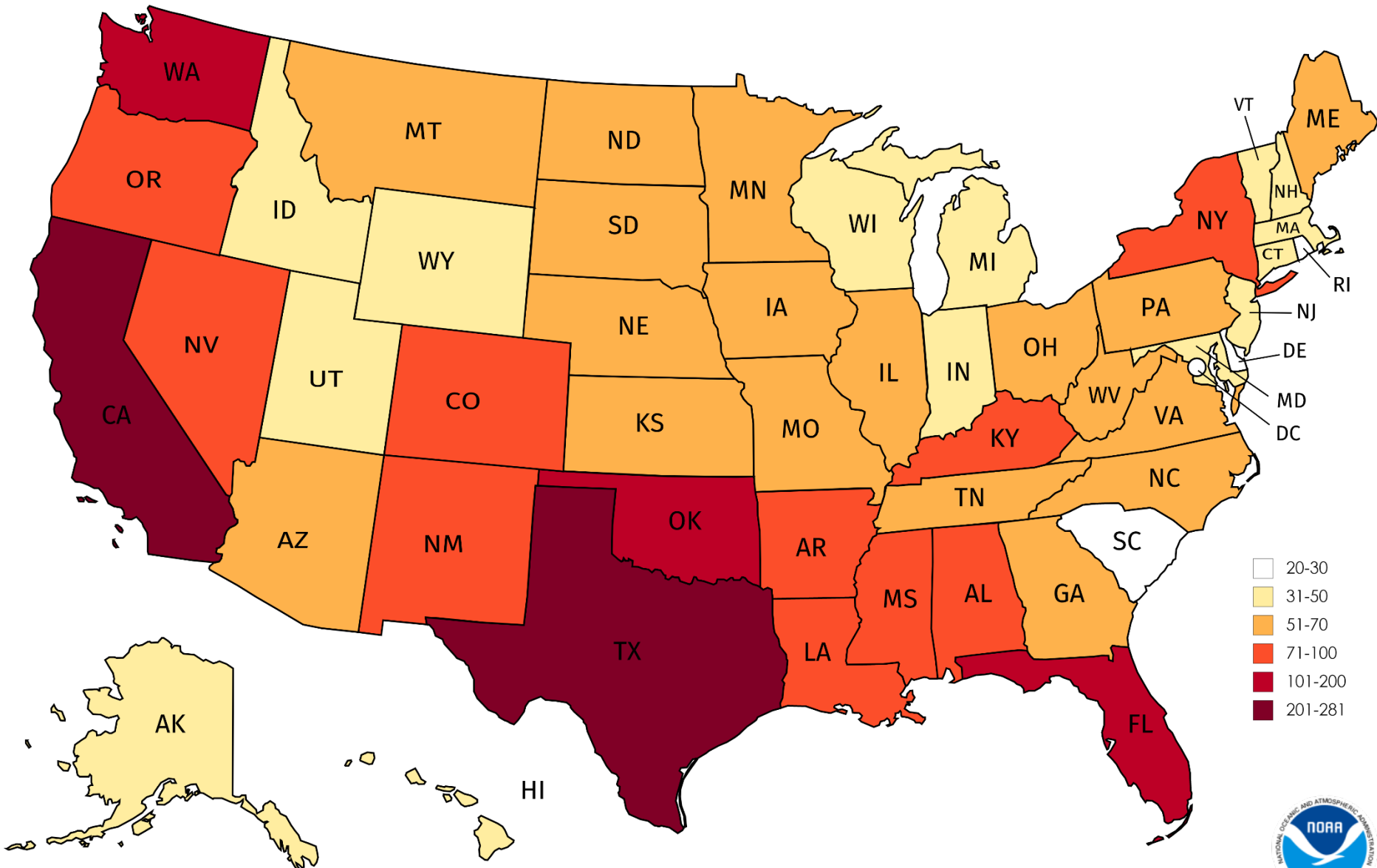
Background



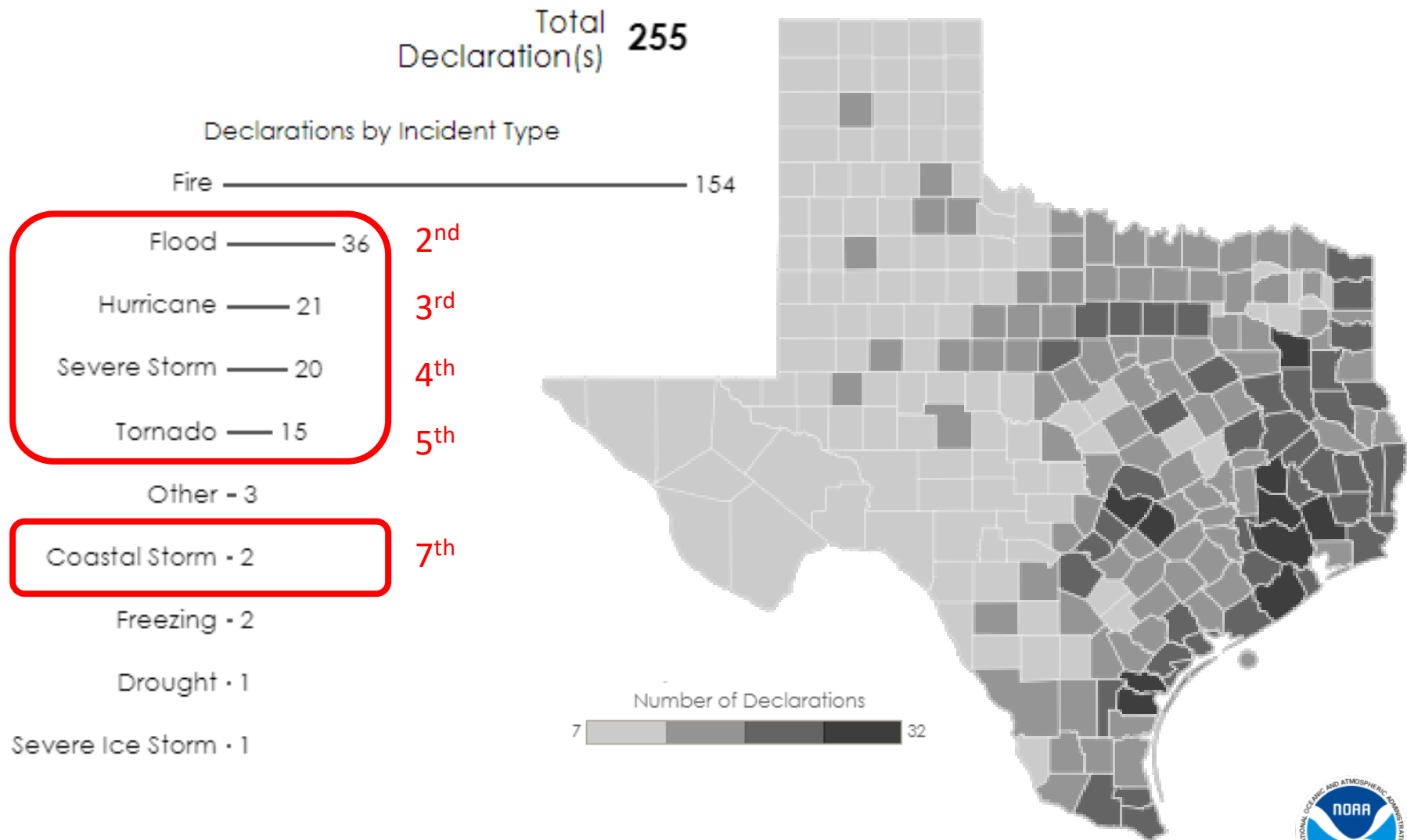
Rockport, TX. Hurricane Harvey. Aug. 27, 2017.

Credit: Eric Gay/AP

Disaster Declarations Since 1953



Disaster Declarations Since 1953



Natural Disasters & Marine Debris

**Hurricane intensity
projected to increase¹**

- Volume and variety of debris

Threats²

- Navigation
- Natural resources
- Human safety
- Hazardous substances

Removal is challenging

- \$\$\$ and time consuming
- Overlapping jurisdictions
- Complex environment

¹<https://www.gfdl.noaa.gov/global-warming-and-hurricanes/>

²FEMA Debris Management Guide



Project Goal

Improve preparedness for response to and recovery from **acute marine debris incidents** in coastal states

what

how

→ Outline **existing** response structures, procedures, and responsibilities at the local, state, and federal levels into **individual state guidance documents**

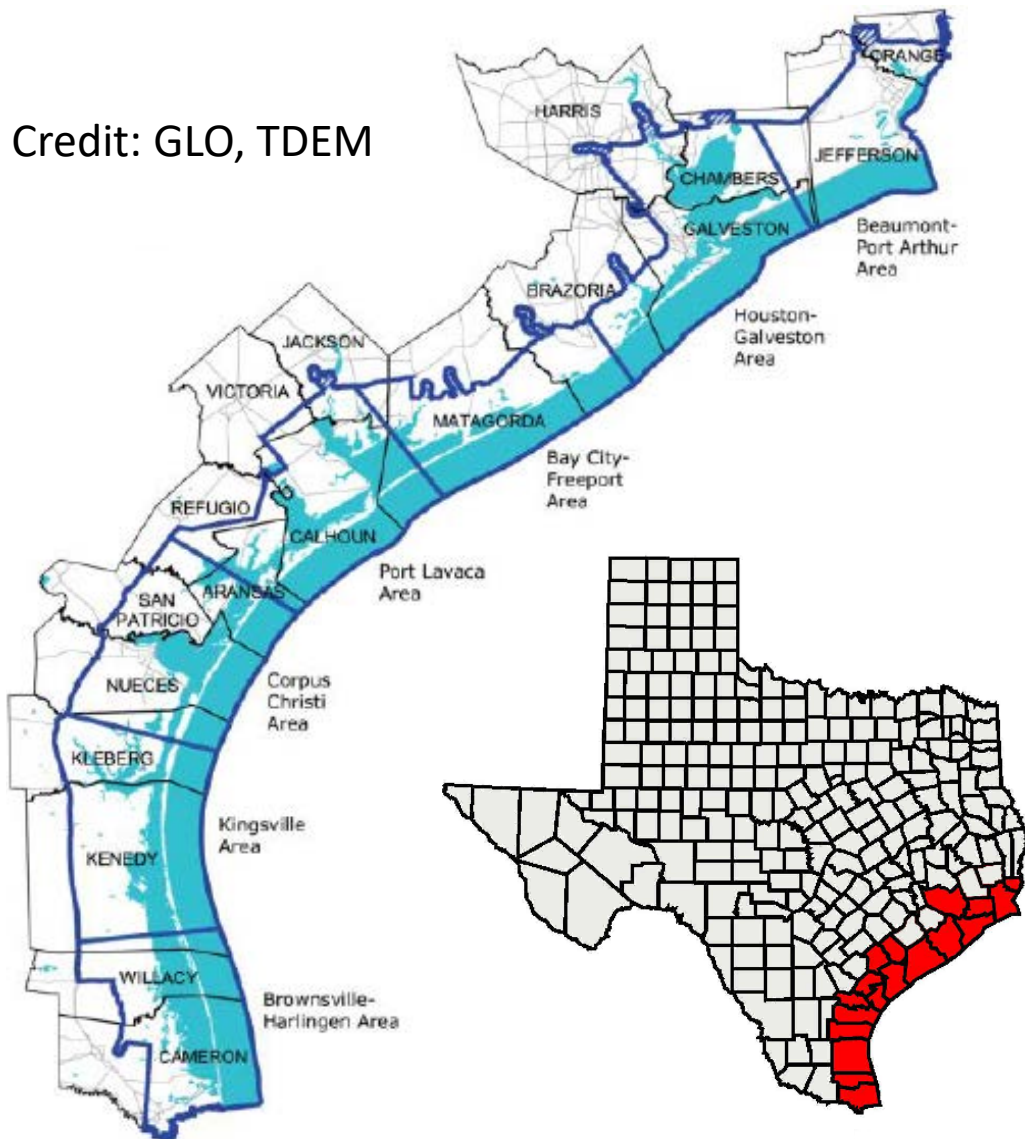
Texas Scope

- Focus on **waterway debris**
 - Solid material (including vegetative debris)
 - Result of acute disaster incident
 - Poses a threat
 - Can include shoreline and wetland debris, or debris in inland non-tidal waterways
- Target audience: All levels of government, responders, marine debris professionals
- Guide and outreach focused on a **state's coastal zone**
 - Information in guidance document is applicable to all of state



Texas Scope

Credit: GLO, TDEM



Coastal zone includes all or part of 18 counties:

Cameron, Willacy, Kenedy, Kleberg, Nueces, San Patricio, Refugio, Aransas, Calhoun, Victoria, Jackson, Matagorda, Brazoria, Galveston, Harris, Chambers, Jefferson, and Orange




Status

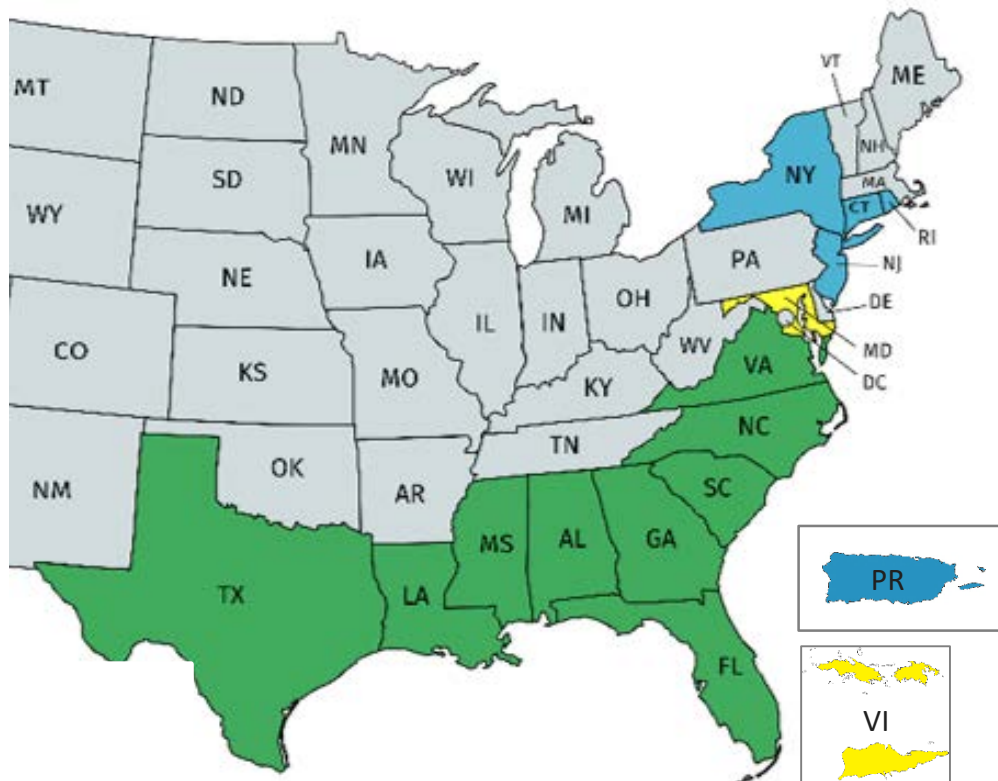


Hurricane Rita, 2005.
Credit: NOAA, Doug Helton

National Project Status

Soon to
be 9!

- 1 →  Published & Complete
- 2 →  In Development
- 5 →  Passive Research Complete



Texas Status



1. Background research, *Post-Harvey 2017*
2. Engage stakeholders
3. Document roles, contacts, and jurisdictions
4. Workshop, *July 10, 2018*
5. Guide edits and finalization
6. Stakeholder review
7. Publication ←

A Few Texas Partners... Thank you!



TEXAS HISTORICAL COMMISSION
real places telling real stories



US Army Corps
of Engineers®



FEMA



NRCS Natural Resources
Conservation Service



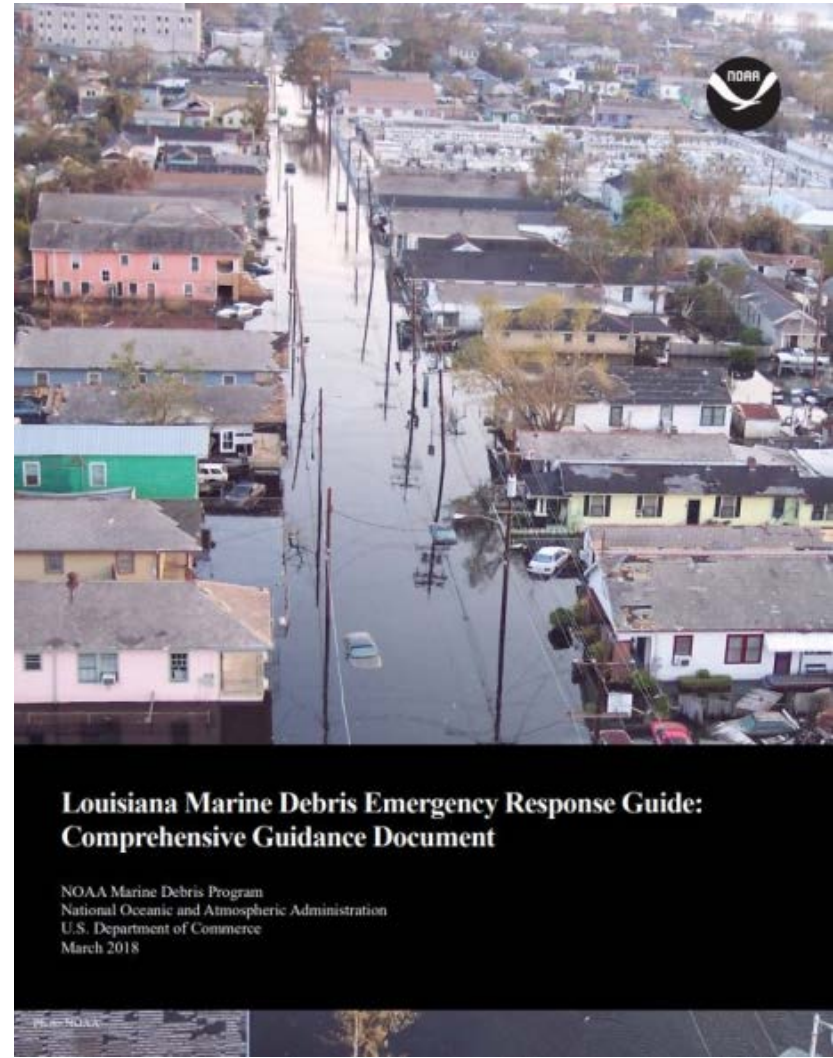
Texas Response Guide Preview



Credit: FEMA

Guide Content

- I. Introduction
- II. Background Risk: Foreseeable Incidents and Debris Types
- III. Roles, Responsibilities, and Jurisdictions
- IV. Permitting and Compliance Requirements
- V. Challenges, Needs, and Recommended Actions
- VI. Response Capabilities
- VII. Contact Information



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- I. Introduction
- II. Background Risk: Foreseeable Incidents and Debris Types
- III. Roles, Responsibilities, and Jurisdictions**
 - ✓ **Local Role**
 - ✓ **State Role**
 - ✓ **Federal Role**
 - ✓ **Private Landowners**
 - ✓ **NGOs/Volunteer Organizations**
- IV. Permitting and Compliance Requirements
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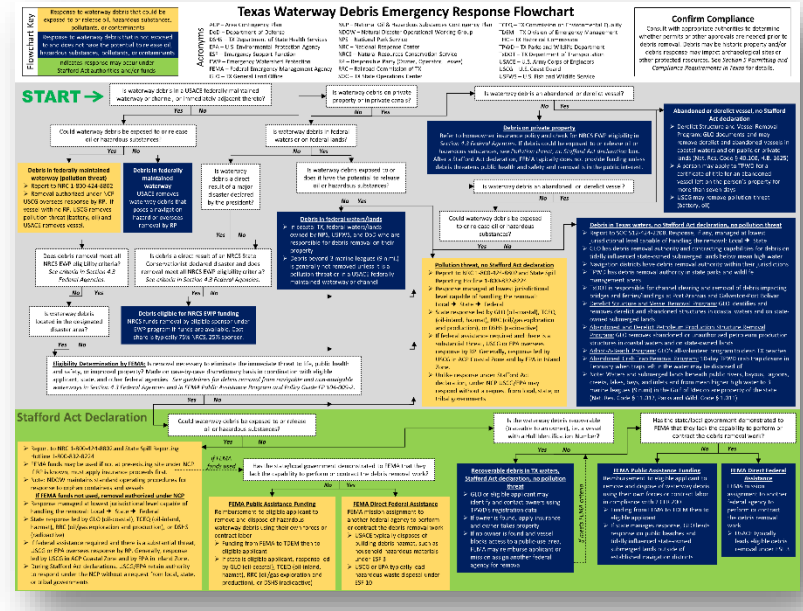
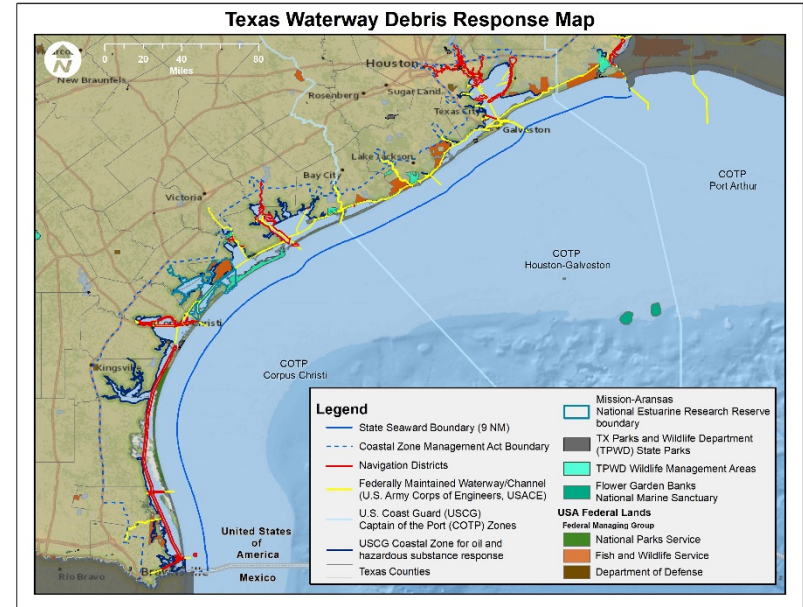
III. Roles, Responsibilities, and Jurisdictions

IV. Permitting and Compliance Requirements

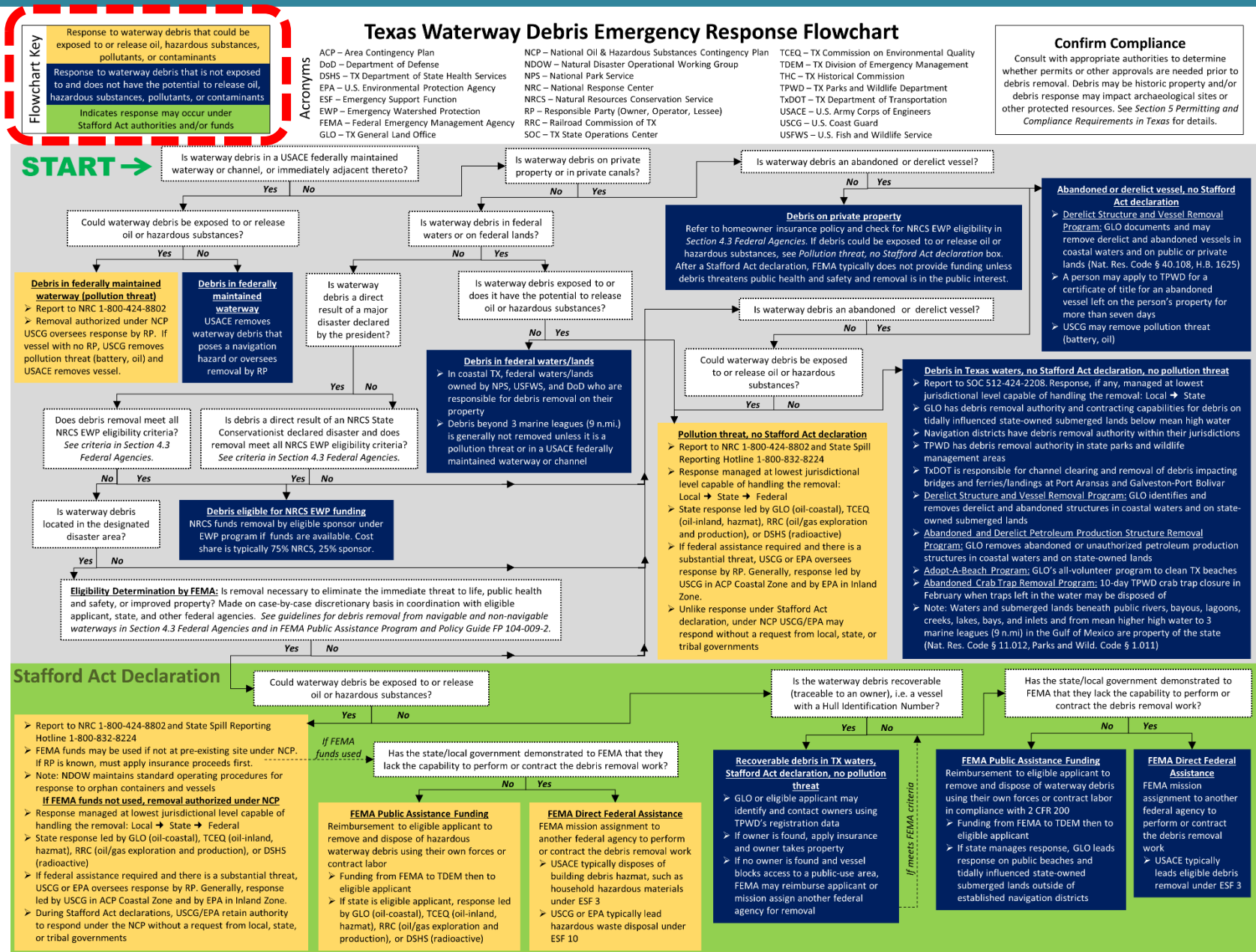
V. Challenges, Needs, and Recommended Actions

VI. Response Capabilities

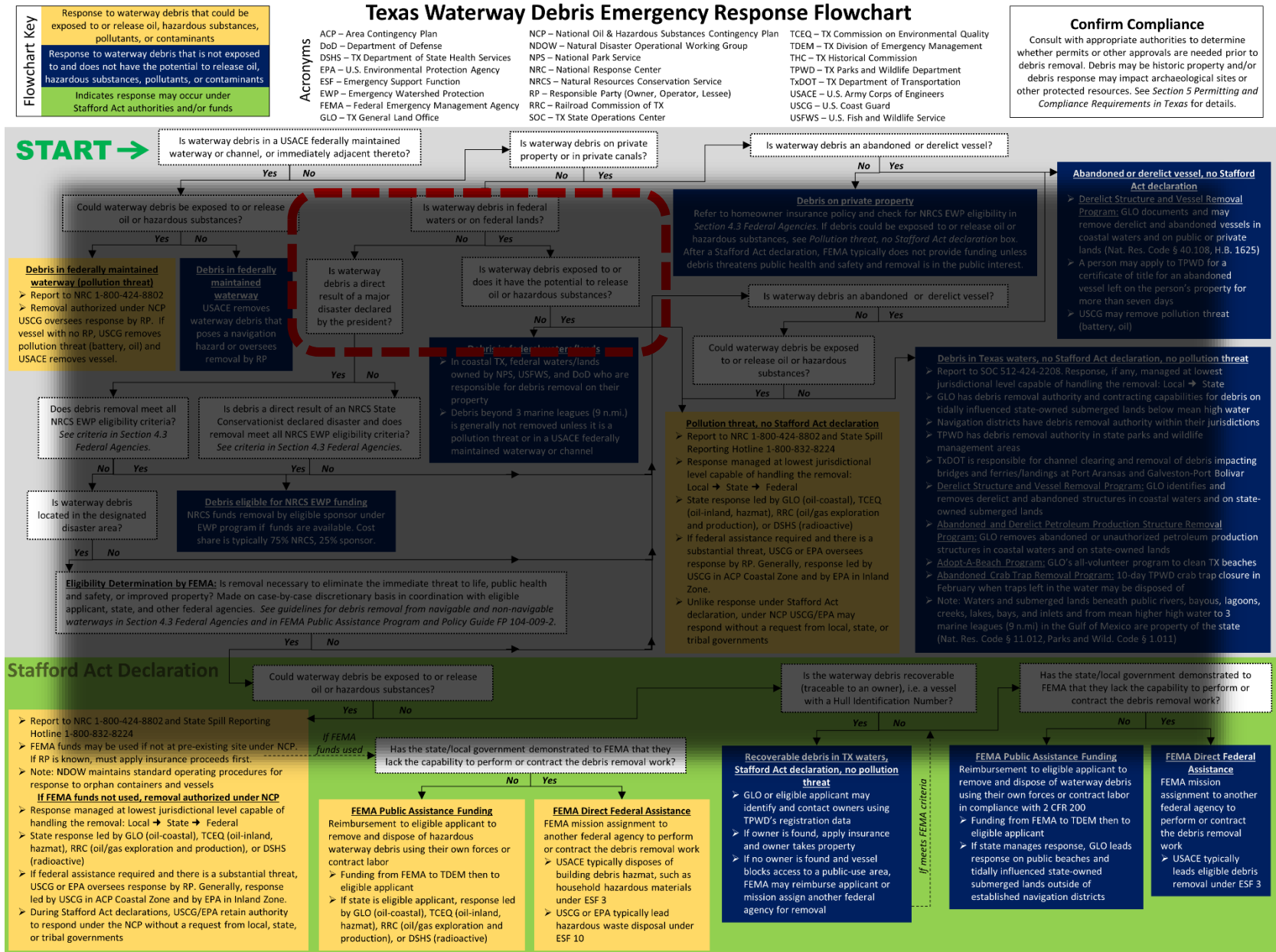
VII. Contact Information



Texas Response Flowchart

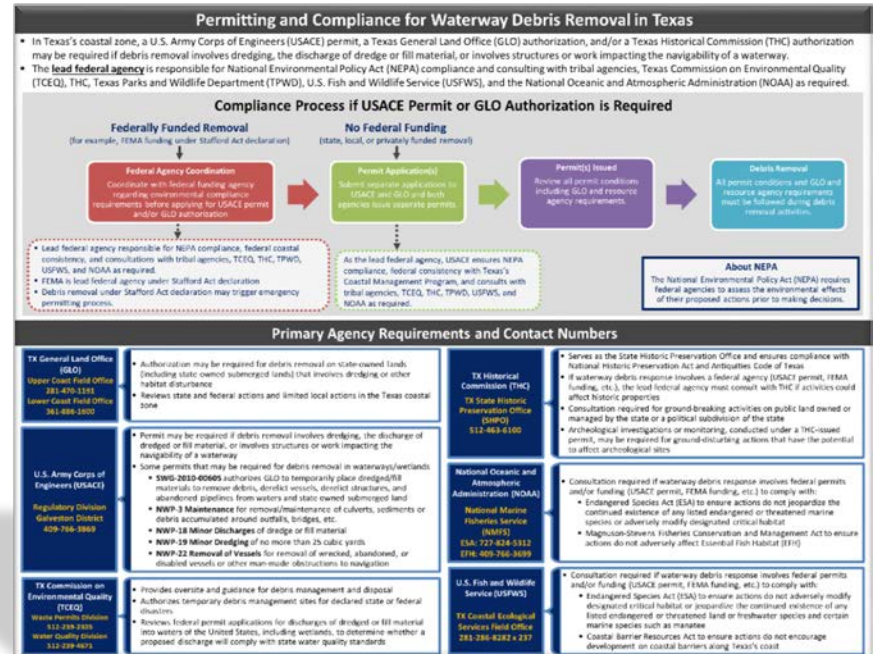


Texas Response Flowchart



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	Local				State					Federal					
Yes (Y) - Verified In-house Capability	Chambers County Sheriff's Office	Port of Cape Fear Authority	Port Freeport	Port Sanitary-Nor District	GLO	BRC, OF & Gas Division	TMC	TPWD, Coastal Fisheries	UTMS/ Mission-Areas NERR	FEMA Region 6 ¹	NOAA	NPS, Padre Island National Seashore	NRCS ²	USACE ³	
Cont. (C) - Contracted capability															
Technology	Aerial photography and video		Yes		Y	C					Yes			Yes	
	Remote sensing (LIDAR)					C					Yes			Yes	
	Sub-Surface Detection: Side scan, Single-beam, or Multi-beam sonar	Cont.	Yes		Y	C	Yes	Yes	Cont.		Yes			Y C	
Equipment	Aircraft				Cont.						Yes				
	Heavy equipment: Barge, self-loading barge, crane, barge-mounted crane, environmental clamshell dredge, excavator				Cont.										
	Remotely Operated Vehicle (ROV)										Yes				
	Specialized equipment for working in sensitive habitats or accessing remote/challenging areas		Yes		Cont.							Yes ⁴		Yes	
	Unmanned Aerial Vehicle (UAV)/ Surveillance drone with FAA trained operator	Yes		Yes		Yes		Yes	Yes		Yes			Yes	
	Vessels	Yes	Yes	Yes ⁵		Yes		Yes	Yes	Yes	Yes	Yes ⁶		Yes	
	Debris modeling expertise (volume, transport, hindcasting, etc.)				Cont.					Yes		Yes		Yes	
	Dedicated waterway/marine debris staff (responders, response team, coordination, etc.)	Y	C			Y	C		Yes	Yes		Yes	Yes		Yes
	Dive support (scientific, technical, commercial, etc.)											Yes ⁷			
	Environmental or cultural resource expertise (location of sensitive areas, endangered species present, etc.)		Yes			Yes		Yes	Yes	Yes	Yes ⁸	Yes	Yes	Yes	Yes
Workflow/Procedure	Geographic Information System (GIS) mapping and	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	



Response Capabilities

		Local				State				
Yes (Y) - Verified In-house 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
Cont. (C) - Contracted capability										
Technology	Aerial photography and video			Yes		Y	C			
	Remote sensing (LIDAR)						C			
	Sub-Surface Detection: Side scan, Single-beam, or Multi-beam sonar		Cont.	Yes		Y	C		Yes	Yes
Equipment	Aircraft					Cont.				
	Heavy equipment: Barge, self-loading barge, crane, <u>knuckleboom crane</u> , environmental clamshell dredge, excavator					Cont.				
	Remotely Operated Vehicle (ROV)									
	Specialized equipment for working in sensitive habitats or			Yes		Cont.				

Technology * Equipment * Workforce/Expertise * Logistics

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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 Wiatrel, Emergency Management Support Team	512-239-1514	christopher.wiatrel@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
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 Borgeas, State Marine Archeologist	512-463-9505	amy.borgeas@thc.texas.gov
		State and Federal Review (inshore and inland debris)	Bill Martin, Archeologist and Reviewer	512-463-5867	bill.martin@thc.texas.gov
	History Programs	Capability: Drones	Arlie McKee, Archeologist and Reviewer	-	arlie.mckee@thc.texas.gov
		State and Federal Review (aboveground resources)	Caitlin Brashear, Historian	512-463-5851	caitlin.brashear@thc.texas.gov



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Field Reference Guide



Next Steps



Hurricane Ike
Credit: NOAA

Next Steps

- Distribute publication announcement
- Support **incorporation of content** into other local, state, or regional plans and trainings
- Conduct **exercises and drills**
- Ongoing maintenance



Questions?

All guides can be found online at:

<https://marinedebris.noaa.gov/emergency-response/marine-debris-emergency-response-guides>



Storm surge damage caused by Hurricane Ike
Bolivar Peninsula, September 2008



Some Definitions...

Marine debris (NOAA definition)

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))

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.



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