



# Regional Response Planning



## Marine Debris Regional Response Planning

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NOAA's Marine Debris Program

Regional Response Team Region VI Meeting  
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# Overview

## 1. Background

- NOAA's Marine Debris Program
- Regional Response Planning Project

## 2. Project Status

- State Overview
- Plan Development Process

## 3. Response Plan Contents

## 4. Next Steps





# What is Marine Debris?

Any solid man-made material

**Directly**  
(from a ship or  
ocean platform)



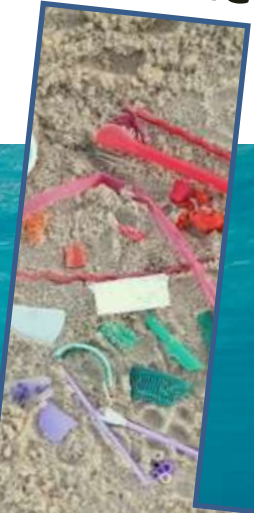
**Indirectly**  
(storm drains,  
tourism, etc.)



**Intentionally  
disposed**



**Unintentionally  
abandoned**



into our marine environment



# NOAA Marine Debris Program Overview

Established in **2006** by Congress as the federal lead for marine debris

## 5 Program Pillars:

- 1) Research
- 2) Emergency Response
- 3) Prevention
- 4) Regional Coordination
- 5) Removal

**Vision:** the global ocean and its coasts free from the impacts of marine debris

**Mission:** to investigate and prevent the adverse impacts of marine debris



# Regional Coordination



# Legislative Mandates

- Identify, determine sources of, assess, prevent, reduce, and remove marine debris
- Provide national and regional coordination
- Reduce adverse impacts of lost and discarded fishing gear
- Conduct outreach and education

Address “severe marine debris events”





# Program Pillars

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*Near Dog River, AL, Credit: DISL*

EMERGENCY RESPONSE



*Debris from Hurricane Katrina*

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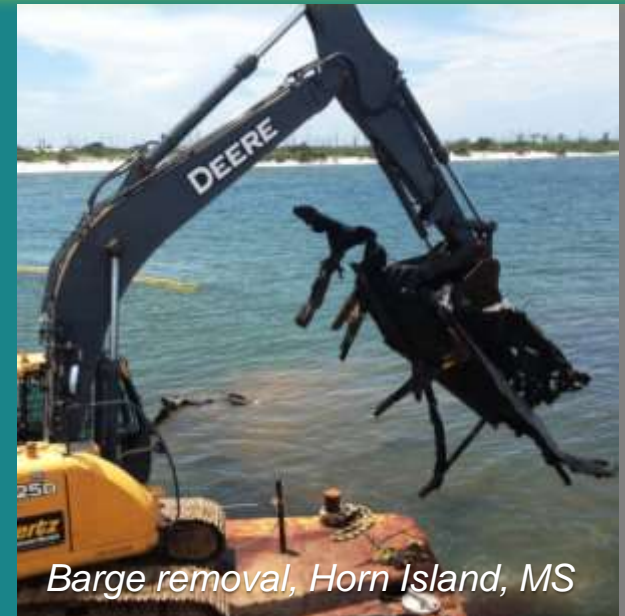


*Watching unmanned watercraft*



*Regional workshop*

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*Barge removal, Horn Island, MS*

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# Emergency Response

- Debris can threaten **navigation, natural resources, and human safety**
- Responded to **4 extreme weather events**
- Response guides for Alabama, Florida, North Carolina, South Carolina, Mississippi, Georgia, and the Pacific Northwest
- Response plan for **Japanese Tsunami Marine Debris**







# MDP: Response History

## 2005-2012: Case-by-case

- Hurricanes Katrina and Rita (2005)
- American Samoa Tsunami (2009)
- Japan Tsunami (2011)
- Super Storm Sandy (2012)

A screenshot of the Gulf of Mexico Marine Debris Project Web Site. The page features a navigation menu on the left, a header with logos for NOAA, the U.S. Coast Guard, and other agencies, and a main content area with a map of the Gulf of Mexico. The map shows survey status for various states, with Louisiana, Mississippi, and Alabama highlighted in yellow to indicate that sonar surveys are complete. The text "Gulf of Mexico" is visible at the bottom of the map area.

Navigation menu items:

- Home
- Mapping and Data
  - Home
  - Map
  - Data
- Other Content
  - Home
  - Map
  - Data

Survey Status

- Sonar survey complete



# MDP: Response History

## 2012: MDP Reauthorization

- Includes specific language on response mandate

## 2014: Response Planning

- Internal: Developing a response framework and list of core services
- External: Working with relevant agencies to create Regional Response Guides







# Response Planning Project Goal

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

Note: Project only specifically addresses “acute” debris incidents, such as disaster debris, and may not apply to chronic marine debris issues







# Project Objectives

1. Develop actionable **response and recovery guides** for emergency marine debris incidents in coastal states.

*Consolidate waterway response information into a single document using information from existing plans, programs and agency authorities*

2. Conduct marine debris response exercises/drills to test guides and identify gaps in response.

*Stand-alone exercises or as injects in larger response drills*



## Project Objectives (cont'd)

3. Support the **integration of response guide content** into other existing local, state, federal or regional plans and trainings.

*Such as U.S. Coast Guard Area Contingency Plans, Emergency Management Plans, State Disaster Debris Management Plans, etc.*



# Project Status

State Overview &  
Plan Development Process





# State Overview



- Emergency Response Guide
- Coordination Plan
- Tsunami Marine Debris Plan
- Draft Guide Under Review
- Response Guide In Progress
- Passive Research



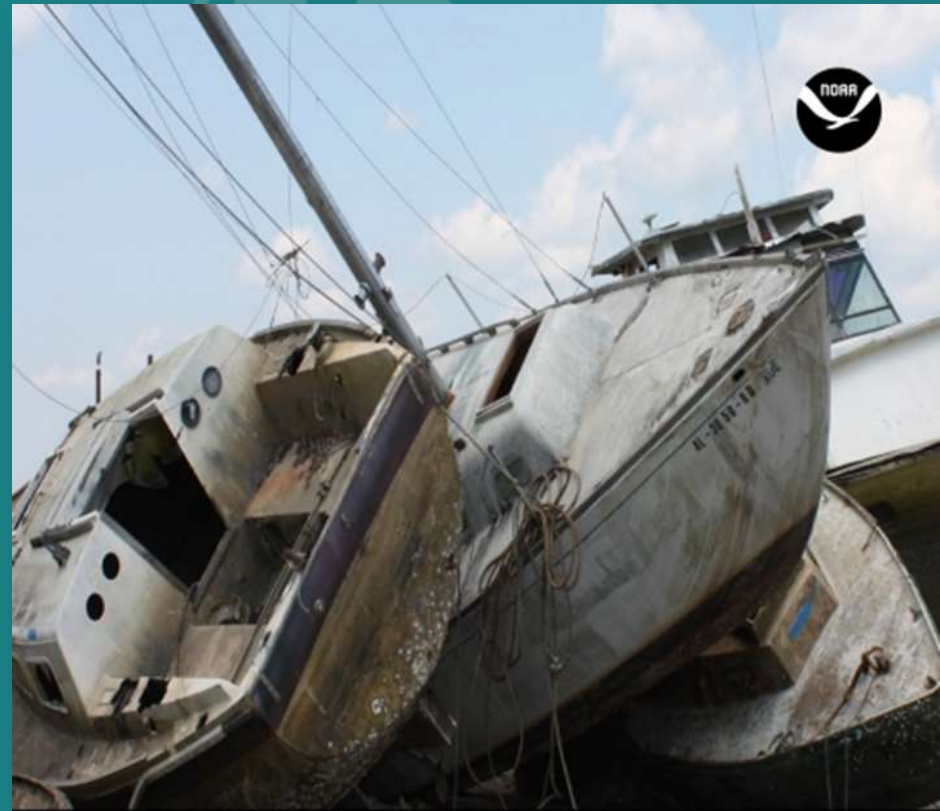
# Response Guide Contents





# Guide Contents

1. Introduction
2. Background Risk: Foreseeable Incidents and Debris Types
3. Agency Roles, Responsibilities, and Jurisdictions
4. Permitting and Compliance Requirements
5. Gaps and Recommended Actions
6. Agency Response Capabilities
7. Agency Contact Information



## ALABAMA INCIDENT WATERWAY DEBRIS RESPONSE *COMPREHENSIVE PLAN*

NOAA Marine Debris Program  
National Oceanic and Atmospheric Administration  
U.S. Department of Commerce  
May 2015





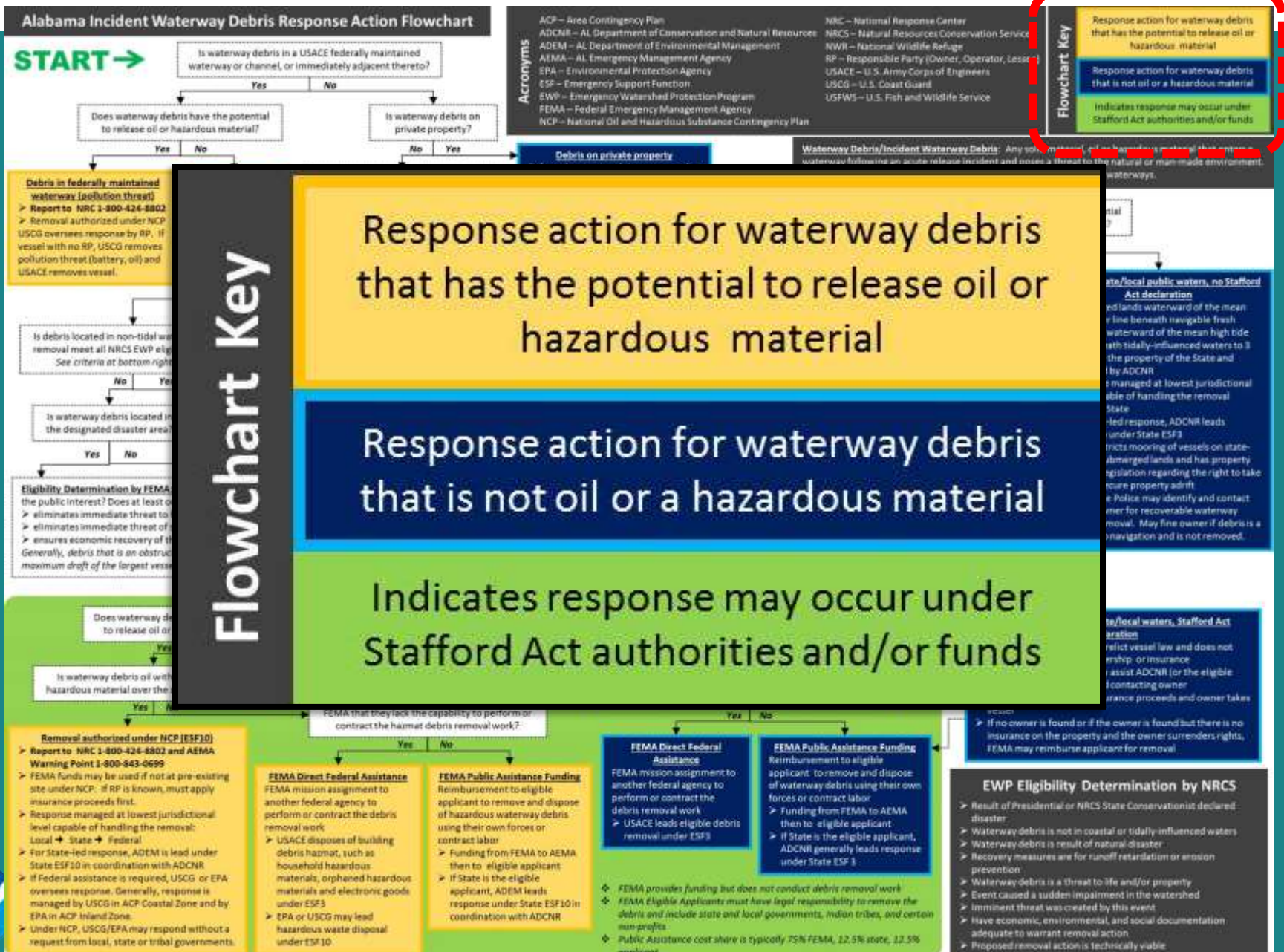
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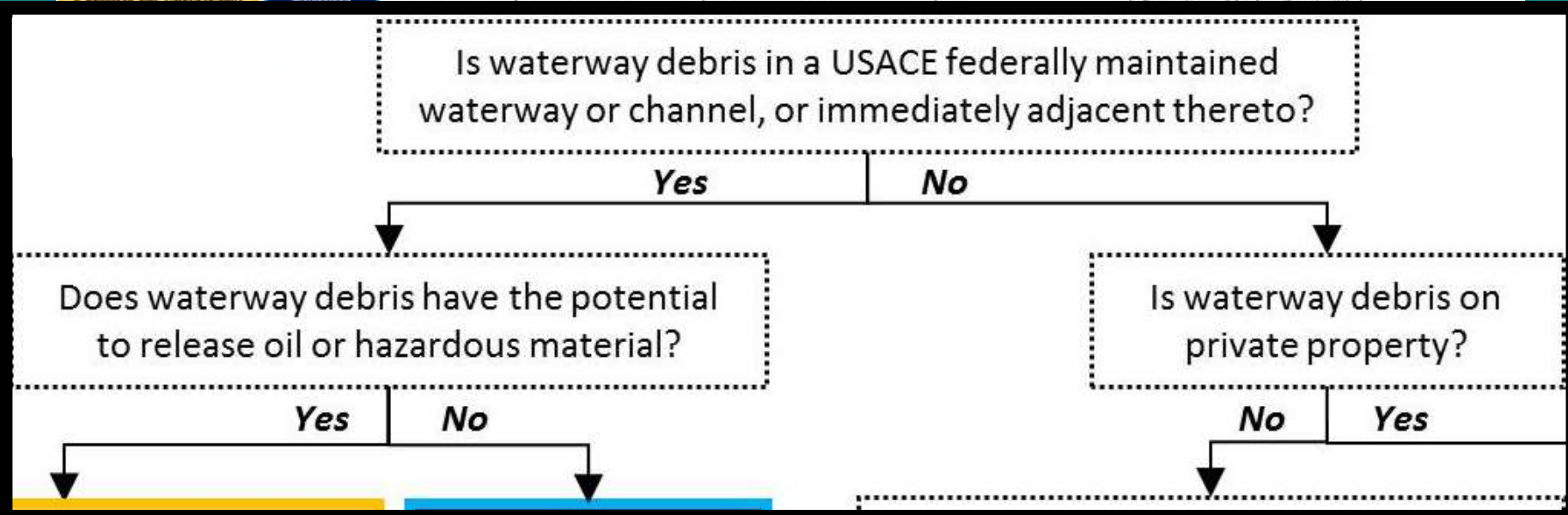
*Field Reference Guide*

# Alabama Incident Waterway Debris Response Action Flowchart





# Alabama Incident Waterway Debris Response Action Flowchart



Is waterway debris oil with a visible sheen or hazardous material over the reportable quantity?

Yes / No

**Removal authorized under NCP [ESF10]**

- Report to NRC 1-800-426-6802 and AEMA Warning Point 1-800-943-0699
- FEMA funds may be used if not at pre-existing site under NCP. If RP is known, must apply insurance proceeds first.
- Response managed at lowest jurisdictional level capable of handling the removal: Local → State → Federal
- For State-led response, ADEM is lead under State ESF10 in coordination with ADCNR
- If Federal assistance is required, USCG or EPA oversees response. Generally, response is managed by USCG in ACP Coastal Zone and by EPA in ACP Inland Zone.
- Under NCP, USCG/EPA may respond without a request from local, state or tribal governments.

Has the state/local government demonstrated to FEMA that they lack the capability to perform or contract the hazard debris removal work?

Yes / No

**FEMA Direct Federal Assistance**

FEMA mission assignment to another federal agency to perform or contract the debris removal work

- USACE disposes of building debris hazard, such as household hazardous materials, orphaned hazardous materials and electronic goods under ESF3
- EPA or USCG may lead hazardous waste disposal under ESF10

**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 AEMA then to eligible applicant
- If State is the eligible applicant, ADEM leads response under State ESF10 in coordination with ADCNR

Has the state/local government demonstrated to FEMA that they lack the capability to perform or contract the debris removal work?

Yes / No

**FEMA Direct Federal Assistance**

FEMA mission assignment to another federal agency to perform or contract the debris removal work

- USACE leads eligible debris removal under ESF3

**FEMA Public Assistance Funding**

Reimbursement to eligible applicant to remove and dispose of waterway debris using their own forces or contract labor

- Funding from FEMA to AEMA then to eligible applicant
- If State is the eligible applicant, ADCNR generally leads response under State ESF3

FEMA provides funding but does not conduct debris removal work

FEMA Eligible Applicants must have legal responsibility to remove the debris and include state and local governments, Indian tribes, and certain non-profits

Public Assistance cost share is typically 75% FEMA, 22.5% state, 2.5% applicant

Response can be initiated only by or through:

- Alabama Marine Police may assist ADCNR (or the eligible applicant) in identifying and contacting owner
- If owner is found, apply insurance proceeds and owner takes vessel
- If no owner is found or if the owner is found but there is no insurance on the property and the owner surrenders rights, FEMA may reimburse applicant for removal

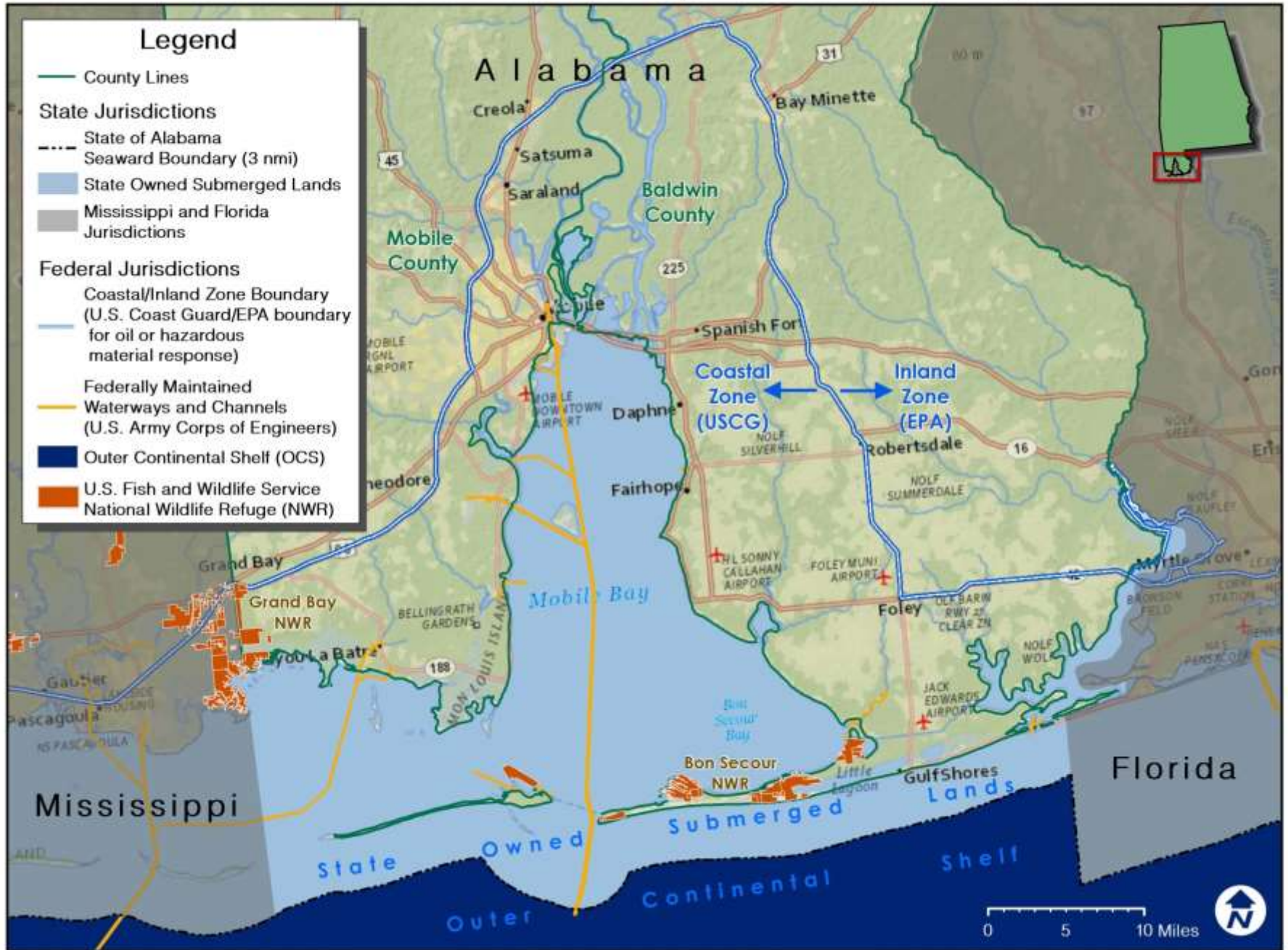
**EWP Eligibility Determination by NRCS**

- Result of Presidential or NRCS State Conservationist declared disaster
- Waterway debris is not in coastal or tidally-influenced waters
- Waterway debris is result of natural disaster
- Recovery measures are for runoff retardation or erosion prevention
- Waterway debris is a threat to life and/or property
- Event caused a sudden impairment in the watershed
- Imminent threat was created by this event
- Have economic, environmental, and social documentation adequate to warrant removal action
- Proposed removal action is technically viable





# Alabama Incident Waterway Debris Response Map



## Permitting and Compliance for Waterway Debris Removal in Alabama






- U.S. Army Corps of Engineers (USACE) permit is required for debris removal within waterways and wetlands. One or multiple permits may be needed.
- In Mobile and Baldwin Counties, permit applications are jointly reviewed by USACE and Alabama Department of Environmental Management (ADEM). A "Joint Application and Notification" can be downloaded at the USACE, Mobile District, Regulatory Division webpage.
- It is the responsibility of the **lead Federal agency** to ensure compliance with National Environmental Policy Act (NEPA), federal coastal consistency, and consult with tribal and resource agencies including Alabama Historical Commission (AHC), U.S. Fish and Wildlife Service (USFWS) and NOAA's National Marine Fisheries Service (NMFS).

# Process to Stay in Compliance



## Agency Requirements and Legislation Details

# Agency Contact Information and Details

<p><b>U.S. Army Corps of Engineers (USACE)</b></p> <p>Mobile District Regulatory Division 251-690-2658</p>	<ul style="list-style-type: none"> <li>Permit(s) required for debris response/removal work within waterways and wetlands</li> <li>ALG-04 Debris Removal from waterway for navigational or drainage purposes</li> <li>NWP-3 Maintenance of navigability (includes dredging for debris accumulated around navigational structures in wetlands)</li> <li>NWP-22 Removal of Vessels for removal of wrecked, abandoned, or disabled vessels or other man-made obstructions to navigation</li> <li>NWP-37 Emergency Watershed Protection &amp; Rehabilitation for work done under NRCS's Emergency Watershed Protection Program</li> </ul>	<p><b>Alabama Historical Commission (AHC)</b> 334-241-3888</p>	<ul style="list-style-type: none"> <li>Consultation with State Historic Preservation Office required if waterway debris response involves Federal permits and/or funding (USACE permit, FEMA funding, etc.) to comply with National Historic Preservation Act</li> <li>AHC reviews whether activities affect historic or cultural sites included in or eligible for the National Register of Historic Places</li> </ul>		
<p><b>Alabama Department of Environmental Management (ADEM)</b></p> <p>Coastal Program 251-304-1176 Warning Point 1-800-843-0699 Air Division 334-271-7879</p>	<ul style="list-style-type: none"> <li>In Mobile and Baldwin Counties, ADEM Coastal Program simultaneously reviews permit applications</li> <li>Disposal of hazardous waste must be coordinated with ADEM</li> </ul>	<p><b>U.S. Fish and Wildlife Service (USFWS)</b></p> <p>Alabama Ecological Services Office 334-241-3831</p>	<ul style="list-style-type: none"> <li>Consultation required if waterway debris response involves Federal permits and/or funding (USACE permit, FEMA funding, etc.) to comply with:                     <ul style="list-style-type: none"> <li>Endangered Species Act (ESA) to ensure actions do not adversely affect threatened or endangered species or critical habitat for land and water</li> <li>Antiquities Act to ensure actions do not encourage or discourage the establishment of national monuments</li> </ul> </li> </ul>		
					



# Capabilities Matrix

Yes - In-house Capability		Baldwin County EMA	Mobile County EMA	ADCNR	ADEM	ASPA	GSA	USACE Mobile District	USFWS	FEMA Region IV <sup>1,2</sup>	NOAA		
Contract - Contracted capability													
Technology	GIS mapping and plotting of imagery	Yes	Yes	Yes	Yes	-	Yes	Yes <sup>2</sup>	-	Yes	Yes		
	Side scan sonar	-	Contract	Yes	-	-	-	Contract	-	-	Yes		
	Multi-beam sonar	-	-	-	-	-	-	Contract	-	-	Yes		
	Single-beam sonar	-	-	Yes	-	-	-	Contract	-	-	Yes		
	Remote sensing capabilities	-	-	-	-	-	Yes	Contract	-	-	Yes		
Manpower	Volunteer manpower	Contract	Contract	Yes	-	-	-	-	Yes	-	-		
	Technical expertise for removal operations	-	-	Yes	-	-	-	Yes <sup>2</sup>	-	Yes	Yes		
	Environmental expertise (location of sensitive areas, endangered species present, etc.)	-	-	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes <sup>1,3</sup>		
Equipment	Yes - In-house Capability		Baldwin County EMA	Mobile County EMA	Technology							Yes	
	Contract - Contracted capability											Yes	
	GIS mapping and plotting of imagery		Yes	Yes								-	
	Side scan sonar		-	Contract								-	
	Multi-beam sonar		-	-								-	
	Single-beam sonar		-	-								-	
	Remote sensing capabilities		-	-								Yes <sup>1,4</sup>	
	Facility suitable for establishing an operations center		Yes	Yes		Yes <sup>2</sup>	-	Yes	-	Yes	-	-	Yes
	Docks for wet storage of vessels		-	-		Yes <sup>2</sup>	-	Yes	-	-	-	-	-
	Staging area for dry storage of vessels		Yes	-		Yes <sup>4</sup>	-	Yes	-	Yes	Yes	-	Yes
Pre-designated landfill/disposal sites		Yes	-	-	-	-	-	-	-	-	-		
Pre-event contracts and staged agreements in place		Yes	-	-	-	-	-	Yes	-	-	-		
Contract authority and oversight capabilities		Yes	-	Yes	-	Yes	-	Yes	-	-	Yes		
Land with water access to offload (has not been evaluated for suitability or officially pre-designated)		Yes	-	Yes <sup>5</sup>	-	Yes	-	-	-	-	-		
Pre-designated staging, off-loading and special handling areas (already evaluated for suitability)		Yes	-	-	-	-	-	-	-	-	-		
Other logistical support, including fuel, housing, food, etc.		Yes	Yes	Yes <sup>5</sup>	-	-	-	-	-	-	-		



# FY17 Response work







## Hurricane Harvey Landfall- August 25, 2017

### Joint Field Office in Austin

- Helped set up FEMA-led Marine Debris Task Force
- Led development of “Texas Waterway Debris Emergency Response Flowchart”
- Worked with Texas GLO to set-up tracking of potential marine debris targets in ERMA

### Continuing work

- Participating in FEMA-led Marine Debris Task Force meetings
- Tracking potential marine debris issues and needs



# HARVEY





## Guidance and Coordination

- Florida Marine Debris Emergency Response Guide
- NGS Imagery / ERMA
- Natural Resource Advisor Coordinator at the Incident Command Post – Miami
- Tracking potential marine debris targets in ERMA

## Continuing work

- Continue to serve as Natural Resource Advisor Coordinator in FL, as needed
- Tracking potential marine debris issues in FL, PR, & USVI







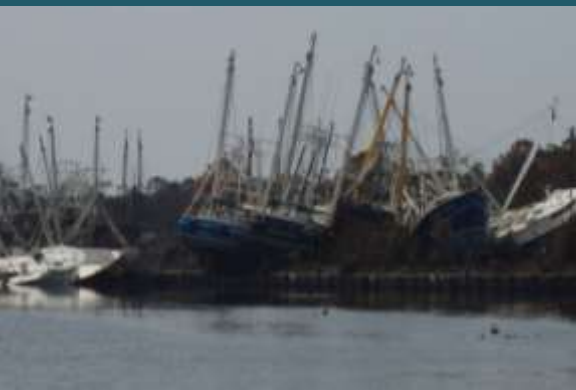
# Regional Response Planning



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Questions?





# Sources of Marine Debris



## Ocean-Based

- Commercial and recreational fishing
- Offshore oil and gas
- Cargo ships
- Abandoned and derelict vessels



## Land-Based

- Littering
- Dumping
- Poor waste management practices
- Storm water discharge
- Extreme weather events





# Plastics

- Common form of marine debris that are **non-biodegradable**
- Estimated **8 million metric tons** of plastic enter the ocean every year
- Break into small pieces (called **microplastics**)





# Microplastics

- Plastics **smaller than 5mm** in size
- Microplastics come from **multiple sources**
  - Microbeads, microfibers, capsules, preproduction pellets
  - Degradation of larger plastics
- Ingestion by animals
- Chemical impacts







# Derelict Fishing Gear

- **Commercial** or **recreational** fishing gear that is lost, abandoned, or discarded
- Made with **synthetic materials** and metal
- Includes:
  - Nets
  - Lines
  - Crab/lobster pots



# Impacts

- Wildlife Entanglement
- Ingestion
- Vessel Damage and navigational hazard
- Invasive species
- Economic loss:
  - Tourism
  - Recreation
  - Fisheries
  - Vessel Damage
- Ghost fishing
- Habitat destruction







# Removal

- **Community-based** marine debris removal grants
- Grants support removal projects **nationwide**
- Recipients include NGOs and local governments
- Funded more than 100 removal projects since 2006, with **more than 5,500 metric tons of debris** removed







# Prevention

- Outreach and Education partnerships
  - National outreach partnerships – **about 10 per year**
  - Zoos, museums, and aquariums
- School Activities
  - **Annual art contest** for K-8<sup>th</sup> grades
  - Curriculum, educational activities, and teacher workshops





# Research

- Joint projects with academia, NOAA partners
- **Microplastics quantification**
- Fishing gear assessment and modification
- Economic impacts
- Plastics and chemicals
- **Shoreline monitoring and assessment at over 180 sites**
- Detection

