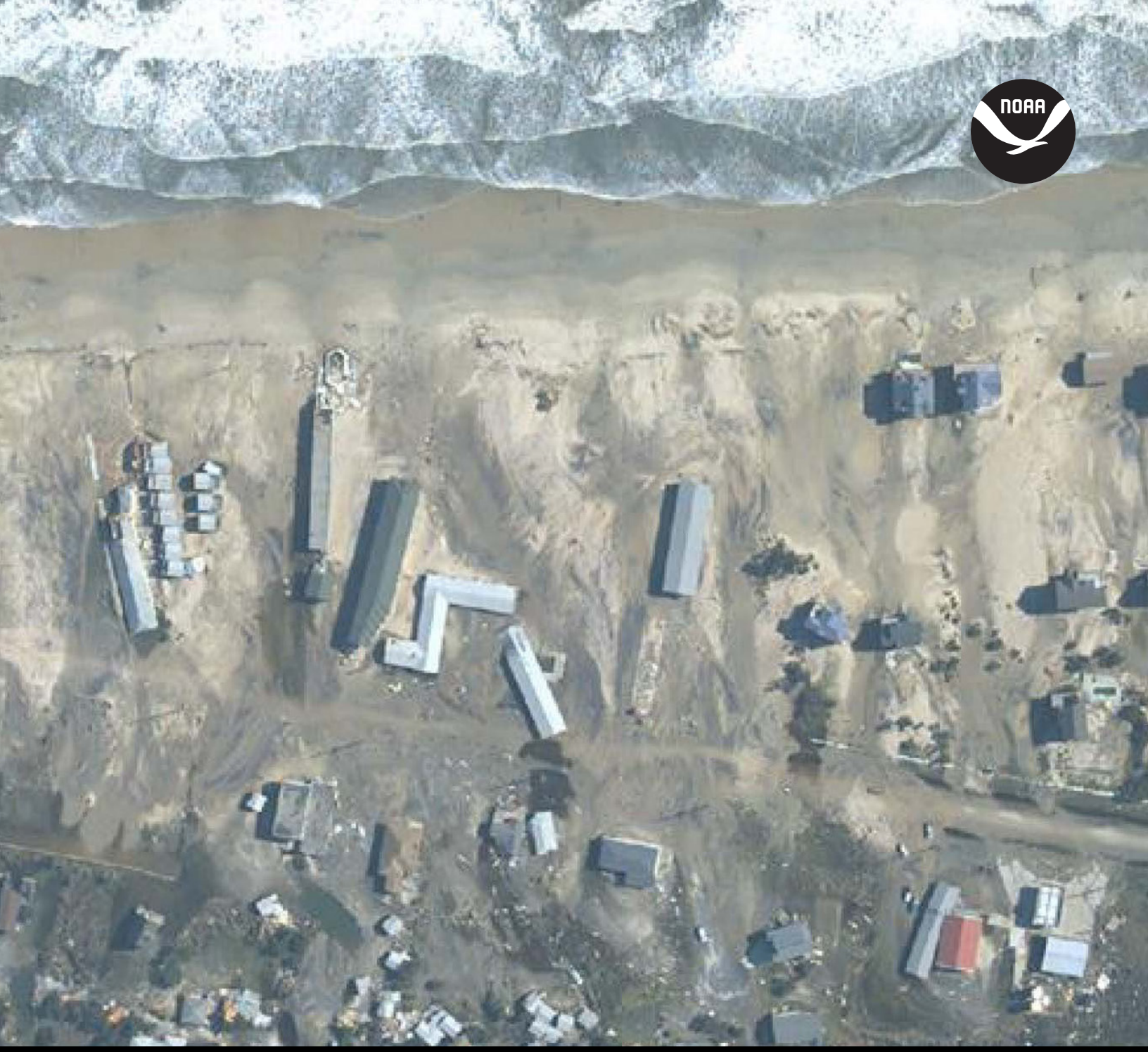

North Carolina Incident Waterway Debris Response Guide: Comprehensive Guidance Document

NOAA Marine Debris Program
National Oceanic and Atmospheric Administration
U.S. Department of Commerce
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List of Acronyms

ACP	Area Contingency Plan
ADV	Abandoned and Derelict Vessel
AEC	Area of Environmental Concern
AGOL	Arc GIS Online
APHIS	Animal, Plant and Health Inspection Service
APNEP	Albemarle-Pamlico National Estuarine Partnership
BMP	Best Management Practice
BSEE	Bureau of Safety and Environmental Enforcement
CAMA	Coastal Area Management Act
CBRA	Coastal Barrier Resources Act
CBRN	Chemical, Biological, Radiological and Nuclear-Contaminated Debris
CBRS	John H. Chafee Coastal Barrier Resources System
C&D	Construction and Demolition Debris
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (Superfund)
DACS	Department of Agriculture and Consumer Services
DEQ	North Carolina Department of Environmental Quality
DHS	Department of Homeland Security
DoD	Department of Defense
ECP	Emergency Conservation Program (of FSA)
EFH	Essential Fish Habitat
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESF	Emergency Support Function
ESI	Environmental Sensitivity Index Map
ESO	Ecological Services Office (of USFWS)
EWP	Emergency Watershed Protection
FEMA	Federal Emergency Management Agency
FSA	Farm Service Agency
FOSC	Federal On-Scene Coordinator
GIS	Geographic Information Systems
GRP	Geographic Response Plan
HHM	Household Hazardous Material
HHW	Household Hazardous Waste
LIDAR	Light Detection and Ranging
MOA	Memorandum of Agreement
NC	North Carolina
NCDOC	North Carolina Department of Commerce
NCDOT	North Carolina Department of Transportation
NCEM	North Carolina Emergency Management
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NGO	Non-governmental Organization
NHC	New Hanover County

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
NRT	Navigation Response Team (of NOAA)
NWR	National Wildlife Refuge (of USFWS)
OCS	Outer Continental Shelf
ORR	Office of Response and Restoration (of NOAA)
RCRA	Resource Conservation and Recovery Act
ROV	Remotely Operated Vehicle
RP	Responsible Party
SEPA	State (or North Carolina) Environmental Policy Act
SERT	State Emergency Response Team
SHPO	State Historic Preservation Office
SSC	Scientific Support Coordinator
SUPSALV	U.S. Navy Supervisor of Salvage and Diving
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USFWS	U.S. Fish and Wildlife Service
USMC	U.S. Marine Corps
WRC	North Carolina Wildlife Resources Commission

Definitions

Abandoned Vessel – A vessel that has been relinquished, left, or given up by the lawful owner without the intention to later resume any right or interest in the vessel (N.C. Gen. Stat. § 75A-2(1)). Within the coastal zone, an abandoned vessel is one that meets any of the following:

1. A vessel that is moored, anchored, or otherwise located for more than 30 consecutive days in any 180 consecutive-day period without permission of the dock owner.
2. A vessel that is in danger of sinking, has sunk, is resting on the bottom, or is located such that it is a hazard to navigation or is an immediate danger to other vessels.

Shipwrecks, vessels, cargoes, tackle, and other underwater archeological remains that have been in place for more than 10 years shall not be considered abandoned vessels and shall not be removed under the provisions of this section without the approval of the Department of Natural and Cultural Resources, which is the legal custodian of these properties pursuant to G.S. 121-22 and G.S. 121-23.

Acute waterway debris incident – An incident that results in the release of large amounts of waterway debris. For example, 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. For North Carolina, the ACP is developed by U.S. Coast Guard District 5, Sector North Carolina (U.S. Coast Guard [USCG], 2012).

Area of Environmental Concern (AEC) – A geographical area in North Carolina of natural importance designated and managed by the North Carolina Department of Environmental Quality. The AEC may be easily destroyed by erosion or flooding; or it may have environmental, social, economic or aesthetic values that make it valuable to the state (N.C. Gen. Stat. § 113A-113).

Chemical, Biological, Radiological and Nuclear-Contaminated Debris (CBRN) – Debris contaminated by chemical, biological, radiological, or nuclear materials (Federal Emergency Management Agency [FEMA], 2016).

Coastal county – See definition for Coastal area

Coastal area – The counties that (in whole or in part) are adjacent to, adjoining, intersected by or bounded by the Atlantic Ocean or any coastal sound. The counties designated as coastal-area counties under this subdivision as of July 1, 2012, are Beaufort, Bertie, Brunswick, Camden, Carteret, Chowan, Craven, Currituck, Dare, Gates, Hertford, Hyde, New Hanover, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Tyrrell, and Washington (N.C. Gen. Stat. § 113A-103(2)).

Coastal zone (according to the ACP) – U.S. Coast Guard area of responsibility for response under the National Contingency Plan, with geographic boundaries defined in the U.S. Coast Guard Sector North Carolina Area Contingency Plan (ACP) (USCG, 2012).

Coastal zone (under North Carolina Coastal Management Program) – North Carolina's coastal zone includes the 20 counties that in whole or in part are adjacent to, adjoining, intersected by or

bounded by the Atlantic Ocean or any coastal sound(s)(National Oceanic and Atmospheric Administration [NOAA], 2012).

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, 2016).

Electronic waste (e-waste) – Electronics that contain hazardous materials, such as computer monitors, televisions, cell phones, and batteries. These products may contain minerals and chemicals that require specific disposal methods (FEMA, 2016).

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 local governments, federally recognized Indian tribal governments and certain private non-profits that serve a public function and have the legal responsibility to remove the debris (FEMA, 2016).

Eligible debris – Debris that is a direct result of a Presidential declared major disaster, in the designated disaster area and whose removal is in the public interest (i.e., eliminating the immediate threat of significant damage to improved public or private property or ensuring economic recovery of the affected community to the benefit of the community at large;). Debris includes, but is not limited to, vegetative debris, construction and demolition debris, sand, mud, silt, gravel, rocks, boulders, and vehicle and vessel wreckage. Debris removal from waterways that is necessary to eliminate the immediate threat to life, public health and safety, or improved property is considered eligible (FEMA, 2016).

Emergency (state definition) –An occurrence or imminent threat of widespread or severe damage, injury, or loss of life or property resulting from any natural or man-made accident, military, paramilitary, weather-related, or riot-related cause (N.C. Gen. Stat § 166A-19.3 (6)).

Emergency (FEMA 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 (NOAA 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 (National Oceanic and Atmospheric Administration [NOAA], n.d.-a).

Emergency (USACE definition) – 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 Support Function (ESF) – Mechanism for grouping functions most frequently used to provide federal support to states and federal-to-federal support, both for declared disasters and emergencies under the Stafford Act and for non-Stafford Act incidents. The state of North Carolina

also adopts the federal ESFs and assigns corresponding state agencies to each ESF in the North Carolina Emergency Operations Plan as prepared by North Carolina Emergency Management (North Carolina Emergency Management [NCEM], 2012).

Environmental Sensitivity Index (ESI) Map – Maps produced by the National Oceanic and Atmospheric Administration that are a compilation of information about coastal shoreline sensitivity, biological resources, and human use resources. This information is used in planning to create cleanup strategies before an accident occurs so that authorities are prepared to take action in the event of such a spill (NOAA, 2016d).

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 (FEMA, 2016)

Hazard to navigation (USCG definition) – 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 (RCRA) and contains properties that make it potentially harmful to human health or the environment. A RCRA hazardous waste is a waste that appears on one of the four hazardous waste lists or exhibits at least one of the following four characteristics: ignitability, corrosivity, reactivity, or toxicity (FEMA, 2016).

Household Hazardous Waste/Material (HHW/HHM) – Hazardous products and materials that are used and disposed of by residential consumers, including some paints, stains, varnishes, solvents, pesticides, and other products containing volatile chemicals that catch fire, react, or explode under certain circumstances, or that are corrosive or toxic (FEMA, 2016).

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, nor are vacant lots, forests, heavily wooded areas and unused areas (44 C.F.R. § 206.221(d)).

Incident waterway debris – See definition for Waterway debris.

Infectious waste – Waste capable of causing infections in humans and can include animal waste, human blood and blood products, medical waste, pathological waste, and discarded sharps (needles, scalpels, or broken medical instruments) (FEMA, 2016).

Inland zone (according to the ACP) – U.S. Environmental Protection Agency (EPA) area of responsibility for response under the National Contingency Plan, with geographic boundaries for North Carolina defined in the U.S. Coast Guard Sector North Carolina Area Contingency Plan (ACP) (USCG, 2012).

Litter Law – It is unlawful for any person, firm or corporation to place, deposit, leave or cause to be placed, deposited or left, either temporarily or permanently, any trash, refuse, rubbish, garbage, debris, rubble, scrapped vehicle or equipment or other similar waste material in or upon any body of navigable water in North Carolina (N.C. Gen. Stat §76-40(a)).

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 the Stafford 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 (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)).

Mean high water – The average of all the high water heights observed over the National Tidal Datum Epoch (NOAA, 2000). The mean high water line is also used as the seaward boundary of all property within the state of North Carolina, not owned by the state, which adjoins the ocean (N.C. Gen. Stat. 3 § 77-20).

National Contingency Plan (NCP) – Federal regulation (National Oil and Hazardous Substances Pollution Contingency Plan) that defines the authorities and responsibilities of designated federal agencies for responding to releases of oil, pollutants, and hazardous substances (U.S. Environmental Protection Agency [EPA], 2016).

Natural waterway – A waterway that is not improved or maintained (FEMA, 2016).

Navigable waters (state definition) – All waters which are navigable in fact (N.C. Gen. Stat. § 146-64. (4))

Navigable waterways (federal definition) – 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. § 329.4, 33 C.F.R. § 2.36). Because the Federal Emergency Management Agency only funds waterway debris removal when another federal agency does not have authority to fund the activity, their definition for navigable waterways (non-federally maintained) includes public waterways that are currently used for commercial and recreational navigation traffic and are not federally maintained or under the authority of a federal agency (FEMA, 2016).

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 (OCS) – The submerged lands, subsoil, and seabed, lying between the seaward extent of the States' jurisdiction and the seaward extent of federal jurisdiction. The OCS is subject to the jurisdiction and control of the federal government (Bureau of Ocean Energy Management, n.d.).

Pollutant or contaminant – Includes, but not be 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)).

Putrescent debris – Debris that will decompose or rot, such as animal carcasses and other fleshy organic matter (FEMA, 2016).

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 (NOAA definition) - 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 can be deposited after floods, landslides, winds and storm surges on improved public property and rights-of-way (FEMA, 2016).

Stafford Act – The Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, provides the authorities and funding for federal support to state and local entities in responding to Presidential major disaster and emergency declarations (U.S. Department of Homeland Security [DHS], 2013).

State-owned submerged lands – See definition for submerged lands.

State Reserves – Protected sites along North Carolina (NC)'s coast established for long-term research, education and stewardship. The ten reserve sites are made up of both State Coastal

Reserves and National Estuarine Research Reserves (NERR). Both sites are managed through the NC Coastal Reserve & National Estuarine Research Reserve program within the NC Division of Coastal Management, a division of the NC Department of Environmental Quality (DEQ). The National Estuarine Research Reserves are managed in partnership with the National Oceanic and Atmospheric Administration (N.C. Gen. Stat. § 113A-129.2).

State seaward boundary – North Carolina's seaward boundary is out 3 nautical miles into the Atlantic Ocean (N.C. Gen. Stat. § 113A-103(2)).

Stormwater - The flow of water which results from precipitation and which occurs immediately following rainfall or a snowmelt (N.C. Gen. Stat. § 143-213 (16a)).

Submerged lands – State lands which lie beneath:

a. Any navigable waters within the boundaries of the state, or
b. The Atlantic Ocean to a distance of three nautical miles seaward from the coastline of the state (N.C. Gen. Stat. § 146-64 (7)).

Tidally influenced waters (Tidal waters) – Areas subject to the ebb and flow of the tide.

Vegetative debris – Whole trees, tree stumps, tree branches, tree trunks, and other leafy material. May be recyclable or have salvage value (FEMA, 2016).

Vehicles and Vessels (FEMA definition) – 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, 2016).

Vessel (State definition) – Every description of watercraft or structure, other than a seaplane on the water, used or capable of being used as a means of transportation or habitation on the water (N.C. Gen. Stat. § 75A-2(5))

Waterway debris (Incident waterway debris) – Any solid material, including but not limited to vegetative debris and debris exposed to or that has the potential to 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, clothes dryers, and water heaters. May contain ozone-depleting refrigerants, mercury, or compressor oils that must be removed before disposal. May be recyclable or have salvage value (FEMA, 2016).

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 North Carolina. The term acute waterway debris incident is used to generally 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 the state of North Carolina.

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 also synthesized in a one-page reference handout.

Because all incidents are different, in reality 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 guide seeks to capture the most likely response structure and actions with the understanding that flexibility is an inherent component of an effective response.

The *North Carolina Incident Waterway Debris Response Guide: Comprehensive Guidance Document* (*Guide*) serves as a complete reference for North Carolina incident waterway debris response. 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 North Carolina's coastline. For purposes of 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, North Carolina stakeholders have identified it as a common debris stream of concern following disasters in the state. To account for both marine debris and vegetative debris in this document, the term waterway debris is used and includes any solid material, including but not limited to vegetative debris and debris exposed to or that has the potential to 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. This *Guide* specifically addresses waterway debris resulting from acute episodic incidents, such as disaster debris, and may not apply to chronic waterway debris issues.

1.3 *Guide* Maintenance

This *Guide* is a living document and is 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 federal, state, and local stakeholders. Contact information will be verified annually, and the *Guide* will undergo a formal review every three years. The *Comprehensive Guidance Document* and subsequent versions will be posted on NOAA's Marine Debris Division website at http://marinedebris.noaa.gov/ (National Oceanic and Atmospheric Administration [NOAA], 2016a).

2. Incident Waterway Debris in North Carolina

2.1 Foreseeable Waterway Debris Incidents in North Carolina

North Carolina's coastline, dominated by over 300 miles of barrier islands, is vulnerable to severe weather events and associated waterway debris. Flooding and erosion from waves and high water driven by coastal storms and hurricanes have the potential to generate large amounts of debris that may enter sounds, estuaries and wetlands (NCEM, 2012). Twenty of North Carolina's 100 counties are considered coastal, bordering either the Atlantic Ocean or the second largest estuarine complex in the lower 48 states: the Albemarle-Pamlico estuary (Albemarle-Pamlico National Estuarine Partnership [ANEP], 2012). The Albemarle-Pamlico watershed is home to over 30% of North Carolina's population and several ecologically sensitive aquatic and terrestrial species (APNEP, 2012). Over half of the juvenile fish habitat along the east coast is located within the estuary (Burkholder et al., 2004). Recreational and commercial fishing industries contribute a large portion to the economy, supporting over 17,000 jobs for the saltwater fishing industry alone (Crosson, 2010).

Tourism along North Carolina's coast is critical to the state's economy, with over 43 million tourists travelling to the shoreline each year (Coastal Carolina, 2014). In 2012, the economic impact of tourism in Albemarle-Pamlico's four ocean side counties exceeded $1.37 billion (North Carolina Department of Commerce [NCDOC], 2014). These coastal counties and the barrier islands that extend east into the Atlantic Ocean are especially vulnerable to the impacts of severe weather and associated waterway debris. Between 1960 and 2008, North Carolina's coast was ranked second only to Florida in number of hurricane strikes along the east coast (Fig. 1, US Census Bureau, 2010).

Figure 1. Number of hurricanes between 1960 and 2008 along the eastern coast and Gulf of Mexico coasts of the United States (US Census Bureau, 2010).

Natural hazards are the prominent reason for releases of waterway debris in North Carolina. The likelihood of an occurrence (Table 1) is based on historical observations and a qualitative measure of vulnerability and exposure for each hazard (NCEM, 2013). The most common natural hazards are flooding, tropical cyclones, severe weather and tornadoes. Although maritime disasters are not considered in NCEM (2013), they are a type of anthropogenic hazard that could result in a release of incident waterway debris. Detailed hazard risk analyses and impacts at the local level can be found in the *North Carolina Hazard Mitigation Plan* and in county mitigation strategies (NCEM, 2013). A corresponding risk description for select hazards is included in Appendix 8.1.

Table 1. Frequency of occurrence of natural hazards that could result in the release of waterway debris in North Carolina (NCEM, 2013). The following definitions are used for frequency of occurrence for any given year; Highly Likely: 75% or greater chance, Likely: 50%-75% chance, Possible: 10%-50% chance, Unlikely: Less than 10% chance

		Frequency of Occurrence			
		Highly Likely	Likely	Possible	Unlikely
Hazard	Flooding	X			
	Hurricanes	X			
	Severe Thunderstorm	X			
	Severe Winter Weather	X			
	Earthquakes		X		
	Tornado			X	
	Dam Failure				X
	Tsunami				X

2.2 Prominent Debris Types

An agency's authority to respond to incident waterway debris depend on both the location and type of debris. Therefore, response to debris in North Carolina 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 (FEMA, 2016) include the following:

- Chemical, Biological, Radiological, and Nuclear-Contaminated (CBRN)
- 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. Anthropogenic hazards are highly variable in both quantity and type of waterway debris released.

Table 2. Typical debris streams for different types of hazard incidents. Data adapted from FEMA (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 North Carolina waterways. For example, protected undeveloped areas near Alligator River National Wildlife Refuge are likely to generate vegetative debris, while developed properties near Wilmington are likely to generate C&D debris. A land cover map for North Carolina is depicted in Figure 2 and illustrates the distribution of land use types in the state, including developed lands. Increased development in the floodplain may increase the likelihood of waterway debris following a natural hazard event.

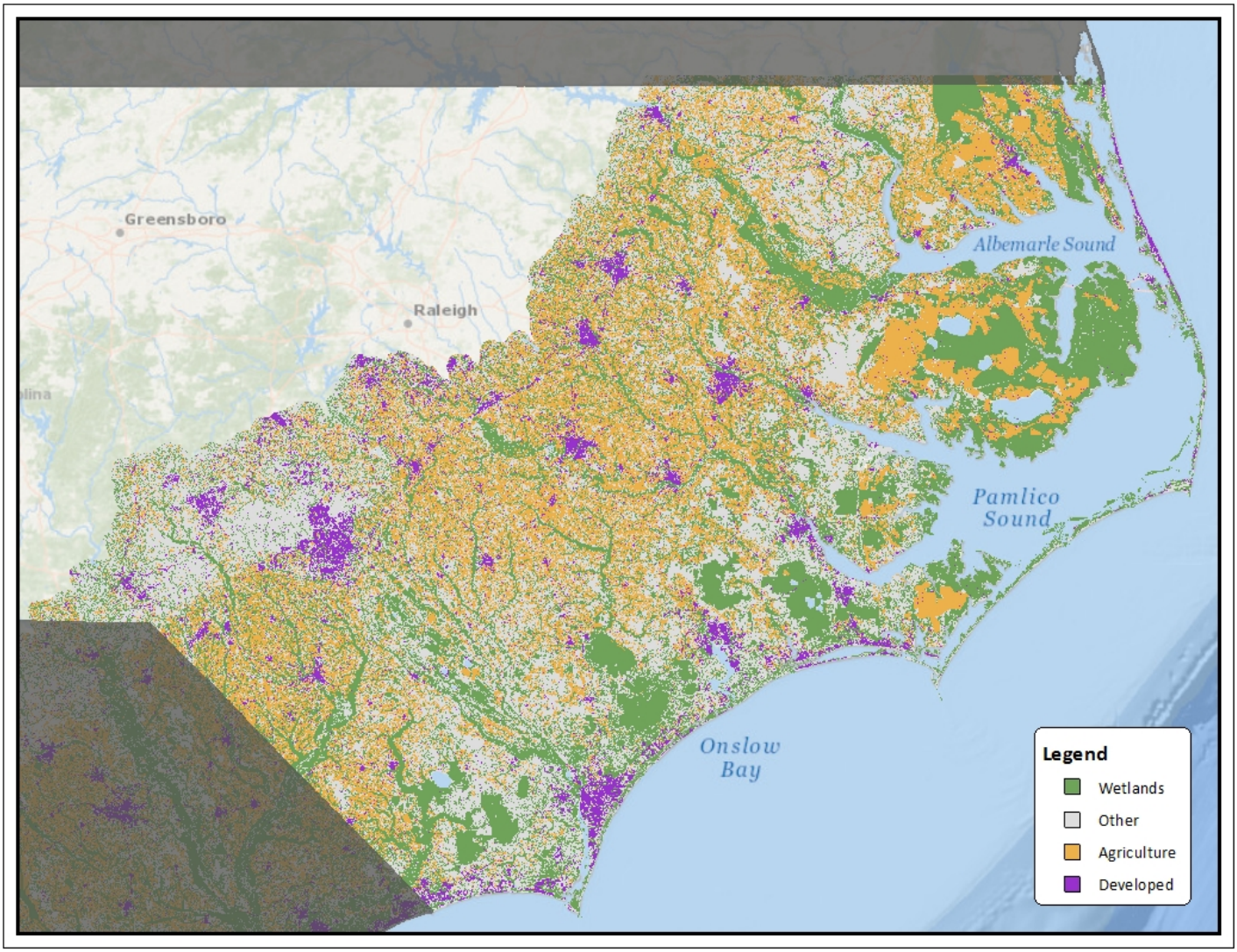


Figure 2. Land cover map for the state of North Carolina (NOAA, 2016c).

3. North Carolina Incident Waterway Debris Response Flowchart

The "North Carolina Incident Waterway Debris Response Flowchart" included in this section provides a visual one-page representation of agency 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 is exposed to or has the potential to 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.

For detailed information regarding individual organization roles, responsibilities and authorities, see Section 4.

DRAFT: NC Incident Waterway Debris Response Flowchart

Acronyms

- ADV – Abandoned and Derelict Vessel
- ACP – Area Contingency Plan
- DEQ – NC Department of Environmental Quality
- DoD – U.S. Department of Defense
- EOC – Emergency Operations Center
- EPA – U.S. Environmental Protection Agency
- ESF – Emergency Support Function
- EWP – Emergency Watershed Protection Program
- FEMA – Federal Emergency Management Agency
- NCDOT – NC Department of Transportation
- NCEM – NC Emergency Management
- NGO – Non-governmental Organization
- NCP – National Oil & Hazardous Substance Contingency Plan
- NPS – National Park Service
- NRC – National Response Center
- NRCS – Natural Resources Conservation Service
- RP – Responsible Party (Owner, Operator, Lessee)
- USACE – U.S. Army Corps of Engineers
- USCG – U.S. Coast Guard
- USFWS – U.S. Fish and Wildlife Service
- WRC – NC Wildlife Resources Commission

Flowchart Key

- Response to waterway debris that is exposed to or has the potential to 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

Waterway Debris/Incident Waterway Debris: Any solid material, including but not limited to vegetative debris and debris exposed to or that has the potential to 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.

Note: Before waterway debris removal work can begin, agencies responsible for removal must meet certain permitting and compliance requirements. Please see section 4 or refer to the permitting one-pager for more information.
Note: If debris is an animal carcass, contact your local SSC for proper channels to report a potential protected species

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

- **Yes** → Is waterway debris exposed to or does it have the potential to 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 generally leaves in place. USACE may remove vessel
  - **No** → **Debris in federally maintained waterway**
    USACE may remove debris, or oversee removal by RP. If a hazard to navigation, USCG will mark debris or remove in some cases.
- **No** → Is waterway debris along a DOT Ferry Route?
  - **Yes** → **Debris in NCDOT Ferry Route**
    NCDOT will remove debris
  - **No** → Is waterway debris on private property?
    - **No** → Is waterway debris in federal waters (beyond 3 n. mi.) or on federal lands?
      - **No** → Is waterway debris a direct result of a major disaster declared by the President?
        - **Yes** → Is debris located in non-tidal waters, and does removal meet all NRCS EWP eligibility criteria? *See criteria at bottom right of page.*
          - **No** → Is waterway debris located in the designated disaster area?
            - **Yes** / **No** → **Eligibility Determination by FEMA:** Made on case-by-case discretionary basis in coordination with eligible applicant, state and other federal agencies. Is removal necessary to eliminate the immediate threat to human lives, public health and safety or improved property?
              - *For navigable waterways, debris removal is limited to a max depth of 2 feet below the low tide draft of the largest vessel that utilized the waterway prior to the incident. Any debris below this zone is not eligible unless it is necessary in order to remove debris extending upward into an eligible zone*
              - *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 property during the occurrence of a 5-year flood (See FEMA Recovery Policy FP 104-009-2)*
          - **Yes** → **Debris eligible for NRCS EWP funding**
            NRCS funds removal by eligible sponsor under EWP program. Cost share is typically 75% NRCS, 25% sponsor.
        - **No** → Is debris a direct result of an NRCS State Conservationist declared disaster, located in non-tidal waters, and does removal meet all NRCS EWP eligibility criteria? *See criteria at bottom right of page.*
          - **Yes** → **Debris eligible for NRCS EWP funding**
            NRCS funds removal by eligible sponsor under EWP program. Cost share is typically 75% NRCS, 25% sponsor.
          - **No** → **Eligibility Determination by FEMA:** Made on case-by-case discretionary basis in coordination with eligible applicant, state and other federal agencies. Is removal necessary to eliminate the immediate threat to human lives, public health and safety or improved property?
      - **Yes** → Is debris exposed to or does it have the potential to release oil or hazardous substances?
        - **No** → **Debris in federal waters or on federal lands**
          - Federal lands: Federal lands on North Carolina's coast are owned by NPS, USFWS, and DoD who are responsible for debris removal on their lands. These agencies may coordinate with local or state governments to remove debris.
          - Federal waters: No federal agency actively removes waterway debris in federal waters unless it is a pollution threat or in a USACE federally maintained waterway or channel.
        - **Yes** → Is debris exposed to or does it have the potential to release oil or hazardous substances?
          - **Yes** → **Pollution threat, no Stafford Act declaration**
            - Report to state EOC 1-800-858-0368 and NRC 1-800-424-8802
            - Response managed at lowest jurisdictional level capable of handling the removal: Local → State → Federal
            - If state-led response, DEQ Divisions of Air Quality and Water Resources lead response
            - If federal assistance required, USCG or EPA oversees response by RP. Generally, response led 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
          - **No** → **Debris in North Carolina waters, no Stafford Act declaration, no pollution threat**
            - Response managed at lowest jurisdictional level capable of handling the removal: Local → State
            - WRC Law Enforcement or DEQ Marine Patrol may lead investigation to identify RP for abandoned vessels
            - For state-led response, NCEM leads response under ESF-3
            - NC Coastal Federation manages a grant funded project for removal of abandoned crab pots in state waters during closed season under authority of DEQ Marine Patrol
            - NGOs and non-profit organizations may have volunteer groups able to assist with debris removal
            - Note: Most submerged lands waterward of the mean high water line beneath navigable fresh water or tidally-influenced waters are property of the state. Title to these lands is held by the NC Department of Administration with delegated authority to DEQ to maintain activities that utilize these lands
  - **Debris on private property**
    Refer to homeowner insurance policy and check for EWP eligibility at bottom right of page. State or local agencies may remove debris with a "Right of Entry" Agreement.

Stafford Act Declaration

Is waterway debris exposed to or does it have the potential to release oil or hazardous substances?

- **Yes** →
  - Report to state EOC 1-800- 858-0368 and NRC 1-800-424-8802
  - FEMA funds may be used if not at pre-existing site under NCP. If RP is known, must apply insurance proceeds first.

  If FEMA funds are not used, removal authorized under NCP
  - Response managed at lowest jurisdictional level capable of handling the removal: Local → State → Federal
  - If state-led response, DEQ Divisions of Air Quality and Water Resources lead response
  - If federal assistance required, USCG or EPA oversees response by RP. Generally, response led by USCG in ACP Coastal Zone and by EPA in ACP Inland Zone.
  - Under the NCP, USCG/EPA retain authority to respond 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 hazmat debris removal work?
  - **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, orphaned hazardous materials and electronic goods under ESF-3
      - EPA or USCG typically lead hazardous waste disposal under ESF-10
  - **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 NCEM then to eligible applicant
      - If state is eligible applicant, DEQ leads response and provides scientific support
- **No** → Is the waterway debris recoverable (traceable to an owner), i.e. a vessel with a Hull Identification Number (HIN)?
  - **No** → Has the state/local government demonstrated to FEMA that they lack the capability to perform or contract the debris removal work?
    - **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
    - **No** →
      - **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 NCEM then to eligible applicant
  - **Yes** → **Recoverable debris in North Carolina waters, Stafford Act declaration, no pollution threat**
    - The state of North Carolina does not have any legislation or programs that regulate the removal or disposal of ADVs
    - WRC Law Enforcement may assist eligible applicant with identifying and contacting owner
    - If owner is found, apply insurance and owner takes vessel or they may receive a littering ticket by WRC Law Enforcement
    - 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

- *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, 12.5% state, 12.5% applicant*

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
- Public and private landowners may be eligible if represented by a project sponsor that is a political subdivision of the state or a Tribal council

4. Roles and Responsibilities

In North Carolina, response to an acute waterway debris incident is generally managed at the lowest jurisdictional level capable of handling the response and removal (NCEM, 2012). Each county in North Carolina is responsible for emergency management within its jurisdictional boundaries and will conduct emergency operations according to established plans and procedures. Should a disaster or emergency be beyond the capabilities of local government, requests for state and/or federal assistance are made to the State Emergency Operations Center (EOC).
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, volunteer, and non-governmental organizations.

For a visual one-page representation of agency roles and responsibilities, see "North Carolina Incident Waterway Debris Response Flowchart" in Section 3. For a map defining agency jurisdictional authorities, see Section 4.6. Additionally, response capabilities of each agency and corresponding agency contact information can be found in Appendix 8.2 and 8.3, respectively.

4.1 Local Agency Responsibilities

- May act as first responders to reports of waterway debris incidents which impact any of North Carolina's 20 coastal counties and their municipalities
- County emergency management agencies are the lead local agencies for emergency planning, preparedness, mitigation, response, and recovery
    - Following a Stafford Act declaration, local emergency management agency offices serve as the first point for contact with the North Carolina Emergency Management (NCEM)
    - Maintain Multi-Hazard Mitigation, Emergency Operations and Debris Management plans for relevant coastal counties
    - Provide resource coordination and support to on-scene incident commanders during response and recovery, including the ability to request external resources from NCEM
- Each county is responsible for setting up and maintaining disaster debris staging sites or permitted landfills through North Carolina Department of Environmental Quality (DEQ) Waste Management Division
- Following a Stafford Act declaration, may serve as eligible applicant and receive public assistance reimbursement funding from the Federal Emergency Management Agency (FEMA) to perform or contract waterway debris removal
    - As an applicant, responsible for determining ownership of recoverable waterway debris, providing a staging area for temporary storage of recoverable waterway debris, and demonstrating the pre-disaster condition and capacity of waterways.
- Following any disaster that causes a sudden watershed impairment that threatens lives or property, may apply to the National Resources Conservation Service (NRCS) State Conservationist for Emergency Watershed Protection (EWP) program assistance to perform or contract waterway debris removal. See "North Carolina Incident Waterway Debris Response Flowchart" in Section 3 for EWP eligibility criteria

Select local authorities:

- Counties enforce ordinances within public trust areas (Gen. Stat § 153A-145.3)
- North Carolina Emergency Operations Plan (NCEM, 2012), which includes a list of enabling legislation
- Removal and disposal of abandoned and junked motor vehicles; abandoned vessels (N.C. Gen. Stat § 153A-132)

4.2 State Agency Responsibilities

Select State Authorities:

- North Carolina Emergency Operations Plan (NCEM, 2012), which includes a list of references and authorities

North Carolina Department of Administration

State Property Office

- Owns and manages all state-owned lands, including submerged lands

Select North Carolina Department of Administration Authorities:

- Department of Administration given control of certain State lands; general powers. (N.C. Gen § 146-2)

North Carolina Department of Agriculture and Consumer Services (DACS)

- Serves as a support agency for ESF-3 Public Works and Engineering and ESF-10 Oil and Hazardous Materials Response
- Assists in damage assessment of state-owned property
- Assists with debris removal from state-owned property
- Provides personnel and equipment to assist in coordination of debris removal when environmental concerns exist
- Provides food and lodging for debris removal personnel as requested
- Assists North Carolina Department of Transportation (NCDOT) in obtaining permits and clearances for disposal of debris and wreckage
- Provides air, water and land transportation as requested by the State Emergency Response Team (SERT)
- Provides a liaison to and carries out technical consultations with U.S. Fish and Wildlife Service (USFWS) and other appropriate federal fish and wildlife specialists
- Provides watercraft and crews to support enforcement of U.S. Coast Guard (USCG)-initiated restrictions on waterway use
- Plans and coordinates actions to dispose of animal carcasses following a disaster
- Responsible for early detection, control and/or eradication of harmful exotic plant pest and noxious weed introductions

Agronomic Services Division

- Assesses the impact of oil on water sources used for irrigation
- Serves as technical resource for recovery of damaged agricultural lands and turf
- Analyzes soil samples, plant, solution and irrigation water samples, and animal, municipal and industrial wastes and makes recommendations designed to protect natural resources

Emergency Programs Division

- Provides veterinary expertise and coordinates animal response support as requested by NCDEQ
- Provides SERT Liaison as needed

Forest Service Division

- Provides equipment and personnel for decontamination operations, including earth moving and potential wash down
- Provides air and land transportation
- May provide equipment suitable for debris removal activities in coordination with county government
- May perform emergency debris removal of vegetative debris on lands other than state property when requested and approved through the State EOC (New Hanover County [NHC], 2005)

Water Resources Branch

- Provides technical assistance and best management practices (BMPs) to ensure suitable water quality

Soil and Water Conservation Division

- Provides coordination and support for 96 soil and water conservation districts in the state
- Manages the Stream Debris Removal Project, which may provide funding for debris removal from inland waterways and storm drains to prevent flooding of crop lands

Select DEQ Authorities:

- North Carolina Forest Service designated as emergency response agency (N.C. Gen § 166A-19.77)

North Carolina Department of Environmental Quality (DEQ)

- Serves as a support agency for both ESF-3 Public Works and Engineering and ESF-10 Oil and Hazardous Materials Response, as outlined in the state's Emergency Operations Plan (NCEM, 2012)
- Provides damage assessment for beaches, shores, parks and recreation areas as support agency under state ESF-3 Public Works and Engineering
- Has regulatory authority for certain activities that may utilize lands submerged under navigable rivers. While DEQ regulates the activity itself, DEQ does not regulate the use of submerged lands
- Cooperates with the U.S. Army Corps of Engineers for removal processes involving any wrecked, sunken or abandoned vessel or unauthorized obstructions and encroachments in public harbors, channels, waterways, and tidewaters of the state (N.C. Gen. 3 Stat. § 143-355(b)(5))

Divisions of Air Quality and Water Resources

- Assume the lead roles in coordinating emergency response to air and water quality problems resulting from an emergency
- Provide technical assistance related to environmental concerns and enforcement authority to the State on-Scene Coordinator for spill containment and cleanup of oil and other hazardous substances

- Respond as appropriate to the spill scene, assess the extent of environmental damage and provide an on-scene liaison with NCEM to USCG or Environmental Protection Agency (EPA)
- Assert state jurisdiction and order cleanup actions if no federal official has arrived on-scene and assumed control or if the spill is outside federal jurisdiction
- Review containment and cleanup methods proposed by the responsible party (RP) if the spill is within state jurisdiction. Monitor these methods if cleanup is within federal jurisdiction.
- Provide on-scene liaison to Federal On-Scene Coordinator (FOSC) concerning state environmental policies and regulations

Division of Coastal Management

- Assesses waterway debris within Coastal Reserves and coordinates cleanup efforts
- May work in coordination with federal and local partners to remove debris and abandoned vessels from State Reserves
- Assists in technical assessment of the impact of spills and cleanup operations on the marine environment
- Assists in determining damages done to natural resources within the coastal zone
- Advises SERT concerning access points and routes least likely to harm areas of environmental concern
- Provides technical advice to SERT Leader on any issue concerning impact of spill on Coastal Reserves
- Provides liaison to SERT authorized to grant permission for response and cleanup activities and to issue any required permits within Coastal Reserves
- Coordinates with lead federal agency to determine whether proposed debris removal activities are fully consistent with the enforceable policies of the North Carolina Coastal Management Act (CAMA) Program
- Reviews U.S. Army Corps of Engineers (USACE) permit applications for consistency with CAMA Program for waterway debris removal conducted in the North Carolina Coastal Area boundary
- For additional information on the Division of Coastal Management's permitting and compliance requirements, see Section 5
- For a map of Coastal Reserves in North Carolina see Section 4.6

Division of Marine Fisheries

- In the event of an oil or hazardous material release, may provide transportation and assist in rescue missions
- Provides expert consultation in marine biology
- Marine Patrol officers monitor all coastal and inland waterways in the state
- May respond to derelict fishing gear after a severe storm and remove derelict pots during annual closed season in cooperation with North Carolina Coastal Federation
- May attempt to locate the owner of an abandoned vessel and work with Wildlife Resources Commission to pursue legal enforcement

Division of Waste Management

- Coordinates with counties and municipalities to set up, pre-approve and inspect disaster debris disposal and staging sites
    - Staging sites are set up if solid waste facilities can't directly receive wastes

- Offers quarterly trainings to local governments, public works employees and waste management officers to discuss regulations about waste burning and disposal
- Encourages local governments to have a plan in place for debris disposal
- Identifies procedures for storage of oil contaminated debris pending disposal
- Issues emergency permits for treatment, storage, disposal and transportation of debris from oil spill and associated cleanup activities

Select DEQ Authorities:

- Navigable waters; certain practices regulated. (N.C. Gen § 76-40(a)(e))
- Powers and duties of the Department (N.C. Gen. 3 Stat. § 143-355(b)(5))

North Carolina Department of Natural and Cultural Resources

Division of Historical Resources

- Serves as the State Historic Preservation Office (SHPO) and ensures compliance with the National Historic Preservation Act
- Reviews proposed debris removal activities to evaluate potential impacts to historic or cultural sites
- Serves as a support agency for ESF-10, Oil and Hazardous Materials Response, in the state's Emergency Operations Plan (NCEM, 2012)
    - Inspects spill areas to determine presence and significance of sensitive terrestrial and submerged archaeological and historical areas
    - Advises SERT Leader concerning impact of spill on known archaeological or historical sites
    - Provide liaison on-scene to:
        - Assist SERT in choosing least-impact access points and staging areas
        - Monitor cleanup activities and advise SERT concerning impact on archeological and historical sites by machinery and cleanup crews
        - Provide damage assessments
- For additional information on SHPO compliance requirements, see Section 5

Select North Carolina Department of Natural and Cultural Resources Authorities:

- Title to bottoms of certain waters and shipwrecks, etc., thereon declared to be in state (N.C. Gen. § 121-22)

North Carolina Department of Public Safety

Emergency Management Division (NCEM)

- Lead state agency for emergency planning, preparedness, mitigation, response, and recovery
- Coordination point between FEMA and state and local eligible applicants following a Stafford Act declaration
- Coordinates damage assessment and needs assessment process with local and federal assessment teams and works with counties to coordinate debris removal
- Serves as FEMA grantee and administers public assistance funding to eligible applicants
- Implements the State Emergency Operations Plan (EOP) (NCEM, 2012)
    - EOP defines the roles, responsibilities, resources and procedures necessary to ensure emergency assistance becomes available as soon as possible following an incident that exceeds local capabilities
- Maintains the State Hazard Mitigation Plan

- Maintains State Emergency Operations Center (EOC) line for reporting oil and hazardous material releases
- May dispatch personnel to assist in response and recovery at a disaster site
- State Area Coordinators act as the state liaison for local county governments and manage state assets

Select NCEM Authorities:

- Powers of the Secretary of Public Safety (N.C. Gen. § 166A-19.11)
- State emergency assistance funds (N.C. Gen. § 166A-19.41)

North Carolina Department of Transportation (NCDOT)

- Serves as a support agency for ESF-3, Public Works and Engineering, ESF-10, Oil and Hazardous Materials Response, and a primary agency for "Debris Removal Support" category within the North Carolina Emergency Operations Plan (NCEM, 2012)
- Assumes the lead role for vegetative debris removal on NCDOT-maintained right of ways during and after an emergency or disaster
- Through the Memorandum of Agreement (MOA) between NCDOT and local governments, NCDOT releases authority to local governments to pick up and dispose of storm related vegetative debris from NCDOT routes after a federal emergency declaration is made.
- Removes contaminated sand debris from state-maintained rights of way and disposes at sites approved by DEQ
- Provides SERT partners with lists of contractors/suppliers to assist in clean-up of sites outside the state-maintained right of way

Division of Ferries

- Coordinates movement of ferries through affected waterways with USCG
- Provides transportation for oil spill response personnel and equipment as needed
- In charge of dredging and debris removal along ferry routes if a hazard to ferry travel

Division of Highways

- When directed by NCEM, will develop, let, and administer contracts for the removal of oil from private roads. Such contracts will be pre-approved by NCEM prior to advertisement and award (NCEM, 2012)
- Removes debris from bridges and pylons associated with bridges

Select NCDOT Authorities:

- Responsibility of counties for upkeep, etc. (N.C. Gen. § 136-97)
- Department of Transportation to establish and maintain ferries (N.C. Gen. § 136-82)

North Carolina Wildlife Resources Commission (WRC)

- Serves as a support agency for ESF-3, Public Works and Engineering and ESF-10, Oil and Hazardous Materials Response
- Monitors game fish and wildlife (game and non-game) periodically in impacted area during and after an emergency
- Provides air, water and land transportation and may assist in rescues
- Provides consultation in wildlife management and biology

Law Enforcement Division

- May lead investigation to find responsible party (RP) for abandoned or derelict vessels (ADVs)
- May ticket abandoned vessel owners for littering
- Provides law enforcement assistance as directed

Select WRC Authorities:

- Navigable waters; certain practices regulated (N.C. Gen § 76-40(e))

4.3 Federal Agency Responsibilities

Animal, Plant and Health Inspection Service (APHIS)

- 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

Select APHIS Authorities:

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

Bureau of Safety and Environmental Enforcement (BSEE)

- Manages a Marine Trash and Debris Program to eliminate debris associated with oil and gas operations on the Outer Continental Shelf (OCS)
- Regulates marine trash and debris for oil and gas operations and renewable energy development on the OCS
- 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

Farm Service Agency (FSA)

- The Emergency Conservation Program (ECP) helps farmers repair damage to farmland caused by natural disasters, such as:
    - Debris removal from farmland
    - Grading, shaping or leveling damaged land
- Up to 75% of the cost to implement emergency conservation practices can be provided to farmers. Qualified limited resource producers may earn up to 90% cost-share
- Locally-elected FSA County Committee is authorized to implement ECP and determine if land is eligible for ECP
- Farmers should inquire with their local FSA county office regarding ECP enrollment periods, which are established by FSA county committees

Select FSA Authorities:

- Agricultural Credit Act of 1978 (92 Stat. 420-434), as amended by the Disaster Assistance Act of 1989, Section 502 and 7CFR, 701, Subpart B

Federal Emergency Management Agency (FEMA), Region IV

- Under the Stafford Act, provides reimbursement funding for eligible debris removal from navigable waterways (non-federally maintained) or wetlands during Presidential major

disaster declarations when another federal agency does not have authority to fund the activity
    - Provides funding to eligible applicants at a typical cost share of 75% FEMA, 12.5% state, and 12.5% eligible applicant. Note: Historically, the state has provided the full 25% non-federal share for Stafford Act Public Assistance declarations
    - 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, 2016)
    - For navigable waterways, debris removal is limited to a max depth of 2 feet below the low tide draft of the largest vessel that utilized the waterway prior to the incident. Any debris below this zone is not eligible unless it is necessary in order to remove debris extending upward into an eligible zone (FEMA, 2016)
    - 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 property during the occurrence of a 5-year flood (a flood that has a 20% chance of occurring in any given year) (FEMA, 2016)
- Employs debris specialists that can be mobilized to assist eligible applicants with debris management
- May reimburse costs for use of side scan sonar that identifies eligible submerged debris and sunken vessels
- Provides geospatial support as well as host data, paper maps, and live data collection with interactive mapping through a shared group on ARC GIS Online (AGOL)

Select FEMA Authorities:
- 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)

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

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 a variety of spatially-referenced remote-sensing datasets to support national emergency response. Imagery is obtained using high resolution digital cameras, film-based aerial camera systems, LIDAR and thermal and hyperspectral imagers.

Office of Response and Restoration, Emergency Response Division

- Serves as Scientific Support Coordinator (SSC) to coordinate application of NOAA assets and services during emergencies to help FOSC make timely operational decisions
- In the event of an oil spill, the SSC will provide technical support, chemical hazard analyses, assessments of the sensitivity of biological and human-use resources and recommend best actions moving forward.

Office of Response and Restoration, Marine Debris Division

- Funds marine debris assessment and removal projects, through grants or congressional supplemental funding
- May prepare for and respond to severe marine debris events
- 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 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

Select NOAA Authorities:

- 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.)

National Park Service (NPS)

- Manages the Cape Lookout National Seashore and the Outer Banks Group, consisting of Cape Hatteras National Seashore, Wright Brothers National Memorial and Fort Raleigh National Historic Site
- Conducts waterway debris assessment and cleanup within their jurisdiction in coordination with county, state and other federal partners
- Organizes volunteer beach cleanups on NPS lands
- Responsible for operations occurring 150 feet into the water off of the sound-side shoreline and down to the mean low tide line along coastal shorelines
- In the event of Emergency Operations Center (EOC) activation, the Superintendents of Cape Lookout National Seashore and/or the Outer Banks Group should be notified. The Superintendent(s) or their designee may be seated at the EOC as part of the operations group to plan for emergency response
- For a map of coastal areas managed by NPS in North Carolina, see Section 4.6

Select NPS Authorities:

- National Park Service and Related Programs (54 U.S.C § 100101)

Natural Resource Conservation Service (NRCS)

- When funding is available, provides emergency financial and technical assistance for debris removal in non-tidally influenced waters through its Emergency Watershed Protection (EWP) program
    - Help communities address watershed impairments that pose imminent threats to lives and property as a result of natural disasters
    - Typical cost share of 75 percent NRCS and 25 percent project sponsor, in the form of cash or in-kind services used to implement the EWP recovery measures
    - Public and private landowners are eligible for assistance, but they must be represented by a project sponsor that is a political subdivision of the state, or a Tribal Council. County governments through soil and water conservation districts and town governments are the most common sponsors of EWP projects in North Carolina.
- See "North Carolina Incident Waterway Debris Response Flowchart" in Section 3 for EWP eligibility criteria

Select NRCS Authorities:

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

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

- Maintains pre-event contracts regionally for all U.S. states and territories
- May request assistance from NOAA's NRT 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 lead eligible debris removal from navigable waterways (non-federally maintained) and wetlands if FEMA mission assigns another federal agency to perform or contract debris removal and surveying

Navigation

- Serves as lead federal agency for conduction surveys of ports, and shallow draft waterways for changes in water depth and hazards to navigation for commercial and recreational channels
- Responsible for operation, maintenance and debris removal from federally maintained waterways and channels within Wilmington District. For a map of USACE federally authorized and maintained waterways and channels, see Section 4.6
- May use side-scan sonar to identify sunken debris
- May remove abandoned vessels that obstruct federally maintained navigable channels if an owner or responsible party (RP) cannot be identified

Regulatory Program

- Wilmington District issues permits for debris removal within waterways and wetlands throughout the state
- For additional information on USACE permitting and compliance requirements, see Section 5

Select USACE Authorities:

- 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)
- Permits for Structures or Work in or Affecting Navigable Waters of the United States (33 C.F.R. § 322)
- Rivers and Harbors Appropriation Act of 1899 (33 U.S.C. § 401 et seq.)
    - Prohibits the unauthorized obstruction or alteration of any navigable water of the United States (Section 10, 33 U.S.C. § 403)
    - Authorize USACE to remove sunken vessels or other obstructions from navigable waterways under emergency conditions (Sections 15, 19 and 20, 33 U.S.C. § 409, 414, 415) in coordination with USCG Sector NC
- Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C § 5121 et seq.)
- Water Resources Development Act (33 U.S.C § 426m)

U.S. Coast Guard (USCG), District 5 Sector North Carolina

- In most cases, removal of incident waterway debris by USCG is not authorized, unless contaminated debris is causing a health or environmental threat
- Responds to oil and hazardous material releases or threats of release in waterways within the coastal zone as defined in the USCG Sector North Carolina Area Contingency Plan (ACP)
    - Removal actions generally limited to removing oil and other hazardous substances while leaving vessels in place. If a vessel appears abandoned an attempt will be made to contact the owner. Oil will be extracted and the vessel will remain in place unless it is so contaminated that it is declared a hazard to the environment, in which case, under COMDTINST M16465.43, the USCG will seek approval from the Commandant to take temporary custodianship of the vessel and fund removal, with cooperation from local and state counterparts
    - 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 a responsible party (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 take action 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
- 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 debris obstructing watercourse or creating hazards to navigation within federally maintained waterways. USCG will also notify USACE of any hazards to navigation within federally maintained waterways
- Following a Stafford Act declaration, may lead removal of contaminated waterway debris under a FEMA mission assignment to perform or contract the work
- May request assistance from NOAA's NRT to survey ports and near-shore waterways

- The Captain of the Port will set conditions used to alert the maritime community and affect changes in port operations necessary to prepare for tropical cyclone activity. This may include restricting or closing all port traffic
- For a map of the USCG sector boundaries and the ACP coastal-inland zone boundary, see Section 4.6

Select USCG Authorities:

- Abandoned Barge Act of 1992 (46 U.S.C. § 4701-4705)
- Abandoned Vessels, Commandant Instruction (M16465.43)
- 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.)
- 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 IV

- Provides the pre-designated Federal On-Scene Coordinator (FOSC) for oil and hazardous substance releases or threats of release on land and in waterways within the inland zone and for non-maritime transportation related incidents as defined in the USCG Sector Charleston ACP. For a map of the ACP coastal-inland zone boundary, see Section 4.6
- Serves as lead federal agency (FOSC) for Stafford Act Incidents under ESF-10 Oil and Hazardous Materials Response in the ACP inland zone and in 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 a responsible party (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 take action 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

Select EPA Authorities:

- 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)

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
- Coordinates with federal, state and local partners to remove acute waterway debris within their jurisdiction
- Has jurisdiction of submerged lands within NWRs down to the mean high water line along the coast and up to the shoreline along Pamlico and Albemarle Sounds
- Provides BMPs to protect listed threatened or endangered land and freshwater species, certain marine species, and their critical habitat
- When an emergency is declared, either state or presidential, USFWS regulations are suspended for 30 days so that the emergency can be dealt with to the fullest extent
- For a map of NWRs in North Carolina, see Section 4.6

Select USFWS Authorities:

- 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.)

U.S. Marine Corps (USMC)

Marine Corps Air Station, Cherry Point

- Manages bombing and rocket firing areas in Pamlico Sound and vicinity that are closed to navigation through a lease agreement with the state of North Carolina
- Responsible for removal of debris resulting from USMC training exercises within their jurisdiction
- Responsible for removing acute waterway debris within bombing ranges if it impedes a mission or operation
- May coordinate with USACE or USCG to remove large-scale debris
- May authorize access of non-USMC personnel and equipment into bombing ranges in the event of an emergency
- For a map of Department of Defense (DoD) managed military ranges, see Section 4.6

Select USMC Authorities:

- Pamlico Sound and adjacent waters, N.C.; danger zones for Marine Corps operations (33 CFR 334.420)

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 (ROVs), oil spill response and salvage equipment
- Exercises and manages regional standing emergency salvage contracts to quickly draw upon the required resources of the commercial salvage industry (U.S. National Response Team, 2014)

4.4 Private Landowners

- 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 hazard and is in the public interest (NCEM, 2012)
- May report acute waterway release incidents to local emergency management office to begin a coordinated, proper response
- In rare cases, state, tribal or local officials may invoke their authority to declare that debris on private property is a health and safety threat to the public-at large. In such instances, the local government or its contractor will enter private property to address the public health threat by removing debris. The eligible applicant may request prior approval from FEMA for the reimbursement of private property debris removal conducted to mitigate a health and safety threat (NCEM, 2012)
- State agencies will not remove debris from private property without a properly executed "Right-of-Entry" agreement.

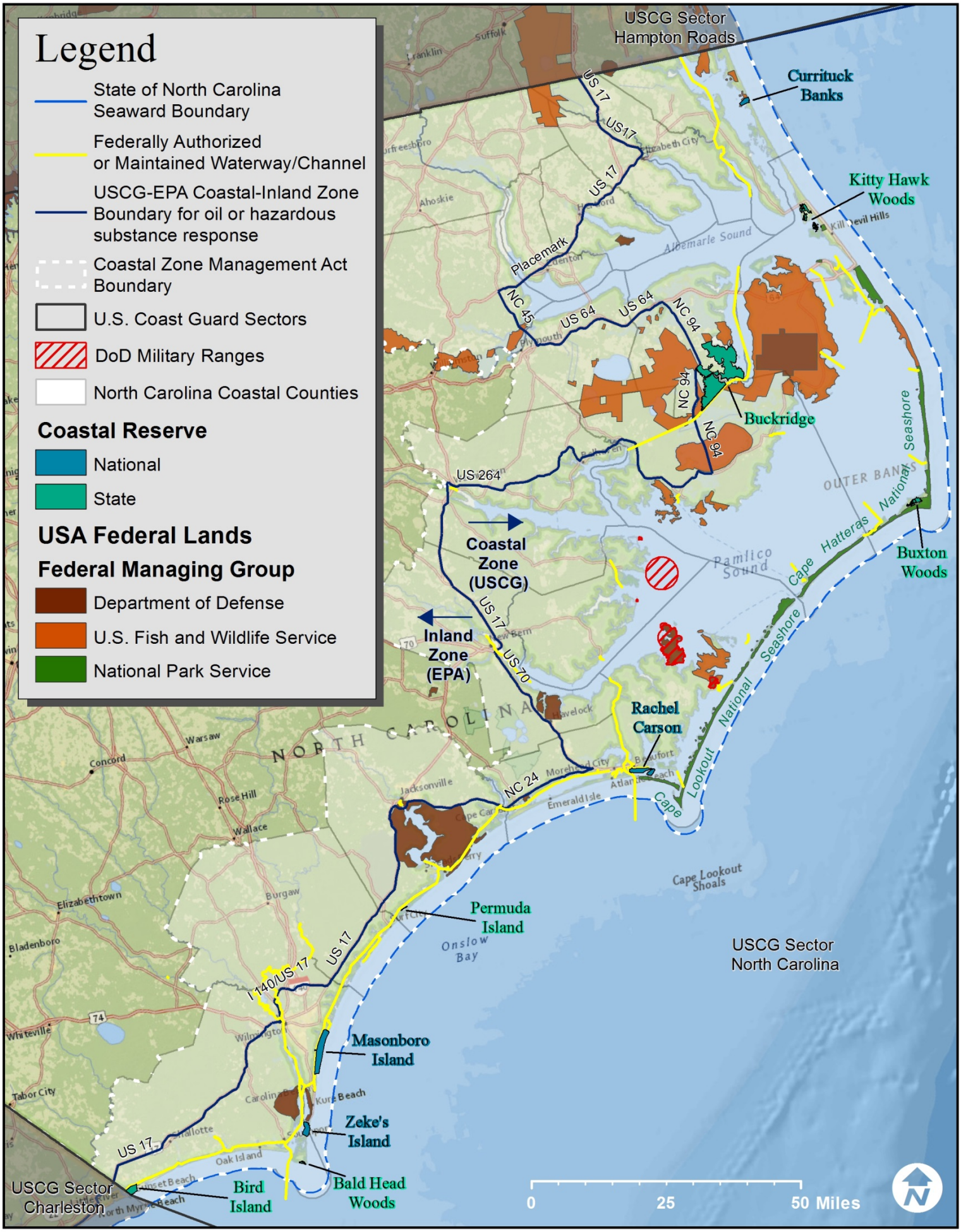
4.5 Volunteer and Non-Governmental Organizations

- Volunteers may provide cleanup and debris removal services as part of state ESF-7B Volunteers and Donations (NCEM, 2012)
- Non-governmental organizations may provide debris removal assistance through funded projects and programs
- The North Carolina Coastal Federation has historically received grant funding from the NOAA Marine Debris Program and North Carolina Sea Grant for a project to remove derelict crab pot traps from inshore waters in cooperation with NC DEQ Marine Patrol and local fisherman

4.6 Agency Jurisdiction Map

- See page 34.

North Carolina Incident Waterway Debris Response Map



5. Permitting and Compliance Requirements in North Carolina

Before waterway debris removal can begin, agencies responsible for removal activities must meet certain permitting and compliance requirements. While the agency or individual conducting the debris removal work is responsible for obtaining necessary permits – such as a 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 North Carolina Department of Natural and Cultural Resource's State Historic Preservation Office (SHPO), USFWS and NOAA National Marine Fisheries Service (NMFS).

During response under a Stafford Act declaration, FEMA provides funding to applicants for debris removal and is therefore considered the lead federal agency responsible for tribal and resource agency coordination. NCEM serves as a liaison between FEMA and local governments during declared events. If waterway debris removal is conducted without FEMA 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 brief description of individual agency requirements and authorities is outlined below and is summarized in the "Permitting and Compliance for Waterway Debris Removal in North Carolina" handout in Section 5.3. Agency contact information can be found in Appendix 8.3.

5.1 State Agency Requirements

North Carolina Department of Environmental Quality (DEQ)

Division of Coastal Management

- A CAMA permit may be required for debris removal projects that:
  - Are in or affect an Area of Environmental Concern (AEC)
  - Disturb shellfish beds or fish nursery areas
  - May damage wetlands
  - May release pollutants into waters
- If a project also requires a permit through USACE, the applicant can apply through the state and federal review will be concurrent with the state review to expedite the process
- For waterway debris removal conducted in the North Carolina Coastal Area, DEQ Division of Coastal Management simultaneously reviews USACE permit applications for consistency with North Carolina's Coastal Area Management Act (CAMA) Program
- If USACE determines that the waterway debris removal project does not fit a nationwide or general permit that has been evaluated for coastal consistency, then the project is processed under a letter of permission or standard permit process, and a separate determination must be obtained from DEQ that will have specific permit conditions
- If a waterway debris removal project in North Carolina 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 DEQ prior to beginning debris removal work to determine whether activities are fully consistent with the enforceable policies of the Division of Coastal Management

North Carolina Department of Natural and Cultural Resources

Division of Historical Resources

- The National Historic Preservation Act 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 North Carolina 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 the State Historic Preservation Office (North Carolina Department of Natural and Cultural Resources) prior to beginning debris removal work to determine whether activities affect historic or cultural sites
- Serves as liaison with appropriate federal officials concerning implementation of Section 106 of National Historic Preservation Act (36 CFR Part 800)
- Any project that is carried out with public funds and/or uses state land, and requires a state approval or action in order to be implemented, and has the potential for an environmental impact is subject to a State Environmental Policy Act (SEPA) review. The State Environmental Policy Act of 1971 requires state agencies to review and report the environmental effects of all activities that involve an action by a state agency, an expenditure of public monies or private use of public land, and have a potential negative environmental effect upon natural resources, public health and safety, natural beauty, or historical or cultural elements of the state
- During a Stafford Act declaration, reviews may be expedited if debris removal is deemed an emergency. An emergency is defined as: "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)

Select North Carolina Department of Natural and Cultural Resources Authorities:

- State Environmental Policy Act of 1971 (Gen. Stat § 113A)

5.2 Federal Agency Requirements

National Environmental Policy Act (NEPA)

- NEPA requires federal agencies to follow a specific planning process to ensure environmental consequences of a federally funded action have been considered.
- 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
- 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 North Carolina 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 adversely affect listed threatened or endangered species or critical habitat. Generally, USFWS manages land and freshwater species, while NOAA Fisheries manages marine and anadromous species. 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 North Carolina ESA-listed marine species list (National Oceanic and Atmospheric Administration [NOAA], 2016b). See USFWS's endangered species web page for an up to date North Carolina ESA-listed land and freshwater species list (U.S. Fish and Wildlife Service [USFWS], 2016).
- 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. The South Atlantic Fishery Management Council is responsible for identifying EFH for federally managed species in North Carolina (South Atlantic Fishery Management Council, 2016)

- NOAA Fisheries defines an emergency as 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).
- 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 National Oceanic and Atmospheric Administration (n.d.-b) and National Oceanic and Atmospheric Administration (n.d.-c), respectively

U.S. Army Corps of Engineers (USACE) Wilmington District, Regulatory Division

- USACE permit is required for debris removal within or over all Section 10 navigable waterways and wetlands (33 U.S.C. 403), or for debris removal within waterways and wetlands if the activity involves dredging, the discharge of dredge or fill material or involves structures or work impacting the navigability of a waterway. One or multiple permits may be needed depending on the scope of work to be conducted
- Wilmington District Regulatory Division has jurisdiction over the entire state and is geographically aligned into five permitting offices that cover each region of the state, with a division office located at the main district office in Wilmington
    - A complete list of the five permitting offices in North Carolina can be found at: http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Contact/
- Permits that may be required include:
    - **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. in wetland areas
    - **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 Natural Resources Conservation Service's Emergency Watershed Protection 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. Activities undertaken entirely on a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site are not required to obtain permits
    - **Programmatic General Permit 291: Coastal Area Management Act (CAMA).** Issued for construction activities in the 20 coastal counties receiving prior approval from the State of North Carolina in the form of a Coastal Area Management Act (CAMA) Permit, and/or a state dredge and fill permit, and if required, a water quality certification, that are otherwise not eligible for federal authorization in the form of a nationwide or another regional general permit
- If a project requires a Coastal Area Management Act (CAMA) permit through the NC Division of Coastal Management, the applicant can apply through the state and federal review will be concurrent with the state review to expedite the process
- In emergency situations, permitting procedures may be expedited and resource agency coordination (or completion of coordination/consultation) occurs "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
- USACE designates an emergency as 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))

U.S. Fish and Wildlife Service (USFWS)

Ecological Services Program

- If a waterway debris removal project in North Carolina 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 the appropriate USFWS Ecological Services Office (ESO) in North Carolina 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 adversely affect listed threatened or endangered species or critical habitat. 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 NOAA Fisheries or USFWS. See USFWS's endangered species web page for an up to date North Carolina ESA-listed land and freshwater species list (USFWS, 2016). See NOAA Fisheries Southeast Regional Office's endangered species web page for an up to date North Carolina ESA-listed marine species list (NOAA, 2016b)

  - CBRA makes designated coastal barriers ineligible for most federal expenditures and financial assistance, and was developed as a way to minimize development of coastal barriers and damage to property, fish, wildlife and other natural resources. 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 North Carolina can be accessed at https://www.fws.gov/habitatconservation/State_Locator_Maps/Small_NC.pdf or downloaded from U.S. Fish and Wildlife Service (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
- USFWS has two ESO offices in North Carolina located in Raleigh and Asheville
- 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
- Generally, USFWS will provide BMPs that, when followed, 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 North Carolina One-Pager

The "Permitting and Compliance for Waterway Debris Removal in North Carolina" one-pager 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 agency requirements, see Sections 5.1 and 5.2, respectively.

DRAFT: Permitting and Compliance for Waterway Debris Removal in North Carolina

- U.S. Army Corps of Engineers (USACE) permit may be required for debris removal within waterways and wetlands. One or multiple permits may be needed.
- If a project requires a Coastal Area Management Act (CAMA) permit, the applicant can apply to NC Department of Environmental Quality (DEQ) Division of Coastal Management directly and the state and federal review will occur concurrently to expedite the process.
- It is the responsibility of the **lead federal agency** to ensure compliance with National Environmental Policy Act (NEPA), federal coastal consistency, and consult with resource agencies including North Carolina State Historic Preservation Office (SHPO), U.S. Fish and Wildlife Service (USFWS) and NOAA's National Marine Fisheries Service (NMFS) as required.

Compliance Process when Permit is Required

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

State/Local Response
(No federal funding)

Federal Agency Coordination
Coordinate with federal funding agency regarding environmental compliance requirements before applying for DEQ-USACE permit

Permit Application
Complete and submit permit application to DEQ. DEQ distributes application to USACE and both agencies review.

Permit Issued
Review all permit conditions including DEQ and resource agency requirements

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

- Lead federal agency is responsible for NEPA compliance, federal consistency with North Carolina's Coastal Management Program, and consultations with North Carolina State Historic Preservation Office, USFWS and NMFS as required.
- FEMA is the lead federal agency under Stafford Act declaration.

As the lead federal agency, USACE will ensure NEPA compliance, federal consistency with North Carolina's Coastal Management Program, and consult with North Carolina State Historic Preservation Office, USFWS and NMFS as required.

Agency Requirements and Legislation Details

National Environmental Policy Act (NEPA)

- Requires federal agencies to follow a specific planning process to ensure environmental consequences of federally funded actions are considered

U.S. Army Corps of Engineers (USACE)
Wilmington District Regulatory Division
910-251-4633

- Permit(s) that may be required for debris removal work within waterways and wetlands
  - **NWP-3 Maintenance** for removal/maintenance of culverts, sediments or debris accumulated around outfalls, bridges, etc. in wetland areas
  - **NWP-22 Removal of Vessels** for removal of wrecked, abandoned, or disabled vessels or other man-made obstructions to navigation
  - **NWP-37 Emergency Watershed Protection & Rehabilitation** for work done under NRCS's Emergency Watershed Protection program
  - **NWP-38 Cleanup Hazardous/Toxic Waste** for containment, stabilization, or removal of hazardous or toxic waste not under CERCLA/NCP
  - **Programmatic GP 291**: Coastal Area Management Act. Issued for construction activities in the 20 coastal counties receiving prior approval from the state in the form of a CAMA Permit that are otherwise not eligible for federal authorization in the form of a nationwide permit

NC Department of Environmental Quality (DEQ)
Division of Coastal Management
252-808-2808

- For waterway debris removal conducted in the North Carolina Coastal Area, DEQ simultaneously reviews USACE permit applications for consistency with North Carolina's Coastal Area Management Act (CAMA) Program
- A CAMA permit may be required for debris removal projects that:
  - Are in or affect an Area of Environmental Concern (AEC)
  - Disturb shellfish beds or fish nursery areas
  - May damage wetlands
  - May release pollutants into waters
- If a CAMA permit is required, the applicant can apply through the state and federal review will occur concurrently to expedite the process

NC Department of Natural and Cultural Resources
State Historic Preservation Office (SHPO)
919-807-6570

- Serves as the State Historic Preservation Office (SHPO) and ensures compliance with the National Historic Preservation Act.
- Consultation with SHPO required if waterway debris response involves federal permits and/or funding (USACE permit, FEMA funding, etc.) and has the potential to affect historic or cultural sites included in or eligible for the National Register of Historic Places.

U.S. Fish and Wildlife Service (USFWS)
Raleigh ESO
919-856-4520

- Consultation with local Ecological Services Office (ESO) 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 affect listed threatened or endangered species or critical habitat for land and freshwater species and certain marine species such as manatee.
  - Coastal Barrier Resources Act (CBRA) to ensure actions do not encourage development on coastal barriers along the Atlantic coast.

NOAA National Marine Fisheries Service (NMFS)
ESA: 727-824-5312
EFH:-727-570-5317

- 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 affect listed threatened or endangered species or critical habitat for marine species.
  - Magnuson-Stevens Fisheries Conservation and Management Act to ensure actions do not adversely affect Essential Fish Habitat (EFH).

6. North Carolina Waterway Debris Response Needs

Waterway debris response gaps identified by stakeholders are outlined below, along with associated recommendations. These identified gaps will serve as future points of discussion and action for the North Carolina waterway debris response community. Potential opportunities for addressing response needs 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 Gaps in North Carolina

The following gaps in response have been reported by stakeholder agencies engaged in waterway debris response in North Carolina.

- After an acute waterway debris incident that does not result in a Presidential major disaster declaration, there are only limited funding sources for debris removal in state waters
- Federal projects may not receive annual funding, so there may not be federal response available for some federally authorized channels. There is also the potential that at the time of an acute waterway debris incident, annual funds may already be depleted
- There is no state agency in North Carolina responsible for removing debris from state waters during an acute waterway debris incident if it does not directly cause a threat to human health or safety
- There is a potential for delay in timely notification to the appropriate response agencies after an acute waterway debris event due to a lack of consistency in the reporting process
- The characterization and definitions for threats and emergencies vary across agencies
- The definitions for submerged debris and hazards to navigation vary across agencies
- Certain types of natural debris (sediment, vegetative, animal carcasses) in non-federal channels may not be classified as acute waterway debris to state response agencies and therefore may not be eligible for removal funding when there is no Stafford Act declaration
- Current debris management and emergency response plans lack information and clarity specific to waterway debris
- Current storm water programs do not address solid waste
- There is a lack of consistency in the enforcement of litter laws
- There is a lack of communication between solid waste managers and local emergency management personnel

- Local communities may lack the resources to retrieve and remove debris from wetlands and creeks

- It is difficult to determine ownership of anthropogenic waterway debris

- If a derelict vessel is in state waters and has the potential to release oil or hazardous material, USCG will remove pollution threats such as oil and batteries. However, USCG generally lacks the authority and dedicated funding to remove the vessel itself and the state of North Carolina currently has no abandoned vessel program in place

6.2 Recommended Actions

The following recommendations have been compiled based on stakeholder agency input to improve preparedness for response and recovery operations following an acute waterway debris incident in North Carolina. Recommended actions include funding and policy actions to address gaps in response as well as education and outreach actions to meet pre-event planning needs.

6.2.1 Funding and Policy

- Identify and establish a standing source(s) of funds for operation and maintenance of public waterways in North Carolina to supplement existing programs and limited funding sources

- Research and connect with state agencies that could potentially leverage funding for debris removal in state waters, such as DEQ Division of Water Resources

- Establish partnerships with non-governmental organizations to assist with fund raising and contracting for debris removal in emergency situations

- Continue and expand coordination between USCG and local agencies to have vessels removed after USCG has abated a pollution threat in state waters

- Establish an agreed upon consistent set of terminology and definitions among federal, state and local government waterway debris response agencies. This includes inter-agency discussions regarding what constitutes an emergency among federal agencies responsible for permitting and environmental compliance, what constitutes a hazard to navigation and what types of natural debris are eligible for removal funds

- Establish a procedure for reporting of an acute waterway debris event in North Carolina and a mechanism for disseminating this information to local authorities and the public

- Develop an inter-agency communication plan for disseminating information during an acute waterway debris release incident in North Carolina. Plan should clearly define stakeholder audiences, identify trusted spokespeople and outline agency responsibilities

- Establish an abandoned and derelict vessel program or law to reduce the number of derelict vessels

6.2.2 Outreach and Education

- Encourage coastal residents to label personal property that has the potential to be released into waterways during an acute event, such as floating docks
- Encourage coastal residents to store hazardous chemicals in locations where minor flooding or weather events will not result in a waterway release
- Support the integration and implementation of the incident waterway debris response guide into existing exercises, plans, and emergency operations documents
- Work with counties to incorporate waterway debris response and removal information in local debris management plans
- Encourage local governments to establish pre-event standing emergency waterway debris removal contracts

6.3 Additional Resources

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8. Appendices

8.1 Risk Description for Select Hazards in North Carolina

Note: Data adapted from North Carolina Hazard Mitigation Plan (NCEM, 2013)

Debris Incident Hazard	Incident Risk Description for North Carolina
Flooding	▪ Coastal flooding is typically a result of storm surge, wind-driven waves, and heavy rainfall. ▪ Between 1977 and 2013, North Carolina has received federal aid for 20 major disasters that produced substantial flood damage to one or more counties.
Hurricanes	▪ Hurricanes can produce an array of hazardous weather conditions, including storm surge, high winds, torrential rain, and tornadoes ▪ North Carolina has an extensive hurricane history dating back to colonial times ▪ North Carolina has had 15 hurricanes impact the state between 1993 and 2012
Severe Thunderstorm	▪ Damaging wind from thunderstorms is much more common than damage from tornadoes ▪ North Carolina ranks third in the nation in number of lightning-related deaths, and fourth in lightning-related injuries
Severe Winter Weather	▪ Severe winter storms are extra-tropical cyclones fueled by strong temperature gradients and an active upper-level jet stream. These storms can produce freezing rain, ice storms and blizzards ▪ The winter storms that typically impact North Carolina generally form in the Gulf of Mexico or off the southeast Atlantic Coast ▪ The entire state is likely to experience severe winter weather
Earthquakes	▪ Earthquakes could potentially affect any geographic location in North Carolina, however they are more likely in the western part of the state ▪ Between 1735 and 2013, North Carolina has experienced 23 earthquakes, each of which caused at least architectural damage.
Tornado	▪ The damage from a tornado is a result of the high wind velocity and wind-blown debris ▪ Although tornadoes have been reported in North Carolina throughout the year, most of them have occurred in the spring
Dam Failure	▪ In the event of a dam failure, the energy of the water stored behind even a small dam is capable of causing the loss of life and considerable property damage ▪ There are more than 4,600 dams in North Carolina. According to the Division of Land Resources, approximately 1,700 dams would pose a risk to public safety and property if a dam failure were to occur
Tsunami	▪ Tsunamis are primarily associated with earthquakes that occur in oceanic and coastal regions and are rare along the Atlantic coast ▪ North Carolina will be vulnerable to large-scale tsunamis in the future, due to its relative proximity to the Canary Island of LaPalma in Africa. La Palma has the potential to experience a volcanic eruption which would trigger a landslide capable of causing a large-scale tsunami event for the entire Atlantic seaboard of the United States.

8.2 Agency Response Capabilities

	Yes - In-house Capability Contract - Contracted capability	USACE Wilmington District	USCG Sector North Carolina	FEMA Region IV[12]	USFWS	NOAA[14]	NRCS	NPS	NC WRC	NC DEQ Waste Management	NC DEQ Water Resources	NCDEQ Coastal Management	NC DNCR	NC DOT
Technology	IT support during response (server/storage space for data and information sharing)					Yes		-	Yes[21]	Yes	Yes	-	-	
	Multi-beam sonar	Yes[3]	-	-	-	Yes	-	-	Yes[21]	-	-	-	-	Yes
	Side scan sonar	Yes[3]	-	-	-	Yes	-	-		-	-	-	Yes	Yes
	Single-beam sonar	Yes[3]	-	-	-	Yes	-	-	Yes[21]	-	-	-	-	Yes
	Magnetometers	Yes[3]						-	-	-	-	-	Yes	-
	Sediment profilers					Yes		-	-	-	-	-	-	-
	Remote sensing	Contract	-	-	-	Yes		-	-	-	Yes	-	Yes	Yes
Manpower/Expertise	Communication/public information expertise (dedicated spokesperson/Public Information Officer)	Yes				Yes		-	Yes[21]	Yes	Yes	Yes	-	Yes
	Compliance and permitting expertise	Yes	-	Yes	Yes	Yes		Yes[20] Cont.	Yes	Yes	Yes	Yes	Yes	Yes
	Data/information management capabilities		Yes			Yes			Yes[21]	Yes	Yes	-	-	Yes
	Debris modeling expertise (volume, transport, hindcasting, etc.)							-	-		-	-	-	-
	Dedicated waterway/marine debris staff (responders, response team, regional coordination, etc.)						-	-	-	-	-	-	Yes	-
	Dive support (scientific, technical, commercial, etc.)	Yes	Yes[4]	-	-	Yes[15]	-	-	-	-	Yes	-	Yes	Yes
	Environmental expertise (location of sensitive areas, endangered species present, etc.)	Yes	Yes	Yes	Yes	Yes[13]	Yes	Yes	Yes	-	Yes	Yes	-	Yes
	GIS mapping and plotting of imagery	Yes[1]	-	Yes	-	Yes		Yes[20]	Yes[21]	-	Yes	Yes	-	Yes
	Post-storm damage assessment teams			Yes				Yes	-	-		Yes	-	-
	Hazardous substance and/or oiled debris expertise			Yes		Yes	-	-	-	Yes	Yes	-	-	-
	Incident Command System (ICS) trained staff			Yes				Yes	Yes[21]	-		-	Yes	-
	Waterway management authority (law enforcement officers)			Yes			-		Yes	-	-	-	-	-
	Technical expertise for removal operations (techniques, best management practices, etc.)	Yes[2]	Yes	Yes	-	Yes	Yes	Yes	-	-	Yes	Yes	-	-
	Maritime Transportation Recovery Unit (MTSRU) expertise			Yes			-	-	-	-		-	-	-
	Protected species/Environmental Sensitivity Index (ESI) expert in the field					Yes		Yes	Yes	-	Yes	Yes	-	-
	Volunteer manpower	-	-	Yes	Yes	-	Yes		-	-	-	Yes	-	-

	Yes - In-house Capability Contract - Contracted capability	USACE Wilmington District	USCG Sector North Carolina	FEMA Region IV[12]	USFWS	NOAA[14]	NRCS	NPS	NC WRC	NC DEQ Waste Management	NC DEQ Water Resources	NCDEQ Coastal Management	NC DNCR	NC DOT
Equipment	Aircraft	-	Yes	-	-	Yes	-	-	Yes[21]	-	-	-	-	-
	Barge, Self-loading barge	Contract	-	-	-	-	-	-	-	-	-	-	-	Yes[22]
	Boom	Contract	Contract[5]	-	-	-	-	-	-	-	-	-	-	-
	Crane, Knuckleboom Crane	Contract	-	-	-	-	-	-	-	-	-	-	-	Yes[22]
	Environmental clamshell dredge						-	-	-	-	-	-	-	-
	Excavator	Contract	-	-	-	-	-	Yes	Yes	-	-	-	-	-
	Remotely Operated Vehicle (ROV)	Yes[3]	Yes			Yes	-	-	-	-	-	-	-	-
	Sampling Equipment					Yes		-	Yes	-	Yes	-	-	-
	Unmanned Aerial Vehicle (UAV)/Surveillance drones	Yes	Yes[6]	-	-	Yes	-	-	-	-	-	-	-	-
	Vessels	Yes[3]	Yes	-	Yes	Yes	-	-	Yes	-	Yes	Yes	Yes	-
	Other specialized equipment that cannot be readily procured immediately following a debris incident	Contract	Yes	-	Yes		-	-	-	-		-	Yes	-
Logistics	Contract authority and oversight capabilities	Yes	Yes[11]	-	-	Yes	Yes[18]	-	-	-	Yes	-	-	-
	Pre-approved removal contractors					-	-	-	-	-	-	-	-	-
	Pre-event contracts and staged agreements in place	Yes	Yes[10]	-	-	-	-	-	-	-	-	-	-	-
	Docks for wet storage of vessels	-	Yes[8]	-	-	-	-	-	-	-	-	Yes	-	-
	Facility suitable for establishing an emergency operations center (EOC)	Yes	Yes	-	-	Yes	-	-	-	-	-		-	-
	Funding for waterway debris removal	Yes[3]	Yes[7]	-	-	Yes[16]	Yes[19]	-	-	-	-	-	-	-
	Laboratory space					Yes		-	-	-	Yes	Yes	-	-
	Research program established to analyze long-term trends, impacts, etc.					Yes		-		Yes	Yes	-	-	-
	Staging/Off-Loading: Land with water access to stage, offload debris (has not been evaluated for suitability or officially pre-designated)	-	-	-	-	-	-	Yes	Yes	-	-		-	-
	Staging/Off-Loading: Pre-designated staging, off-loading and special handling areas (already evaluated for suitability)	-	Yes	-	-	-	-	-	-	Yes	-	-	-	-
	Pre-designated landfill/disposal sites (to include sites for vegetative debris and animal carcasses)	-	-	-	-	-	-	-	-	Yes	-	-	-	-
	Staging area for dry storage of vessels	Yes	Yes[9]	-	Yes	Yes	-	Yes[20]	-	-	Yes	Yes	-	-
	Other logistical support, including fuel, housing, food, etc.	-	-	-	-	Yes[17]	-	-	-	-	-	-	-	-

Each agency self-reported capabilities which could be used during waterway debris response. Agencies were asked to indicate whether capabilities were in-house or were contracted through a third party. Gray cells reflect capabilities that agencies do not have and white cells represent capabilities that agencies are unsure of. Footnotes refer to additional information provided for a particular capability.

[1]USACE – has a GIS cadre for response
[2]USACE – has planning response teams
[3]USACE – Funding in place for federal projects only
[4]USCG – Has divers but not typically used for waterway debris
[5]USCG – Small amounts of boom on hand but capable of using pre-event contracts for larger pollution events
[6]USCG – Surveillance drones not typically used for waterway debris
[7]USCG – Funding for pollution incidents only
[8]USCG – Docks for wet storage of vessels has limited space and suitable for larger vessels only
[9]USCG – Staging area for dry storage of vessels has limited space
[10]USCG – Pre-event contracts and staged agreements in place for pollution incidents only
[11]USCG – Contract authority and oversight capabilities for USCG contracts only
[12]FEMA – Capabilities contingent upon a Presidential major disaster declaration. FEMA capable of mission-assigning other Federal support to increase capabilities. FEMA has interactive live collection and mapping capabilities and a template wet debris collector map for Region IV.
[13]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
[14]NOAA - Some capabilities require contract support for staffing
[15]NOAA - Dive capabilities do not include sites with oil or hazardous pollutants
[16]NOAA – Funding through grant program and possible Congressional supplemental funding
[17]NOAA - Weather and marine forecasts through National Weather Service in Newport, NC
[18]NRCS – Contract authority for EWP contracts only
[19]NRCS – Funding for authorized EWP contracts only
[20]NPS – Capabilities for Cape Lookout National Seashore only
[21]NC WRC – Capabilities within Law Enforcement Division
[22]NC DOT– Capabilities within the Ferry Division

8.3 Agency Contact Information

Local/State Agencies

Agency	Division	Topic	Point of Contact	Phone	Email
Coastal Area Management Act (CAMA) Counties	Beaufort County	Emergency Management	-	252-946-2046	-
	Bertie County	Emergency Services	-	252-794-5302	-
	Brunswick County	Emergency Services	-	910-253-5383	emergency.services@brunswickcountync.gov
	Camden County	Emergency Management	-	252-331-7474	-
	Carteret County	Emergency Management	Jen Sawyer	-	jen.sawyer@carteretcountync.gov
	Chowan County	Emergency Medical Services	-	252-482-4365	-
	Craven County	Emergency Management	-	252-636-6608	-
	Currituck County	Emergency Management	-	252-232-6010	-
	Dare County	Emergency Management	Drew Pearson, Director	-	drew.pearson@darenc.com
	Gates County	Emergency Services	-	252-357-5569	-
	Hertford County	Emergency Management	-	252-358-7861	-
	Hyde County	Emergency Services	-	252-452-0806	-
	New Hanover County	Emergency Management	Warren Lee	-	WLee@nhcgov.com
			Steven Still	-	SStill@nhcgov.com
			Joe Suleyman	-	jsuleyman@nhcgov.com
	Onslow County	Emergency Services	-	910-347-4270	-
	Pamlico County	Emergency Management	-	252-745-4131	-
	Pasquotank County	Emergency Management	-	252-331-7474	-
	Pender County	Emergency Management	-	910-259-1210	-
	Perquimans County	Emergency Management	-	252-426-5646	-
	Tyrrell County	Emergency Management	-	252-796-1371	-
	Washington County	Emergency Management	-	252-793-4114	-
NC Coastal Federation	-	-	Rachel Bisesi	-	rachelb@nccoast.org

Local/State Agencies Continued

Agency	Division	Topic	Point of Contact	Phone	Email
NC Sea Grant Extension Program			Gloria Putnam	-	gfputnam@ncsu.edu
NC Department of Agriculture and Consumer Services (DACS)	Division of Soil and Water Conservation	Stream Debris Removal	David Williams, Deputy Director	919-715-6103	david.b.williams@ncagr.gov
		Technical services	Natalie Woolard, Chief of Technical Services	252-948-3902	Natalie.Woolard@ncagr.gov
	Forest Service Division	Water Resources	Reid Hildreth	-	reid.hildreth@ncagr.gov
NC Department of Environmental Quality	Division of Coastal Management	CAMA permitting	Braxton Davis, Director	252-808-2808	Braxton.Davis@ncdenr.gov>
		NC Clean Marina	Patricia Durrett, NC Clean Marina & CVA Program Coordinator	-	Pat.durrett@ncdenr.gov
		Coastal Reserves	Rebecca Ellin	252-838-0880	rebecca.ellin@ncdenr.gov
			Paula Gillikin, Central Sites Manager	252-838-0886	Paula.Gillikin@ncdenr.gov
	Division of Marine Fisheries	Marine Patrol	Jason Walker	-	jason.walker@ncdenr.gov
	Division of Waste Management	Field Operations	Jason Watkins, Field Operations Branch Head	-	jason.watkins@ncdenr.gov
		-	Michael Scott, Director, Division of Waste Management	919-707-8200	Michael.scott@ncdenr.gov
	Division of Water Resources	-	Jay Zimmerman, Division Director	919-707-9027	jay.zimmerman@ncdenr.gov
		-	Fred Tarver	-	fred.tarver@ncdenr.gov
NC Emergency Management (NCEM)	Operations Section	Operations Section	Joe Wright, Deputy Director/Operations Chief	-	Joe.Wright@ncdps.gov
	Recovery Section	Recovery Section- Public Assistance	Mary Glasscock, Public Assistance Supervisor	-	Mary.Glasscock@ncdps.gov
			Andy Innis, Public Assistance Manager	-	andy.innis@ncdps.gov
	-	Eastern Branch	Dianne Curtis, Eastern Branch Manager	-	dianne.curtis@ncdps.gov
			Melissa Greene, Area 3 Coordinator	-	melissa.greene@ncdps.gov
			Zakare Whicker, Area 5 Coordinator	-	Zakare.Whicker@ncdps.gov
	-		Joe Stanton, Assistant Director	-	Joe.Stanton@ncdps.gov
NC Department of Natural and Cultural Resources	State Historic Preservation Office	National Historic Preservation Act compliance	Renee Gledhill-Earley, Environmental Review Coordinator	919-807-6579	environmental.review@ncdcr.gov
	Underwater Archaeology Branch	Approval for operations	Underwater Archaeology Branch	910-458-9042	-
		Equipment capabilities	Stephen R. Claggett, State Archaeologist	919-807-6551	steve.claggett@ncdcr.gov

State Agencies Continued

Agency	Division	Topic	Point of Contact	Phone	Email
NC Department of Transportation (NCDOT)	Ferry Division	Technological capabilities	Keith Honeycutt, Area Locating Engineer	919-266-4078	khoneycutt@ncdot.gov
		Equipment capabilities	Lance Winslow	-	lwinslow@ncdot.gov
	-	Bridge Management	John Abel, Jr.	-	jabel@ncdot.gov,
		Disaster Recovery	Josh Kellen	-	jlkellen@ncdot.gov
NC Wildlife Resources Commission (WRC)	Habitat Conservation	Expertise capabilities	Maria Dunn, Coastal Habitat Coordinator	-	maria.dunn@ncwildlife.org
	Information Technology Section	IT support	Janice Underwood, IT Director	919-707-0110	Janice.underwood@ncwildlife.org
	Law Enforcement	Sonar capabilities	Jon Evans, Colonel of Law Enforcement	919-707-0030	jon.evans@ncwildlife.org,
		Expertise capabilities		-	chris.huebner@ncwildlife.org
			Chris Huebner, Major Admin OPS		
	-	Equipment capabilities	Tommy Hughes, Coastal Area Ecoregion Supervisor	-	tommy.hughes@ncwildlife.org

Federal Agencies

Agency	Division	Topic	Point of Contact	Phone	Email
Bureau of Safety and Environmental Enforcement (BSEE)	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 IV	Funding following Presidential disaster declaration	Contact local Emergency Management Agency	-	-
		GIS mapping and plotting of imagery	David Lawson, Region IV GIS Coordinator	770-220-5504	David.Lawson@fema.dhs.gov
		Technical expertise for removal operations and environmental, compliance and permitting expertise	Valerie Rhoads, Public Assistance Branch Chief	770-220-5618	-
National Oceanic and Atmospheric Administration (NOAA)	National Marine Fisheries Service (NMFS) or NOAA Fisheries	Emergency EFH Consultation	Ken Riley	252-728-8750	Ken.Riley@noaa.gov
		Emergency ESA Consultation	General Contact	727-824-5312	nmfs.ser.emergency.consult@noaa.gov
	NOS, National Centers for Coastal Ocean Science	Scientific and technical diving capabilities	Brian Degan, NOAA Divemaster	252-728-8704 (O)	brian.p.degan@noaa.gov
	NOS, Office of National Marine Sanctuaries	Archaeology and cultural resources	Bruce Terrell, Maritime Heritage Program Archaeologist and Historian	240-533-0701 (O)	bruce.terrell@noaa.gov
	NOS, ORR, Emergency Response Division	Potential to release oil or hazardous material	Frank Csulak, District 5 Scientific Support Coordinator (SSC)	732-872-3005	frank.csulak@noaa.gov
	NOS, ORR, Marine Debris Division	Response capabilities and coordination	Sarah Latshaw, Southeast Regional Coordinator	843-7401154 (O), 843-697-7416 (C)	sarah.latshaw@noaa.gov
	National Weather Service	Weather and Marine Forecasts	Richard Bandy, Meteorologist-in-Charge	252-223-5122 x 222	Richard.Bandy@noaa.gov

Federal Agencies Continued

Agency	Division	Topic	Point of Contact	Phone	Email
National Park Service (NPS)	Cape Hatteras National Seashore	Expertise capabilities	Michelle Havens, Chief of Resource Management	252-475-9016	michelle_havens@nps.gov
			John Kowlok	252-475-9024	john_kowlok@nps.gov
			Boone Vandzura	252-475-9006	boone_vandzura@nps.gov
	Cape Lookout National Seashore	Compliance and permitting expertise	Jeri DeYoung, Chief of Resources Management	252-728-2250 x 3012	jeri_deyoung@nps.gov
		Dry Staging for Vessels	Mike Baker, Chief of Facility Manager	252-728-2250 x 3011	mike_baker@nps.gov
		Environmental Expertise	Jon Altman, Biologist	252-728-2250 x 3013	jon_altman@nps.gov
			Jeri DeYoung, Chief of Resources Management	252-728-2250 x 3012	jeri_deyoung@nps.gov
		ESA information and Protected Species	Jon Altman, Biologist	252-728-2250 x 3013	jon_altman@nps.gov
		GIS mapping and plotting of imagery	Jon Altman, Biologist	252-728-2250 x 3013	jon_altman@nps.gov
		Incident Command Staff	Jill Jaworski, Chief Ranger	252-728-2250 x 3034	jill_jaworski@nps.gov
	Southeast Region	Ocean Programs	Catherine (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	Terri Ruch, State Conservation Engineer	919-873-2130	Terri.Ruch@nc.usda.gov
U.S. Army Corps of Engineers (USACE)	Emergency Operations	Response capabilities	Janelle Mavis, Chief Readiness & Contingency Operations	910-251-4944	janelle.m.mavis@usace.army.mil
	Navigation	Federally maintained waterway or channel	Roger Bullock, Chief of Navigation	910-251-4822	roger.d.bullock@usace.army.mil
			Todd Horton, Chief Geospatial Services Section	910-251-4067	james.t.Horton@usace.army.mil
	Regulatory	Compliance and permitting expertise	Dale Beter, Chief Wilmington Regulatory Field Office	910-251-4631	Dale.E.Beter@usace.army.mil
			Bill Biddlecombe, Chief Washington Regulatory Field Office	910-251-7416	William.J.Biddlecombe@usace.army.mil
			Jean Gibby, Chief Raleigh Regulatory Field Office	919-554-4884 x 24	Jean.B.Gibby@usace.army.mil
			Scott Jones, Asheville Regulatory Field Office	828-271-7980 x 222	Scott.Jones@usace.army.mil
U.S. Coast Guard (USCG)	District 5, Sector North Carolina	Potential to release oil or hazardous material	National Response Center (NRC)	1-800-424-8802	-
		Response capabilities	Sean DiGeorge, Contingency Planning	-	Sean.D.DiGeorge@uscg.mil
			Terry Hasenhour, MSD Fort Macon	910-362-4015	Terry.L.Hasenauer@uscg.mil

Federal Agencies Continued

Agency	Division	Topic	Point of Contact	Phone	Email
U.S. Environmental Protection Agency (EPA)	Region IV	Potential to release oil or hazardous substance	National Response Center (NRC)	800-424-8802	-
		Planning and coordination	Gary Andrew, RRT IV and ESF-10 Coordinator	678-733-1621	Andrew.Gary@epa.gov
		Capability contact	EPA Region IV Duty Officer	404-562-8700	-
U.S. Fish and Wildlife Service (USFWS)	Ecological Services Program	Compliance and permitting expertise	John Ellis, Ecological Services Office	-	john_ellis@fws.gov
	National Wildlife Refuges	Alligator River NWR	Scott Lanier		scott_lanier@fws.gov
		Cedar Island NWR	Kevin Keeler	252-225-2511	Kevin_keeler@fws.gov
		Mattamuskeet NWR	Keith Ramos	-	Keith_Ramos@fws.gov
		Pea Island NWR	Arthur Beyer	-	arthur_beyer@fws.gov

8.4 North Carolina Legislation Applicable to Waterway Debris Response

- Delegation and Exercise of the General Police Power (N.C. Gen. Stat. § 153A Article 6)
    - Removal and disposal of abandoned and junked motor vehicles; abandoned vessels (N.C. Gen. Stat § 153A-132)
    - Counties enforce ordinances within public trust areas (Gen. Stat § 153A-145.3)
- Lands Adjoining Coastal Waters (N.C. Gen. § 77 Article 3)
    - Seaward boundary of coastal lands (N.C. Gen. § 77-20 (a))
- Navigation (N.C. Gen § 76)
    - Navigable waters; certain practices regulated (N.C. Gen § 76-40)
- North Carolina Emergency Management Act (N.C. Gen § 166A)
    - Powers of the Secretary of Public Safety (N.C. Gen. § 166A-19.11)
    - State emergency assistance funds (N.C. Gen. § 166A-19.41)
- Salvage of Abandoned Shipwrecks and Other Underwater Archaeological Sites (N.C. Gen. § 121 Article 3)
    - Title to bottoms of certain waters and shipwrecks, etc., thereon declared to be in state (N.C. Gen. § 121-22)
- Water Resources (N.C. Gen. Stat. § 143 Article 38)
    - Powers and duties of the Department (N.C. Gen. Stat. § 143-355(b)(5))

Penny Pritzker
United States Secretary of Commerce

Dr. Kathryn D. Sullivan
Under Secretary of Commerce for Oceans and Atmosphere

Dr. Russell Callender
Assistant Administrator, National Ocean Service