NRT

# ABANDONED VESSEL AUTHORITIES AND BEST PRACTICES GUIDANCE

## 2020 UPDATE
## VERSION 10

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# Executive Summary

This National Response Team (NRT) document provides guidance for the federal response community in developing solutions for the abatement of pollution from abandoned vessels. This document also examines options applicable to the removal and disposition of abandoned vessels, including existing state programs. Developed in response to growing concerns over abandoned vessels throughout United States (U.S.) waters, the *Abandoned Vessel Authorities and Best Practices Guidance* is designed to provide the federal response community with information about the regulatory and policy authority of each agency having a major nexus to abandoned vessels; roles and responsibilities of each agency pursuant to those authorities; best practices used for responding to abandoned vessels; and options for removal and ultimate disposition of abandoned vessels.

This document offers a wide array of solutions to abandoned vessels including abatement of pollution, removal of the abandoned vessels through a variety of alternative programs, or application of navigable waterway solutions (e.g., Notice to Mariners or Markings). Based on previous case studies, it has been observed that a combination of both federal and state authorities and programs may provide the most effective and comprehensive approach for addressing abandoned vessels. This document is designed to be a living document and will be updated with the most current technological and programmatic developments and information regarding abandoned vessel abatement and disposition. This document will be periodically reviewed and updated by the NRT as appropriate.

# Acknowledgements

The NRT acknowledges its member agencies as well as other state, federal, and tribal agencies for their contributions in preparing this document. We invite comments or concerns on the usefulness of this document in all-hazard planning for responses. Please send comments to:

U.S. National Response Team NRT Preparedness Committee

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Or via email to:
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U.S. NRT Member Agencies:

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For more information on the NRT, please visit *www.nrt.org*.

# How to Use This Guidance

This document is designed for the federal response community to use as a desk reference tool for abandoned vessel response.[1] Developed jointly by the NRT's 15 member agencies, this document includes key information pertinent to addressing legal authorities to act, as well as best practices and lessons learned from previous responses. Case studies from a variety of responses have been included, such as small marina vessels, larger abandoned commercial vessels, and post-Stafford Act disaster responses, such as post-hurricane debris and vessel removal operations. Best practices are incorporated, as appropriate, into these sections and into the Case Studies in Appendix A, which consider both smaller abandoned vessels as well as larger submerged legacy wrecks.

The *Abandoned Vessel Authorities and Best Practices Guidance* is divided into six key sections, and is formatted to follow the same general phases of response employed during pollution abatement and removal operations.

***Section 1.0 – Background and Purpose*** includes information on the purpose and background of this Guidance, assumptions, and the overarching pattern of response for abandoned vessels.

***Section 2.0 – Definition of Terms*** provides information on the terms associated with abandoned vessels.

***Section 3.0 – Initial Assessment*** describes the steps involved in abandoned vessel assessment, including documentation and safety considerations.

***Section 4.0 – Response Authorities*** provides an overview of the applicable laws and regulations relating to abandoned vessels, wrecks, and hazards to navigation.

***Section 5.0 – Funding Authorities*** provides information on the use of federal funds for the removal of abandoned vessels, when funds can be used, when they cannot, and under what authorities.

***Section 6.0 – Vessel Removal and Options for Ultimate Disposition*** describes response options based on federal authorities and funding established in previous sections. This section discusses various removal methods, constraints, and documentation procedures for response activities.

This document also includes a series of appendices designed to provide additional reference materials and tools. These include:

***Appendix A: Abandoned Vessel Response Case Studies*** provides a synopsis of a variety of vessel removal cases, including state removal; removal after a natural disaster; dismantling for recycling, scrapping, and/or disposal on land; and removal by other federal agencies.

***Appendix B: Technical Specialist and Special Teams*** includes additional information on special teams available to the federal On-Scene Coordinator (OSC)/Captain of the Port (COTP) for assistance with abandoned vessel operations.

***Appendix C: State Abandoned Vessel Programs*** provides a summary of state abandoned vessel programs (if applicable), including whether they are funded and any applicable statutes. This section is developed to assist OSCs in capitalizing on existing programs in addition to federal resources.

[1] Under 40 C.F.R. §300.120(b), USCG COTPs serve as the designated OSCs for areas in the coastal zone for which an Area Contingency Plan (ACP) is required.

***Appendix D: Pollution Mitigation of Legacy Wrecks*** provides a primer on submerged legacy wreck abatement. This section focuses primarily on pollution abatement, rather than removal of submerged wrecks.

***Appendix E: Abandoned Vessel Program Development*** offers examples of programs that have been successful in abandoned vessel removal and makes recommendations for local and regional abandoned vessel program development.

***Appendix F: EPA Ocean Disposal Permitting Program*** provides regulations applicable to EPA's ocean disposal general permit process.

***Appendix G: References and Additional Reading Materials*** provides references, worksheets, and samples of products and other materials to assist OSCs in performing their responsibilities.

***Appendix H: Acronyms*** identifies acronyms and abbreviations.

# Section 1.0 Definition of Terms

The following terms are those most commonly associated with abandoned vessel removal and pollution abatement activities by OSCs, RRTs, state officials, first responders, and other stakeholders. These terms and definitions may vary among different federal and state laws, regulations, and guidance. **The use of these terms in this Guidance do not cover all interpretations of vessel abandonment, and is not intended to, nor does it supersede any legal determinations under federal or state law.**

## Abandoned Vessel

The Rivers and Harbors Appropriation Act of 1899 (RHA) contains several sections known as the Wreck Act that addresses sunken vessels.[2] There is a statutory presumption under the Wreck Act that sunken vessels that are not removed within 30 days are abandoned.[3] Under the implementing regulations of the Wreck Act, "'Abandonment' means the surrendering of all rights to a vessel (or other obstruction) and its cargo by the owner, or owners if vessel and cargo are separately owned."[4] These implementing regulations specifically note that they are applicable to the removal of wrecks or other obstructions within the navigable waters of the U.S., but they do "not apply to the summary removal or destruction of a vessel by the USCG under authority of the Clean Water Act (CWA)."[5] Accordingly, the requirements below for establishing "abandonment" are generally applicable to the U.S. Army Corps of Engineers' (USACE) under the RHA. "In all cases other than emergency, abandonment will be established as a precondition to Corps removal, to avoid a "taking" of private property for public purposes. Abandonment is established by either: Affirmative action on the part of the owner declaring intention to abandon, or failure to commence immediate removal of the obstruction and prosecute such removal diligently." [6]

In its policy statement on "Removal of Wrecks and Other Obstructions," USACE defines "abandonment" as follows: "Abandonment is an owner's giving up the exclusive right to salvage and an indication of no intent to claim the vessel. Abandonment DOES NOT relieve the owner of his/her legal obligation to remove the wreck or of liability for damages caused by the wreck (unless he or she is a non-negligent owner of a wreck which sank before enactment of PL 99-662, 17 November 1996).[7] "Abandon," as defined by the Abandoned Barge Act of 1992, means "to moor, strand, wreck, sink, or leave a barge of more than 100 gross tons…unattended for longer than forty-five days."[8]

"Abandoned vessels" has also been defined by the USCG in its October 2011 Commandant Instruction 16465.5 addressing "Vessel Removal/Destruction under the Federal Water Pollution Control Act [FWPCA] or Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA]" to mean "any craft designed for navigation that has been moored, stranded, wrecked, sunk, or left unattended for longer than 45 days. A vessel is not abandoned if it is on private property with the permission of the owner." Commandant Instruction M16465.43, 5 April 1996, includes the same definition of "abandoned vessel."[9]

## Coastal Waters

"Coastal waters" means "…the waters of the coastal zone except for the Great Lakes and specified ports and harbors on inland rivers."[10]

## Coastal Zone

[2] 33 U.S.C. §§ 409, 411, 412, 414 & 415.
[3] 33 U.S.C. § 414(a).
[4] 33 Code of Federal Regulations (C.F.R.) § 245.5
[5] 33 U.S.C. § 1321
[6] 33 C.F.R. § 245.45
[7] Department of the Army, Regulation No. 1130-2-250, Chapter 4, 26 November 1996
[8] 46 U.S.C. § 4701(1)
[9] 40 C.F.R. § 300.5
[10] 40 C.F.R. § 300.5

"Coastal zone" means "all [U.S.] waters subject to the tide, [U.S.] waters of the Great Lakes, specified ports and harbors on inland rivers, waters of the contiguous zone, other waters of the high seas subject to the NCP [National Oil and Hazardous Substances Pollution Contingency Plan], and the land surface or land substrata, ground waters, and ambient air proximal to those waters. The term coastal zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/USCG agreements and identified in federal regional [and area] contingency plans."[11]

## Derelict Vessels

For purposes of this document, "derelict" refers to a vessel with an identifiable owner that has been left unattended and is in significant disrepair, as described in Section 1 of this Guidance.

## Inland Waters

"Inland waters" means "the waters of the inland zone, waters of the Great Lakes, and specified ports and harbors on inland rivers."[12]

## Legacy Wreck

"Legacy Wreck" is a term of art used in this document to generally describe sizeable and long-submerged shipwrecks. The term "Historic Wreck," where used in this document, applies to those wrecks applicable under the National Historic Preservation Act (NHPA), Abandoned Shipwreck Act (ASA), and Sunken Military Craft Act.[13]

## Marine Debris

"(a) Marine debris. For the purposes of the Marine Debris Act of 2012 (33 U.S.C. § 1951–1958) only, 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 the Great Lakes. (b) NOAA [National Oceanic and Atmospheric Administration] and USCG have jointly promulgated the definition of marine debris in this part. NOAA's regulation may be found in 15 C.F.R. Part 909."[14]

When the final rule was published, in response to comments about the definition of "marine debris," USCG and NOAA explained that "an item or piece of an item originally placed or permitted in the marine environment, but that subsequently breaks apart, becomes lost, or is no longer actively monitored, could be considered disposed of or abandoned and would meet the definition of marine debris."[15]

## Navigable Waters

The CWA at 33 U.S.C. § 1362(7) defines "navigable waters" as "the waters of the United States, including the territorial seas." The NCP in 40 C.F.R. Part 300.5 and the implementing regulations for the CWA interpret the term to include:

- "All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;
- Interstate waters, including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, and wetlands, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters;

[11] Ibid
[12] Ibid
[13] https://www.history.navy.mil/research/underwater-archaeology/policy-and-resource-management/permits.html
[14] 16 33 C.F.R. § 151.3000
[15] 74 Fed. Reg. 45555, 45558 (3 September 2009)

- That are or could be used by interstate or foreign travelers for recreational or other purposes;
- From which fish or shellfish are or could be taken and sold in interstate or foreign commerce;
- That are used or could be used for industrial purposes by industries in interstate commerce;
- All impoundments of waters otherwise defined as navigable waters under this section;
- Tributaries of waters identified in paragraphs (a) through (d) of this definition, including adjacent wetlands; and wetlands adjacent to waters identified in paragraphs (a) through (e) of this definition: Provided, that waste treatment systems (other than cooling ponds meeting the criteria of this paragraph) are not waters of the [U.S.];
- Waters do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the [CWA], the final authority regarding [CWA] jurisdiction remains with EPA."16

## Navigable Waters of the U.S., Navigable Waters, and Territorial Waters

Under Title 33 C.F.R. § 329.4: "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." This definition is used by USACE for the RHA, including the Wreck Act. Under Title 33 C.F.R. § 2.36, these terms are defined as follows:

- "(a) Except as provided in paragraph (b) of this section, *navigable waters of the [U.S.], navigable waters, and territorial waters* mean, except where Congress has designated them not to be navigable waters of the [U.S.];
- Territorial seas of the [U.S.];
- Internal waters of the [U.S.] that are subject to tidal influence; and
- Internal waters of the [U.S.] not subject to tidal influence that:
    - Are or have been used, or are or have been susceptible for use, by themselves or in connection with other waters, as highways for substantial interstate or foreign commerce, notwithstanding natural or man-made obstructions that require portage, or
    - A governmental or non-governmental body, having expertise in waterway improvement, determines to be capable of improvement at a reasonable cost (a favorable balance between cost and need) to provide, by themselves or in connection with other waters, as highways for substantial interstate or foreign commerce.
- *Navigable waters of the [U.S.] and navigable waters*, as used in sections 311 and 312 of the [FWPCA], as amended, 33 U.S.C. § 1321 and 1322, mean:
    - Navigable waters of the [U.S.] as defined in paragraph (a) of this section and all waters within the [U.S.] tributary thereto; and
    - Other waters over which the Federal Government may exercise Constitutional authority."

[16] 40 C.F.R. § 110.1 and 40 C.F.R. § 300.5

## Ship

"Ship" means a seagoing vessel of any type whatsoever, and any floating craft, except an installation or device engaged in the exploration and exploitation of the resources of the seabed and the ocean floor and the subsoil thereof.[17]

## Vessel

Generally, under CERCLA, the CWA and the NCP, the term "vessel" means every description of watercraft or artificial conveyance used, or capable of being used, as a means of transportation on water. Specifically, the NCP explains that "'vessel' as defined by section 101(28) of CERCLA, means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water; and, as defined by section 311(a)(3) of the CWA, means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel."[18]

[17] 33 U.S.C. § 1471(5)
[18] 40 C.F.R. § 300.5

# Section 2.0 Background and Purpose

## 2.1 Purpose

The Abandoned Vessel Authorities and Best Practices Guidance is designed to provide federal responders with: Information on the regulatory and policy authority of agencies having a major nexus to abandoned vessels; Roles and responsibilities of each agency pursuant to those authorities; Best practices used for responding to abandoned vessels; and Options for removal and ultimate disposition of abandoned vessels.

The NRT urges OSCs to actively engage with members of federal, state, local, tribal, and industry groups to assess this Guidance and identify areas for improvement. This Guidance is a living document, and changing technologies, accumulated experience, and operational improvements are expected to bring about revisions. Please provide recommendations for improvements and updates to this Guidance to your RRT co-chairs. RRT co-chairs may forward recommendations to the chair of the NRT Preparedness Committee.

## 2.2 Background

At the 2011 NRT-RRT Co-Chairs conference, representatives from the USCG and NOAA presented a session on abandoned vessels. Based on issues discussed during the session, the NRT Executive Secretariat agreed there was a need for the NRT to identify interagency best practices when responding to abandoned vessels. A workgroup was then convened under the NRT Preparedness Committee and co-chaired by the USCG and NOAA.

The NRT developed this document to establish a compendium of key laws and authorities relating to abandoned vessel mitigation, as well as special teams and best practices available to the OSC/COTP to address these cases. Currently, a variety of federal, and in some cases state, statutes address different aspects of the abandoned vessel problem. Yet in no instance is there comprehensive policy to address the growing issue. Although there is funding available to remove pollutants and vessels posing a hazard to navigation, these characteristics are not inclusive of all abandoned vessels. Throughout the U.S. and its territories, thousands of vessels remain abandoned, either left to deteriorate by the owner or operator or as the product of a catastrophic event resulting in the loss of the vessel. Generally unsightly, abandoned vessels pose a threat to the environment, human health, and navigational safety. Abandoned vessels can create obstructions to navigation, as the vessel deteriorates; damage important ecosystems, by scarring sensitive habitats like corals, oyster reefs, and marsh grass; or by discharging oil and/or hazardous substances into the environment. Additionally, these abandoned vessels have the potential to become illegal dumping sites for trash, oil, and other hazardous substances.[19]

The foremost challenges in addressing abandoned vessels will be identifying vessels throughout various regions of the U.S., prioritizing the threat posed to public health and the environment, determining jurisdictional authority, identifying an owner/operator or lessee, and evaluating the potential for removal.[20] Additional challenges include the demanding nature of vessel removal and/or mitigation of the wrecks and abandoned vessels. Because no single law exists that comprehensively addresses abandoned vessels, OSCs/COTPs in many cases will need to work collaboratively with other agencies, paying careful attention to each law's limitations.

The ultimate disposition of the vessel and/or wreckage is also a challenge. While some intact vessels may retain positive value and could be sold at auction, another insolvent owner may take possession and create another problem at a later time. Proper vessel disposal and management options are limited and costly, resulting in some vessels being seized and auctioned, rather than being dismantled for recycling or scrapping, used for an artificial reef, or disposed of on land. Several high profile vessels, including the

[19] The M/V Kimton in Puerto Rico demonstrated that simply removing oil from a grounded vessel in not necessarily the best alternative and may unintentionally enable illegal dumping of oil and hazardous substances. See Kauffman, M and Mosley, D. (2003). M/V Kimton: A Case Study of The U. S. Coast Guard's Abandoned Vessel Program. International Oil Spill Conference Proceedings: April 2003, Vol. 2003, No. 1, pp. 571-753.

[20] This activity is consistent with recommendations by the 1992 Government Accountability Office (GAO) Report "Abandoned Vessels Are Polluting the Waterways."

F/V DEEP SEA in Whidbey Island, Washington, went through a series of insolvent owners before sinking and ultimately being dismantled and disposed of by the Washington State Department of Natural Resources (DNR). Environmental concerns about the fate of the wastes are an important consideration when determining the ultimate disposition option for a specific abandoned vessel, as many older vessels contain oily sludge, asbestos, and other hazardous substances.

## 2.3 Considerations and Assumptions

Regional and geographic concerns were considered in the development of this document, including environmental sensitivity, threat to public and maritime commerce, stakeholder concerns, and frequency of the occurrence of incidents. Case studies and technical reports from across the U.S. and its territories were evaluated to address the topic as broadly and accurately as possible. This Guidance examines existing international treaties and federal and state statutes to create a broader awareness of the range of requirements currently applicable to abandoned vessels. Awareness of these laws also promotes partnerships in the mitigation and removal of these potential threats from the navigable waters of the U.S.

It is assumed that vessels discussed within this document are abandoned. Abandoned and derelict are two terms commonly used to describe vessels of significant disrepair and without ownership. The definition of each term can vary, especially in state programs. For the purposes of this document, the terms are defined as follows:

***Abandoned*** refers to "the surrendering of all rights to a vessel (or other obstruction) and its cargo by the owner, or owners if vessel and cargo are separately owned." See Section 2.0 for specific language.

***Derelict*** refers to a vessel with an identifiable owner that has been left unattended and is in significant disrepair, such that may affect the seaworthiness of the vessel or affect the safety of the public or the environment. The term derelict is most commonly used in state statutes and varies from state to state. Derelict should be considered as a stage along the vessel's lifespan decline toward abandonment.

Although some of the authorities discussed in this guidance may also be used to respond to "derelict" vessels where there may still be a viable owner/operator, the focus of this guidance is on the management of abandoned vessels due to unavailability of the owner/operator. The term "abandoned" is what nearly all federal statutes use to authorize removal if it relates to a marine debris or a navigational hazard. CERCLA and CWA do not use the term "abandoned." Rather, the trigger for taking a response action to address a "vessel" (abandoned or not) under these Acts is generally based on the risk to public health or the environment from the release or substantial threat of a release of a hazardous substance, or discharge or substantial threat of a discharge of oil.

# Section 3.0 Initial Assessment

## 3.1 Introduction

The initial assessment of an abandoned vessel is the first and arguably most critical element of the response. The information gathered during this phase will help determine which authorities are applicable, the most appropriate action to be taken, what funding can be used, and, if necessary, what methods of vessel removal or pollution mitigation are most appropriate under the circumstances. It should be noted that OSCs may need to gain access to the abandoned vessel to conduct the initial assessment and, later, the response. While Section 4.0 describes various access authorities under the federal response authorities, it is beyond the scope of this Guidance to address physical access authorities in significant detail. Additional information and detail is available in EPA and USCG internal guidance documents.

Abandoned vessels may range considerably in size and type of service, with the complexity of the response generally increasing proportionately with the size of the vessel. Notwithstanding, there are common initial assessment questions that would help responders characterize the response complexity and resources at risk, regardless of the vessel's size. Responders are highly encouraged to conduct photo documentation in the initial assessment and store imagery in an appropriate database. Photo documentation provides a record of assessment and removal activities. In addition, imagery can be invaluable in litigation and in cases of "chronic" stranded derelict vessels, etc. Resources for photo documentation could include public and agency Geographic Information Systems (GIS) software.

## 3.2 Initial Field Assessment

### *Initial Assessment Considerations*

- Vessel location (moored, stranded, at anchor, or submerged)
- Vessel load and threat of pollution
- Is the vessel posing an obstruction to navigation? [21]
- Owner/operator or lessee information (some vessels are well known, long-time derelicts)
- Physical construction and condition (wood, steel, fiberglass, or composite)
- Potential link to illegal activities
- Vessel type (fishing vessel, yacht, barge, etc.)
- Size/vessel tonnage (over or under 100 displacement tons)
- Propulsion type (e.g., sail or motor)
- Flag state of vessel (foreign flagged vessels may need to be assessed under international regimes)
- Sensitive habitat or protected resources
- Potential historic preservation and gravesite status[22]

Below is an expanded discussion of some of these initial assessment elements.

[21] See 33 CFR § 245.20(a) for a list of factors used by USACE to determine whether a wreck is a hazard to navigation.
[22] The State Historic Preservation Officer and any relevant tribes should be contacted about potential impacts to historical and cultural resources.

### *Vessel Location*

The OSC/COTP should obtain a latitude/longitude for the vessel, distance to shore, depth, current, visibility, and a general geographic description of the area where the vessel is located. USACE districts have survey equipment and other resources needed for this determination, and may be able to provide some of this information. If the vessel lies in or is immediately adjacent to a federal navigation channel and poses a potential hazard to navigation, removal oversight is provided by the USCG or USACE within their specific navigation authorities. Both agencies will collaborate and determine who leads the removal oversight and the appropriate action(s) to be taken.

The following information is required to determine appropriate removal:

- Is the vessel located in a federally maintained commercial harbor, or a navigable waterway authorized by Congress, and which USACE operates and maintains for general (including commercial and recreational) navigation or in a water area immediately adjacent these areas?
- Does the vessel pose a threat to navigation?
- Does the vessel pose a threat to public health and safety?

The OSC/COTP should study the area and become familiar with geographic and bathymetric features (including contaminated sediment, cable areas, or submerged piping), environmentally sensitive areas, infrastructure (including nearby piers and haul-out facilities), and port facilities that could be impacted or be of use in a response and/or removal of the vessel. Determine whether the vessel is within state waters because state/local agencies may not be able to assist if outside of state waters.

In the case of a beached vessel, determine whether the vessel needs to be secured to shore to keep it from drifting away on the next tide. If the vessel appears in danger of becoming adrift, the owner, operator, or lessee should be notified that the vessel should be secured (as location access and safety allows). Further, identify navigational concerns and proximity to navigational channels/byways, mooring fields, marinas, and any other higher traffic areas. These factors may affect the urgency of the response or the need to warn the public of the location of the vessel. Beached vessels are an attraction to persons who can access the vessel and may pose significant safety issues. An immediate assessment of the risk the vessel presents to human health should also be conducted. In non-emergency situations, it may be necessary to conduct periodic environmental and site assessments in the vicinity of abandoned vessels, performing these activities during routine harbor patrols.

In a situation where the vessel has become abandoned as a result of a declared disaster, and the response is being coordinated under FEMA Mission Assignments, the ownership of the property (to include submerged land) is of utmost importance. Because the Stafford Act is designed to aid state, local, tribal, and territorial governments in response to major disasters or emergencies, vessels located on federally-owned lands are excluded from eligibility for relief efforts under the Stafford Act.

In any case, responders should be aware of the issue of access to private property. If there is any question as to rights of access, ensure that appropriate law enforcement officials accompany response personnel during assessment activities. Entry to spaces that are locked should only be conducted in accordance with specific agency policies regarding private property access. If access to private land is required to support a FEMA Mission Assignment or respond under the NCP, the supporting Agency will generally follow its own authorities. Because no catch-all rule exists governing private land access, each situation will be fact-specific. The on-scene or incident commander and the supporting agency may need to coordinate with federal, state, tribal, or local participants or authorities. When an option, the most efficient result is to obtain landowner permission.

### *Vessel Load and Threat of Pollution*

The OSC/COTP should identify the capacity of the fuel tanks, as well as other cargo aboard that may be considered oil or hazardous substances—for example: batteries, paint, hydraulic fluid in gear or stored, engine/generator crank case oil, propane tanks, and/or packaged cleaners. A lack of oil or hazardous substances aboard may limit response and removal options, which is discussed further in later sections of

this Guidance. It is essential to consult with partner agencies, such as harbormasters, state marine patrol, state environmental responders, local fire departments, and federal partners such as EPA, NOAA, USCG, and USACE. These agencies may already have detailed information about the vessel in question or the resources needed to obtain this detailed information. Local fish and game wardens may also be a potential resource.

### *Obstruction to Navigation*

To the extent authorized by statute or regulation,[23] OSCs/COTPs should consider whether the abandoned vessel poses an actual obstruction to navigation or poses a potential hazard to navigation under conditions that may be reasonably anticipated to occur. The USCG and USACE signed a Memorandum of Understanding (MOU) on October 5, 2012, which outlines procedures for making determinations of hazards to navigations and coordinating mitigation actions when a hazard to navigation exists. The 2012 MOU replaces a Memorandum of Agreement (MOA) of October 1985 between USCG and USACE to mitigate hazards to navigation. USACE issued regulations, 33 C.F.R. Part 245 (Removal of Wrecks and Other Obstructions), describing the administrative procedures and policy it uses in exercising its authority for wreck removal. The procedures are intended to ensure that the impacts of obstructions are minimized, while recognizing certain rights of owners, operators, and lessees.[24] The jurisdiction to exercise authority under this regulation extends inland on navigable waters as defined in 33 C.F.R Part 329, beyond what are traditionally the coastal and inland OSC zones under CWA. (An EPA OSC addressing an abandoned vessel in the inland zone would coordinate with USACE and USCG, as appropriate, on the evaluation of whether the vessel poses an obstruction to navigation.)

### *Owner/Operator Information*

Identifying the owner, operator, or lessee is a critical part of the removal effort. Responders should obtain the name, address, e-mail (if available), and phone/cell numbers for the owner and any relevant operators if possible. Insurance is another key piece of information to seek as quickly as possible. In the case of fishing vessels, the local USCG commercial fishing vessel safety examiner may have detailed information on the vessel and crew. Owner or operator information may be captured from law enforcement databases and programs such as Accurint®, Lexis Nexis®, and Marine Information Safety and Law Enforcement (MISLE), and may also be compiled from local marina operators and municipal law enforcement. If the response is taking place under the Stafford Act, there are several criteria to consider before determining whether the federal agency responding has authority to remove the vessel, which can be found in FEMA's Public Assistance Program and Policy Guide, V3.1.[25] Furthermore, if the craft at issue is a qualifying "abandoned barge," USCG may take action under the Abandoned Barge Act as discussed in the next chapter, including assessing penalties and removing the barge.

### *Physical Construction and Condition*

The OSC/COTP should ascertain the hull material--wood, fiberglass, steel, or composite--and its condition. Determining the hull material, condition of the vessel, and its stability and structural integrity are vital components in assessing the overall safety of any response operation. This applies to floating as well as grounded and submerged vessels. Divers investigating the wreck and responders conducting cleaning operations will need to know the condition of the vessel in order to determine whether it is safe to go in or aboard the vessel.

Assessing the overall structural integrity of the vessel may be important in determining what type and capacity of equipment may be needed and whether it is feasible to successfully raise and/or remove a vessel, especially if the vessel is water-logged or full of sediment. Responders should be prepared for an intact vessel to come apart when raised or moved, so they can deal appropriately with the changed

[23] See, e.g 33 C.F.R. 245 "Removal of Wrecks and Other Obstructions" and 33 C.F.R. 64 "Marking of Structures, Sunken Vessels and Other Obstructions"
[24] 53 FR 27511-02, 1988 (21 July 1988) (Final Rule on Removal of Wrecks and Other Obstructions)
[25] https://www.fema.gov/media-library-data/1525468328389-4a038bbef9081cd7dfe7538e7751aa9c/PAPPG_3.1_508_FINAL_5-4-2018.pdf

circumstances that come with floating or submerged debris. Debris and vessel gear such as fishing rigging and nets may pose a risk to responders, divers, and wildlife.

### *Potential Link to Illegal Activities*

Responders should be mindful that abandoned vessels can be havens for illegal activity. Typically, this means that abandoned vessels could serve as sites to illegally discard pollution or other waste materials, but this could also mean other illegal activities. During the 2012 grounding of the foreign freight vessel M/V JIREH on Mona Island, Puerto Rico, the vessel was found to be carrying numerous illegal immigrants as well as drugs smuggled in ballast tanks. If there are any concerns, responders should contact local law enforcement for any information that can be obtained about the vessel prior to sending investigators or responders aboard.

The government has a broad range of enforcement tools. Frequently, a decision on the best enforcement option can be made only after all of the key facts are known and evaluated. Evidence from abandoned vessel investigations may later be used in a criminal case. The decision as to whether there is evidence of a criminal offense might not be made until after the initial boarding has taken place. Therefore, the federal official removing an abandoned vessel should ensure that any potential evidence is collected and maintained in such a manner as to preserve any evidence that may be useful in subsequent criminal investigation or civil proceedings.

### *Sensitive Habitat or Protected Resources*

In certain situations, oil pollution may not be the primary environmental concern. For example, grounded vessels may injure coral, sea grass, mangroves, other sensitive marine habitats, and irreplaceable historical and cultural marine resources. Likewise, the removal/destruction of the vessels can also cause harm to environmental and other sensitive resources – this includes how removal equipment will access abandoned vessel(s), staging areas, etc. Resource trustees should be incorporated into any response planning to help educate others and help protect sensitive species, ecosystems, and resources. Other threats from abandoned vessels may include antifouling paints, invasive species, nutrient enrichment from rusting steel, dispersion of fishing gear that may entangle marine life, and/or marine debris if the vessel is allowed to deteriorate in place.

In the aforementioned circumstances, natural resource trustees can assist the OSC in ensuring key response priorities are established and objectives met, which include:

- Identify and Prioritize Resources at Risk – Resource trustees can act as a supplement to the applicable ACP information on sensitive resources. Trustees provide local knowledge relevant to area natural resources and the risks posed to them.
- Evaluate Protective Measures and Cleanup Strategies – During a discharge or threatened discharge, resource trustees are ideal members for Shoreline Cleanup Assessment Teams and are vital to the development of cleanup endpoints.
- Post-Cleanup Evaluations – Trustee input in final sign-off criteria during post-cleanup evaluation is desired in a response. Trustees should provide information pertinent to federal lands and resources under their care.
- Manage Endangered Species Act (ESA) and Essential Fish Habitat (EFH) Consultation Issues – Trustees can oversee any applicable consultation issues with regards to ESA-listed species and EFH are addressed in a timely manner.
- Consultation Requirements – In addition to the ESA and EFH consultations, OSCs should ensure any required consultations or permits are conducted/acquired regarding applicable natural and cultural resource laws, including but not limited to: the Marine Mammal Preservation Act (MMPA), National Marine Sanctuaries Act (NMSA), and NHPA. Additionally, OSCs should utilize the expertise of natural and cultural resource trustees to ensure consultation and documentation requirements (e.g., Wetlands Statements of Findings, Special Use Permits, etc. depending on the location and specifics of the situation) are identified and potential issues are resolved.

- Wildlife Rehabilitation – Trustees should work with OSCs to ensure appropriate permits are obtained and organizations are contacted when working with injured wildlife and resources during a response. Trustees should provide guidance to OSCs to ensure wildlife response plans are implemented appropriately.[26]
- Invasive Species – Trustees can help determine the possible presence of invasive species in cases where foreign or domestic vessels are abandoned within U.S. protected waters. Invasive species include not only species introduced from ballast water, but also rats and other non- aquatic nuisance species that may be found on the hull. Some inland areas could have significant concerns about invasive plants and mussels that could be inadvertently transported if a vessel or debris is transported out of the immediate watershed.[27] Ballast water can also transport coral disease, which is a significant management issue for the Caribbean and other areas.
- Biological Monitors –NOAA and DOI may be consulted in situations requiring monitoring of biologic indicator species or sensitive ecosystems. These can provide early signs as to the efficacy of response strategies, and in some cases, provide valuable insights into response impacts to public safety. This type of monitoring can also provide useful data points for NRDA consultation processes.

Through federal action and by encouraging the establishment of state programs, the ESA[28] provides for the conservation of ecosystems upon which threatened and endangered species of fish, wildlife, and plants depend. The Act:

Authorizes the listing of species as endangered and threatened;

- Prohibits unauthorized taking, possession, sale, and transport of endangered species;
- Provides authority to acquire land for the conservation of listed species;
- Authorizes establishment of programs for endangered and threatened wildlife and plants; and
- Authorizes the assessment of civil and criminal penalties for violating the Act or regulations.

Section 7(a)(2) of the ESA requires OSCs to ensure any action authorized, funded, or carried out is not likely to jeopardize the continued existence of any listed species or destroy or adversely modify their critical habitat. Under ESA implementing regulations at 50 C.F.R. Part 402, consultation with the National Marine Fisheries Service (NMFS) and/or the USFWS is required for actions that may affect listed species or designated critical habitat.[29,30]

### *Potential Historic Preservation Status*

Consultation with the appropriate State Historic Preservation Office (SHPO) is a requirement for removal of vessels over 50 years old. An established Programmatic Agreement provides detailed guidance on protection of historic properties during emergency responses under the NCP.[31] The provisions of the Programmatic Agreement and implementing plans will apply in lieu of the provisions of 36 C.F.R. Part 800.

[26] NRT. (1998). Federal Natural Resource Trustees and the ICS [Incident Command System]/UC [Unified Command].
[27] The Aquatic Nuisance Species Taskforce is chaired jointly by the NOAA and the U.S. Fish and Wildlife Service (USFWS).
[28] 16 U.S.C. § 1531, et seq.
[29] 16 U.S.C. § 1536.(a)(2). The lead action agency is responsible for ESA compliance. In accordance with *Inter-agency [MOA] Regarding Oil Spill Response Activities under FWPCA, NCP, and ESA*, NOAA NMFS, and [U.S. Department of Interior] DOI USFWS would be consulted where the response may affect listed species/critical habitat. The NOAA Scientific Support Coordinator (SSC) often helps the federal OSC determine what resources are at risk and what consultations need to be conducted.
[30] ESA consultation can also include the Office of National Marine Sanctuaries in the National Ocean Service in NOAA when actions are either in or could impact national marine sanctuaries.
[31] "Programmatic Agreement on Protection of Historic Properties During Emergency Response Under the NCP," June 1997.

## 3.3 Government Collaboration

There are a host of federal, state, local, and tribal resources available to assist with the initial assessment of abandoned vessels. The USCG maintains vessels capable of transporting responders and investigators to the scene of a vessel. Use of these assets *may be available* depending on current operations, and can be coordinated via the nearest USCG Sector Command Center. The USACE district office has survey vessels for federal navigation channel condition surveys. OSCs should coordinate with their local USACE district office to determine whether an abandoned vessel is in or adjacent to a federal navigation channel. NOAA may be able to provide more detailed bathymetry than available on the chart, or arrange sonar surveys of wrecks. NOAA vessels run surveys of coastal areas and, if in the vicinity of a wreck, may be able to divert to survey the site. NOAA's six Navigation Response Teams are highly mobile and can be deployed to do specialized surveys for emergencies such as opening ports or in support of a response or salvage activity. Other federal agencies or offices (such as the Navy Supervisor of Salvage and USACE) have agreements to assist in federal navigation channel vessel or obstruction removal and disposal as needed. Other federal agencies may also have law enforcement or other capabilities (e.g., NPS law enforcement in coastal parks) that may have equipment, dive teams, local knowledge, investigative skills, etc., to assist USCG and USACE with assessments.

State environmental responders and law enforcement (e.g., departments of environmental protection, state marine patrol, and state police) typically maintain vessels capable of assessing vessel sites as well. In particular, they may have shallow draft vessels with trailer capability that can bring investigators to very shallow areas not accessible from shore. Local harbormasters, police, and/or fire departments are also available resources. Further, state and local law enforcement or other agencies may have dive teams available to assist with the assessment. For example, the City of Boston Police Department has aided in the assessment of submerged barges in Boston Harbor in conjunction with the USCG.

# Section 4.0 Response Authorities

## 4.1 Introduction

When the initial assessment discussed in Section 3.0 is complete, the OSC/COTP should have a better understanding of the threat posed to public health, the environment, and navigation and can select the appropriate authorities under which the vessel problems/dangers/damage can be mitigated. Several federal statutes and regulations govern the mitigation of pollution from and the removal of abandoned vessels and wrecks posing a threat to the navigable waters, including the territorial seas of the U.S. This section explains how the relevant federal laws and regulations relate to the OSC/COTP's authority to mitigate pollution and remove abandoned vessels.

## 4.2 Federal Statutes and Regulations

The statutes and regulations listed below are the primary authorities that facilitate federal action in addressing abandoned vessels. Depending on the circumstances at hand, other authorities may be relied on to mitigate damage from or otherwise address abandoned vessels. The synopses provided below offer a brief explanation of how the authorities relate to abandoned vessel response and should not be relied on as complete summaries of the listed authorities, nor relied upon to interpret these authorities. In any case where these authorities are relied upon, legal counsel should be consulted.

| Title | Statute/ Regulation | Lead Agencies | | | | | |
|---|---|---|---|---|---|---|---|
| | | DOD | DOI | EPA | NOAA | USACE | USCG |
| Abandoned Barge Act | 46 U.S.C. § 4701 | | | | | √ | √ |
| Abandoned Shipwreck Act (ASA) | 43 U.S.C. § 2101 | | √ | | | | |
| Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) | 42 U.S.C. § 9601 | | | √ | | | √ |
| Clean Water Act (CWA) | 33 U.S.C. § 1251 | | | √ | | | √ |
| Intervention on the High Seas Act (IHSA) | 33 U.S.C. § 1471 | | | | | | √ |
| Marine Debris Act | 33 U.S.C. § 1951 | | | | √ | | √ |
| Marine Protection, Research and Sanctuaries Act (MPRSA) | 33 U.S.C. § 1401 | | | √ | √ | | |
| National Marine Sanctuaries Act (NMSA) | 16 U.S.C. § 1431 | | | | √ | | |
| Oil Pollution Act of 1990 (OPA 90) | 33 U.S.C. § 2710-2761 | | | √ | √ | | √ |
| Wreck Act | 33 U.S.C. § 414, 415 | | | | | √ | √ |

| Title | Statute/ Regulation | Lead Agencies | | | | | |
|---|---|---|---|---|---|---|---|
| | | DOD | DOI | EPA | NOAA | USACE | USCG |
| Salvage Facilities Act | 10 U.S.C. § 7361 | √ | | | | | |
| Saving Life and Property | 14 U.S.C. § 88 | | | | | | √ |
| Sunken Military Craft Act | Public Law 108-375, Title XIV,§§ 1401-1408 | √ | | | | | |

*Table 1 – List of Federal Statutes Related to Abandoned Vessel Response and Disposition Options*

### *46 U.S.C. § 4701-4705: Abandoned Barge Act*

The Abandoned Barge Act authorizes USCG OSCs[32] to remove an abandoned barge under specific circumstances. This statute applies to navigable waters of the U.S. including territorial seas as provided in Section 1 of this Guidance. Pursuant to § 4701, "abandon means to moor, strand, wreck, sink, or leave a barge of more than 100 gross tons unattended for longer than forty-five days." Further, the Act initiates civil penalties and outlines removal and destruction procedures. The authority to remove a barge under this statute does not include the removal of pollutants.

### *43 U.S.C. § 2101-2106: Abandoned Shipwreck Act*

Under the ASA, the U.S. declares title to abandoned shipwrecks located in the submerged lands of a state. The federal government then transfers the title to the state whose submerged lands contain the shipwreck.[33] Protected shipwrecks under state care can provide opportunities to recreational divers, tourists, and researchers. Public access to the shipwrecks may be encouraged by states through the creation of underwater parks.

The National Park Service (NPS) publishes guidelines for states and agencies for the development of shipwrecks as cultural resources. The effort facilitates access and utilization of the shipwrecks by a variety of organizations and interest groups including divers and research organizations. The OSC/COTP should consult with the NPS before conducting removal of pollutants from protected wrecks.

Consultation is required of all federal agencies undertaking an "action" under Section 106 of the NHPA. USCG has a specific programmatic agreement that addresses this consultation process. Consultation under Section 106 is with the State and Tribal Historic Preservation Officers and may also include the Advisory Council on Historic Preservation, DOI, NOAA, the U.S. Maritime Administration (MARAD), and Department of Defense (DOD). In addition, there may be additional requirements under the Sunken Military Craft Act.

### *42 U.S.C. § 9601-9675: Comprehensive Environmental Response, Compensation, and Liability Act, CERCLA*

Like the CWA, provides for the removal of hazardous substances when there is a release or substantial threat of a release to the environment, including from abandoned vessels. CERCLA § 104(a)(1) directly authorizes responders to remove or arrange for the removal, or take any other response measures to remove or mitigate a hazardous substance, pollutant, or contaminant when: any hazardous substance is released or there is a substantial threat of such a release into the environment, or there is a release or substantial threat of release into the environment of any pollutant or contaminant which may present an imminent and substantial danger to the public health or welfare.[34] The federal OSC's CERCLA response authorities are detailed within the NCP. In situations when a facility or vessel, which is the source of a

[32] Removal authorities and delegations discussed in further detail in subsection 33 U.S.C. § 1251-1387 below.
[33] Except when the wreck is located on public or Indian land, or is a U.S. warship that has not been affirmatively abandoned.
[34] 42 U.S.C. § 9604

release, is under the jurisdiction, custody, or control of DOD or the Department of Energy (DOE), the response authority resides within that agency.[35] For other federal agencies, the response authority resides with that agency, except for emergencies.

Under CERCLA, designated natural resource trustees can seek damages from responsible parties associated with a CERCLA incident. Damages include natural resource damage assessment, restoration, and replacement of the injured habitat or acquisition of equivalent habitat, and compensation of the public for the value of the injured resources until full recovery. Under CERCLA, the Trustees may consider vessel removal as a viable component of compensation, if debris removal is determined to be an appropriate and preferred alternative for injury compensation.

### *33 U.S.C. § 1251-1387: Federal Water Pollution Control Act , commonly known as Clean Water Act, as amended by the Oil Pollution Act of 1990 and delegations of authority*

CWA Sections 311 (c) and (e) provide authority to remove pollutants from potentially polluting sources, including abandoned vessels. CWA has been amended a number of times. The amendments, in addition to the NCP implementing regulations, all contribute to the OSC's authority. This section explains the pertinent provisions from each amendment. The NCP will also be discussed further below.

CWA authority described here applies to a discharge or substantial threat of a discharge of oil and/or hazardous substances. Except for when explicitly stated otherwise, "removal" under the CWA refers to an activity whereby the responder physically removes the pollutant from the vessel, rather than the vessel from its current environment. It is also important to note the removal of oil and hazardous substances is conducted using separate funding mechanisms – the Oil Spill Liability Trust Fund (OSLTF) and the CERCLA fund, respectively.

Removal authority for oil pollution threats comes from CWA § 311(c), as amended by OPA 90 § 4201, and in accordance with the NCP, 40 C.F.R. Part 300.305(d)(1) to:

- Remove or arrange for the removal of a discharge, and mitigate or prevent a substantial threat of a discharge, at any time;
- Direct or monitor all federal, state, and private actions to remove a discharge; and
- Remove and, if necessary, destroy a vessel discharging, or threatening to discharge, by whatever means are available.

Threat determination and removal authority for the inland zone has been delegated to the EPA Administrator under E.O. 12777.[36] EPA has further re-delegated this authority to the EPA Regional Administrators (RAs). The RAs have re-delegated the authority to the Regional Division Directors that manage the removal programs and, in most cases, have re-delegated the authority directly to the individual OSCs. E.O. 12777 also delegated the authority to determine whether a pollution threat is imminent and substantial, and to take removal action, including vessel removal if required to address the threat in the coastal zone to the Secretary of the Department in which the USCG is operating. This authority has been further delegated to the Commandant and re-delegated further to pre-designated OSCs under 33 C.F.R. Part 1.01-80.

Under 33 C.F.R Part 1.01.-80 the Commandant has not delegated authority to remove or destroy a vessel. Such OSC/COTP actions require Commandant approval.

Under Section 404 of the Clean Water Act, Department of Army authorization is required for the discharge of dredged and/or fill material into waters of the U.S., including wetlands. Cleanup, vessel removal, excavation, and vessel disposal activities may require the discharge of fill material which may result in temporary or permanent impacts to waters of the U.S. It may be necessary for the OCS to obtain any required authorizations from the relevant USACE district regulatory office under Section 404 of the CWA, and/or any other applicable laws and regulations unless otherwise exempted.

[35] Executive Order (E.O.) 12580 (1987)
[36] Section 3 of E.O. 12777 delegated removal authority for both coastal and inland zones to USCG and EPA, respectively.

### *Oil Pollution Act of 1990*

Under OPA, designated natural resource trustees can seek damages from responsible parties associated with an OPA incident. Damages include natural resource damage assessment, restoration, and replacement of the injured habitat or acquisition of equivalent habitat, and compensation of the public for the value of the injured resources until full recovery. Under OPA, trustees may consider vessel removal as a viable component of compensation, if debris removal is determined to be an appropriate and preferred alternative for injury compensation.

Under the NCP, EPA and the USCG have the same authority for response to abandoned vessels, but EPA generally has the lead for discharges or releases into or threatening the inland zone and USCG has the lead in the coastal zone, as agreed upon between an EPA Region and the USCG District for a given area and identified in federal Regional Contingency Plans (RCPs).[37,38] The specific delineation is known as a Response Boundary and the geographical area as an Area of Response. CWA authorizes the OSC to remove or arrange for "the removal of a discharge or a substantial threat of a discharge of oil or a hazardous substance into navigable waters; on the adjoining shoreline; into or on the waters of the Exclusive Economic Zone (EEZ); or that may affect natural resources of the U.S."

### *40 C.F.R. Part 300: National Oil and Hazardous Substances Pollution Contingency Plan*

The purpose of the NCP, under 40 C.F.R. Part 300.3(b) is "[Providing] for efficient, coordinated, and effective response to discharges of oil and releases of hazardous substances, pollutants, and contaminants in accordance with the authorities of CERCLA and the CWA." It provides for: "(b)(3): Procedures for undertaking removal actions pursuant to Section 311 of the CWA."

Except in a case when the OSC is required to direct the response to a discharge of oil, the OSC may allow the responsible party (RP) to voluntarily and promptly perform removal actions, provided the OSC determines such actions will ensure an effective and immediate removal of the discharge or mitigation or prevention of the substantial threat of discharge. The OSC is also authorized to direct all response actions, including arranging for the removal, by whatever means available, of the substantial threat of discharge (including from a wreck).[39] The NCP provides clear response direction, specifically authorizing the OSC to address and remove a vessel, if necessary, to mitigate or prevent substantial threats of discharge.[40]

To stabilize the situation and limit further damage, the NCP directs OSCs to ensure proper measures are taken to secure the source of the spill and remove any remaining oil to prevent additional discharge, minimize continued response action in the future, and lessen the impacts to the environment.[41,42]

### *33 U.S.C. § 1471-1487: Intervention on the High Seas Act*

IHSA provides that "federal intervention actions" occur "upon determination of a grave and imminent danger to the coastline or related interest of the [U.S.]," and authorizes the USCG to ". . . remove or eliminate threatened pollution damage" and "…remove, and if necessary, destroy the ship and cargo which is the source of danger."[43] "Ship" is defined as "(A) a seagoing vessel of any type whatsoever, and (B) any floating craft, except an installation or device engaged in the exploration and exploitation of the resources of the seabed and the ocean floor and the subsoil thereof."[44] CERCLA authorizes funds for high seas intervention activities. High seas refers to waters seaward of the territorial seas of the U.S.[45]

The International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties was adopted in 1969 and allows a coastal nation to take defensive action against a vessel on the

[37] 40 C.F.R. § 300.120(a)
[38] 40 C.F.R. § 300.210(b)
[39] 40 C.F.R. § 300.305(d)
[40] 40 C.F.R. § 300.305(d)(1)(iii)
[41] In most oil spill response and removal cases, an OSC will have an identifiable RP and will be responsible for monitoring the response actions of the RP.
[42] 40 C.F.R. § 300.317
[43] 33 U.S.C. § 1474
[44] See 33 U.S.C. § 1471(5)
[45] 33 C.F.R. § 2(c)

high seas where pollution by oil is threatened. IHSA gives USCG intervention authority in circumstances when a ship is threatening to spill crude oil, fuel oil, diesel oil, or lubricating oil into the seas. Further, USCG has the authority to take measures on the high seas to mitigate such dangers.

The U.S. has implemented the Intervention Convention by enacting IHSA, which authorizes actions that may be taken in the case of imminent danger to the coastline or related interests of the U.S. from pollution or threat of pollution. The measures taken to abate the pollution must be proportionate to the damage (actual or threatened).[46] If actions are not proportionate to the threat, the U.S. or other coastal nations will be liable for damages caused.

Before intervening, the Secretary of Homeland Security must consult through the Secretary of State, with the flag state of the ship involved. Also, the Secretary must consult with any other agency or persons whose interests can be reasonably expected to be affected by the proposed measures, except in cases of extreme urgency.

The Secretary of Homeland Security may coordinate and direct all public and private efforts designed to remove or eliminate the threatened pollution; to undertake the whole or any part of any salvage operation of the polluting vessel; and to remove and destroy the ship and the cargo that is the source of the damage.

### *33 U.S.C. § 1951-1958: Marine Debris Act*

The Marine Debris Act was signed into law in 2006 and amended in 2012 and 2018. The Act established the NOAA Marine Debris Program to address the adverse impacts of marine debris on the U.S. economy, the marine environment, and navigation safety through identification, determination of sources, assessment, prevention, reduction, and removal of marine debris. The Act defines "marine debris" 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 the Great Lakes." The Act also established a program within USCG to reduce violations and improve implementation of the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex V, as well as plans to improve ship-board waste management.

In October 2018, the President signed the "Save our Seas Act of 2018" (Public Law No: 115-265). This law amends and reauthorizes the Marine Debris Act for four years, promotes international action to reduce marine debris in our ocean, authorizes cleanup and response actions needed as a result of severe marine debris events, such as hurricanes or tsunamis, and updates the membership of the Interagency Marine Debris Coordinating Committee. Additionally, the Act authorizes and requires NOAA to work with other federal agencies to develop additional outreach and education strategies to address sources of marine debris.

### *33 U.S.C. § 1401-1445: Marine Protection, Research, and Sanctuaries Act (Title 1)*

The MPRSA, also known as the Ocean Dumping Act, regulates the dumping of all types of materials into ocean waters and strictly limits the dumping of any material that would adversely affect human health, welfare or amenities, marine environment, ecological systems, or economic potentialities.[47] Title I of the Act generally prohibits (1) transportation of material from the U.S. for the purpose of ocean dumping; (2) transportation of material from anywhere for the purpose of ocean dumping by U.S. agencies or U.S. flagged vessels; and (3) dumping of material transported from outside the U.S. into the U.S. territorial sea. A permit is required to deviate from these prohibitions. Under MPRSA, the standard for permit issuance is whether the dumping will "unreasonably degrade or endanger" human health, welfare, or the marine environment. Evaluation of whether degradation would be unreasonable or cause endangerment requires consideration of alternatives to ocean disposal, including land-based alternatives.[48]

EPA is the MPRSA permitting agency for all materials except dredged material. (In the case of dredged material, the decision to issue a permit is made by USACE, using EPA's environmental criteria and

[46] The OSLTF, established by CWA, is available for intervention activities under the IHSA.
[47] 33 U.S.C. § 1402(b)
[48] 33 U.S.C. § 1412(a)

subject to EPA's concurrence.) EPA has issued a general permit under the MPRSA for the transportation and disposal of vessels. The MPRSA implements the requirements of the 1972 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention), the international ocean dumping treaty. The U.S. Government reports the ocean dumping of vessels to the International Maritime Organization pursuant to the London Convention. [49]

### *16 U.S.C. § 1431 et seq: National Marine Sanctuaries Act*

Under the NMSA, NOAA manages a system of 14 marine protected areas in U.S. waters. The statute provides NOAA the authority to address any activities that are likely to destroy, cause the loss of, or injure sanctuary resources. For some sites within the system, this authority includes activities that occur outside the boundaries but that could enter and injure sanctuary resources.

Within these sanctuaries, NOAA can seek damages from responsible parties to cover response, injury and damage assessment, restoration, and replacement of the injured habitat or acquisition of equivalent habitat, and compensation of the public for the value of the injured resources until full recovery. Under the NMSA, NOAA may have financial resources available to assist with the response, particularly if there is no longer a nexus to OPA 90 or CERCLA. The NMSA also requires consultation under Section 304(d)[50] for any activities that are "likely to destroy, cause the loss of or injure a sanctuary resource." During consultation, NOAA may recommend reasonable and prudent alternatives to protect sanctuary resources and to address activities that conflict with site- specific activities such as disturbance of the seabed, and discharge or deposit of materials that could occur during assessment or removal activities.

### *33 U.S.C. §409, 411, 412, 414, and 415: Wreck Act*

The Rivers and Harbors Appropriation Act of 1899 (RHA) contains several sections known as the Wreck Act, which provides USACE the authority to remove sunken vessels that pose an obstruction to navigation. This statute applies to navigable waters of the U.S. as provided in Section 2 of this Guidance. Under the Wreck Act, the owner, operator, or lessee of a submerged vessel is responsible for immediately marking the vessel with a buoy or beacon during the day and a lighted lantern at night.[51] The markings must remain until the vessel is removed. The owner, operator, or lessee is also required to "diligently" commence "immediate" removal of the submerged vessel. If the vessel is not removed within 30 days, it will be considered abandoned and USACE may take action to remove the vessel from the navigable waters.[52] The determination of whether a wreck poses an obstacle to navigation rests initially with USACE and a reviewing court will only overturn the determination if the decision is found to be arbitrary and capricious.

If USACE determines the existence of the submerged or wrecked vessel in the navigable waters of the U.S. is creating an emergency situation, the vessel owner, operator, or lessee will be given 24 hours to begin removal of the vessel using the most expeditious method available.[53] USACE makes every effort to locate, contact, and work with the vessel owner/ operator / lessee. However, if the vessel is not removed or steps are not taken in an expeditious manner to secure the vessel's removal, USACE may intercede to remove, sink, or destroy the vessel to alleviate the situation. The vessel owner, operator, or lessee will then be liable to the U.S. for all costs associated with the government's action. If the owner fails or refuses to reimburse the government within 30 days after notification, the vessel may be sold with the proceeds going to the U.S. Treasury.[54]

Under Section 10 of the Rivers and Harbors Appropriation Act of 1899, Department of Army authorization is required for work or structures in, over, or under navigable waters of the U.S. or that otherwise affects the course, location, or condition of such waters. In addition, the cleanup, vessel

[49] The USCG's role under the MPRSA is primarily related to certain enforcement activities. See, 33 U.S.C. 1417.
[50] 16 U.S.C. § 1434
[51] 33 U.S.C. § 409
[52] 33 U.S.C. §§ 409 & 414
[53] 33 U.S.C. § 415: *RHA, (*b) Removal Authority
[54] Cases such as HOVIC III, Steel oil barge. M/V Baltic Sun, Steel hull freighter. Both removed from Christiansted, U.S. Virgin Islands (USVI) in 1992.

removal, and vessel disposition activities may be regulated. The entity proposing to undertake the activity may need to apply for and receive authorization from the relevant USACE district regulatory office prior to commencing these activities.[55] It may be necessary for the OSC to obtain any required authorizations from the relevant USACE District Regulatory Office under Section 10 of the RHA, and/or any other applicable laws and regulations unless otherwise exempted.

### *33 C.F.R. Part 245: Removal of Wrecks and other Obstructions*

33 C.F.R. Part 245 implements provisions of the Wreck Act, as amended by the Water Resources Development Act of 1986, and also reflects the procedures from an interagency agreement between USACE and USCG. The Water Resources Development Act of 1986 (Pub. L. No. 99-662 §939) amended the Wreck Act by extending jurisdiction to non-negligent sinkings, extending the obligation for marking and removal to vessel operators and lessees (in addition to owners), and providing for reimbursement to the U.S. Treasury for full costs of federal removal and disposal. The USACE criteria for determining a hazard to navigation when evaluating the removal of an abandoned or wrecked vessel under these regulations are found below.

Upon receiving a report of a wreck or other obstruction, District Engineers will consult with the USCG District to jointly determine whether the obstruction poses a hazard to navigation. The factors considered in determining a hazard to navigation may, at a minimum, include:

- Location of the obstruction in relation to the navigable channel and other navigational traffic patterns.
- Navigational difficulty in the vicinity of the obstruction.
- Clearance or depth of water over the obstruction, fluctuation of water level, and other hydraulic characteristics in the vicinity.
- Type and density of commercial and recreational vessel traffic, or other marine activity, in the vicinity of the obstruction.
- Physical characteristics of the obstruction, including cargo, if any.
- Possible movement of the obstruction.
- Location of the obstruction in relation to existing aids to navigation.
- Prevailing and historical weather conditions.
- Length of time the obstruction has been in existence.
- History of vessel accidents involving the obstruction.

After a determination has been made that an obstruction presents a hazard to navigation, District Engineers will consult with the USCG District to determine the appropriate remedial action for the specific situation. Any combination of the following, as noted in 33 C.F.R. § 245.25, may be considered:

- Charting
- Marking
- *Redefinition of navigational area* (e.g., channel, fairway, or anchorage)
- Removal[56]
- Broadcast Notice to Mariners and publication of navigational safety information (regarding location of abandoned vessel or wreck)

[55] 33 U.S.C. § 403

[56] There are several instances where USACE has removed vessels posing a hazard or at risk of posing a hazard to navigation even though the RP has the first responsibility to remove a wreck.

- No Action

The marking of wrecks, regulated under 33 C.F.R. Part 64, is the responsibility of the USCG while removal is at the discretion of the USACE.[57] The USCG and USACE signed a MOU on October 5, 2012 that outlines procedures for making determinations of hazards to navigations and coordinating mitigation actions when a hazard to navigation exists. The 2012 MOU replaces an October 1985 MOA between USCG and USACE to mitigate hazards to navigation.

### *10 U.S.C. § 7361 et seq: Salvage Facilities Act*

The Salvage Facilities Act authorizes contracting of U.S. Navy Supervisor of Salvage (SUPSALV). The Salvage Facilities Act, enacted after World War II, has several objectives, including:

- To provide salvage resources to protect the redeployment of government-owned war materiel on chartered ships (but not in excess of national defense needs).
- To foster (but not subsidize) the commercial salvage industry.
- To allow (but not require) the Navy to render salvage services to private vessels when commercial salvors are not available, charging for those services to support the Navy's Salvage facilities.

### *14 U.S.C. § 88: Saving Life & Property*

For the protection of persons and property on the high seas and under the waters over which the U.S. has jurisdiction, 14 U.S.C. § 88 authorizes USCG to "destroy or tow into port sunken or floating dangers to navigation." This law applies to scenarios such as the Japanese F/V RYOU-UN MARU, which was intentionally destroyed by USCG in 2012.[58] The vessel, having drifted for more than a year as a result of an earlier tsunami in Japan, posed a significant danger to safe navigation and threatened to impact Alaskan shores, potentially discharging significant amounts of oil.

### *Public Law 108-375, Title XIV,§§ 1401-1408: Sunken Military Craft Act*

The Sunken Military Craft Act (SMCA) was enacted on October 28, 2004. Its primary purpose is to preserve and protect from unauthorized disturbance all sunken military craft that are owned by the United States government, as well as foreign sunken military craft that lie within U.S. waters. Pursuant to the SMCA, the Navy's sunken military craft remain property of the U.S. regardless of their location or the passage of time and may not be disturbed without the permission from the U.S. Navy. While the Department of the Navy (DON) prefers that non-intrusive in situ research take place on sunken and terrestrial military craft, federal regulations (32 CFR 767) provide for a process by which the DON may authorize disturbance, removal, or injury of sunken or terrestrial military craft under its jurisdiction for archaeological, historical, or educational purposes.[59]

### *Other Federal Authorities*

Other federal government agencies may have authorities when abandoned vessels are on their land or threaten lands under their care, e.g., NOAA (National Marine Sanctuaries), NPS (National Parks), USFWS (National Wildlife Refuges), and DOD facilities.

## 4.3 Post-disaster Response Authorities

The Robert T. Stafford Act as amended[60] (Stafford Act) provides a systematic and organized process for providing federal assistance in support of major disasters and emergencies. The Stafford Act gives the

[57] The marking and removal of wrecks is governed by sections 15, 19 and 20 of the Wreck Act, as amended (33 U.S.C. §§ 409, 414, & 415).
[58] Although this case was within U.S. waters, the variables surrounding the case are comparable to those that may require invocation of IHSA.
[59] This website provides information on the permitting program and contains additional information on the SMCA: https://www.history.navy.mil/research/underwater-archaeology/policy-and-resource-management/permits.html
[60] 42 U.S.C. 5121-5207

Federal Emergency Management Agency (FEMA) the responsibility for coordinating federal government-wide efforts to provide relief to impacted state, local, tribal, and territorial governments.

In this section, the authorities for abandoned vessels as they apply to a major disaster or emergency, such as a major hurricane or other catastrophic event or emergency, will be defined. In a major disaster, state and local resources available to respond may become overwhelmed. As a result, it becomes increasingly important to assess and prioritize removal activities.[61] To support these efforts, state programs will likely require federal assistance. In these instances, the President, at the request of the governor of the affected state and/or Chief Executive of a federally-recognized Indian tribe or nation, can make a declaration enabling access to federal aid and support under Mission Assignments. Authorized under FEMA's discretion, Mission Assignments will largely govern which responding agency will be responsible for the coordination of these efforts. Authorities under the Stafford Act and funding avenues are detailed in this section.

In an effort to clarify federal emergency assistance for removal of debris in waterways under the Stafford Act, FEMA issued Recovery Policy 9523.5, "Debris Removal from Waterways" on 30 October 2012, which has been superseded by the Public Assistance Program and Policy Guide (PAPPG) most recently updated in April 2018. PAPPG establishes eligibility for debris removal and disposal activities for eliminating threat to lives, public health, and safety, or significant damage to improved public or private property.[62] In particular, responders acting under Mission Assignments may take action to remove and dispose of debris that obstructs the passage of vessels in navigable waterways to a maximum depth of two feet below the low-tide draft of the largest vessel that utilized the waterway prior to the incident.

Debris removal is not eligible in federally maintained navigable channels and waterways; flood control works under the authority of the Natural Resources Conservation Service (NRCS); agricultural land; and natural, unimproved land, such as heavily wooded areas and unused areas.[63]

For more information on specific eligibility, please see page 44 of the Public Assistance Program and Policy Guide.

### *Oil and Hazardous Materials Response – Emergency Support Function (ESF)-10*

When a Presidential Emergency or Major Disaster Declaration is made, FEMA may activate the EPA and USCG to coordinate activities under ESF-10 of the National Response Framework (NRF) to address responses to hazardous substances and oil incidents caused by or threatened to be caused by a major disaster or emergency. As requested by a state or tribe, FEMA may provide a Mission Assignment to support oil and hazardous substances response and related activities, including sampling, classification, packaging, transportation, treatment, and disposal of oil or hazardous materials. The NCP generally serves as the basis for actions taken when an ESF-10 Mission Assignment is activated. During Stafford Act responses, however, some procedures in the NCP may be streamlined or may not apply. When ESF-10 is activated, an EPA OSC is typically assigned as the on-scene ESF-10 EPA Incident Commander (IC). For USCG activities, the federal OSC of the affected zone may act as the IC or may designate an incident-specific IC.

OSCs should also be aware that if a Stafford Act incident occurs involving a chemical, biological, radiological, or nuclear (CBRN) blast or explosion, which results in a CBRN-contaminated debris field that includes abandoned vessels, EPA, USACE, and FEMA have signed a MOU that delineates roles and responsibilities for contaminated debris management between ESF-3 and ESF-10.

During Stafford Act responses, if Resource Conservation and Recovery Act (RCRA) hazardous wastes, polychlorinated biphenyls (PCBs) covered by the Toxic Substances Control Act (TSCA), or other

[61] Note: See section 6.6 on Multiple Vessel Casualty situations for more information.
[62] https://www.fema.gov/media-library-data/1525468328389-4a038bbef9081cd7dfe7538e7751aa9c/PAPPG_3.1_508_FINAL_5-4-2018.pdf
[63] https://www.fema.gov/media-library-data/1525468328389-4a038bbef9081cd7dfe7538e7751aa9c/PAPPG_3.1_508_FINAL_5-4-2018.pdf

regulated wastes are generated as a result of abandoned vessel operations, then additional requirements under the relevant laws may apply.

### *Public Works and Engineering – ESF-3*

USACE has primary responsibility for the removal of debris from federally-maintained navigable channels and waterways. Section 202 of the Water Resources Development Act of 1976 (PL 94-587) authorizes the USACE to remove debris from federally-maintained commercial harbors and water areas immediately adjacent thereto. Sections 15 and 19 of the Wreck Act, authorize the USACE to remove sunken vessels. Section 20 of the Wreck Act also allows the USACE to remove certain other obstructions from navigable waterways under emergency conditions. A navigable waterway is one that has been authorized by Congress, and which the USACE operates and maintains for general (including commercial and recreational) navigation. Debris includes, but is not limited to, vegetative debris, construction and demolition debris, sand, mud, silt, gravel, rocks, boulders, and vehicle and vessel wreckage.[64] During the recovery of debris and damaged vessels post-storm, thorough documentation of owner/operator and vessel identification information, as well as method of removal and disposal, if required, becomes vitally important.

The USACE's policy under these authorities is to oversee removal of sunken vessels by an identifiable owner, operator, or lessee if the sunken vessel is in or likely to be moved into a federal navigation channel.

The USACE will remove a vessel using its emergency authorities only if the owner, operator, or lessee cannot be identified or they cannot effect removal in a timely and safe manner. Vessel removal operations conducted under ESF-3 will be coordinated through the USACE as the primary agency and the USCG as a supporting agency, if required to assist. Debris removal activities, such as clearance, removal, and disposal, are eligible as Category A if the removal is in the public interest based on the following:

- Eliminates immediate threats to lives, public health, and safety;
- Eliminates immediate threats of significant damage to improved public or private property;
- Ensures economic recovery of the affected community to the benefit of the community at large; or
- Mitigates risk to life and property by removing Substantially Damaged[65] structures and associated structures and appurtenances as needed to convert property acquired using Hazard Mitigation Grant Program funds for use compatible with open space, recreation, or wetlands management practices. Such removal must be completed within 2 years of the declaration date unless extended by the FEMA Assistant Administrator of the Recovery Directorate.[66]

[64] https://www.fema.gov/media-library-data/1525468328389-4a038bbef9081cd7dfe7538e7751aa9c/PAPPG_3.1_508_FINAL_5-4-2018.pdf

[65] Stafford Act § 407, 42 U.S.C. § 5173, and 44 CFR § 206.224(a).

[66] The term "Federal-aid roads" means the highways on the Federal-aid highway system and all other public roads not classified as local roads or rural minor collectors. The Federal-aid highway system means the National Highway System and the Dwight D. Eisenhower National System of Interstate and Defense Highways (the Interstate System).

## 4.4 Additional Statutes Applicable to Abandoned Vessel Disposition

### *14 U.S.C. § 2601 – 2697: Toxic Substances Control Act*

TSCA, among other things, provides EPA with authority to require reporting, record-keeping, testing, and imposes restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA including, but not limited to, food, drugs, cosmetics, and pesticides. TSCA specifically addresses the production, importation, use, and distribution in commerce of PCBs.

Note: The reefing of a vessel containing PCBs is not authorized under TSCA or EPA's implementing regulations without an approval from EPA. The OSC/COPT should contact the EPA's office for ship disposal issues if reefing is considered the best approach for a vessel containing PCBs.

### *42 U.S.C. § 6901 – 6992: Resource Conservation and Recovery Act*

RCRA gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. Although RCRA is a federal statute, EPA authorizes states to operate the hazardous waste program in lieu of the federal program. Currently, 48 of 50 states implement the hazardous waste program. RCRA also sets forth a framework for the management of non-hazardous solid wastes. The OSC/COTP should consult with state RCRA Coordinators for application of all relevant RCRA regulations from generation of the waste to final disposal. OSCs should also be aware that under RCRA, waste from a vessel is considered "generated" when waste is removed from the vessel (point of generation) and RCRA-specific waste management requirements may apply at the point of generation.

### *16 U.S.C. § 4711: The Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA), as amended*

OSCs overseeing pollution removal operations should also be aware of the potential dangers to the marine environment from the introduction of nonindigenous aquatic invasive species due to either biofouled hulls/debris or the release of untreated ballast water. The threat of invasive species may be of particular concern from a recently abandoned vessel originating from a foreign port. Careful consideration should be given to the discharge of ballast into U.S. waters from these vessels.

## 4.5 Determination of Response Authorities

In general, the same response authorities that apply during any other pollution threat or hazard to a navigation situation also apply to abandoned vessels and wrecks. This includes the flag state of the vessel; whether the vessel is U.S. flagged or foreign flagged, the same authorities apply except for where they are explicitly differentiated. The decision regarding what authorities can and should be used when removing an abandoned vessel or submerged wreck should be based on several criteria, including the location of the vessel, the threat it poses (e.g., is it a hazard to navigation or does it pose a substantial environmental or public health threat due to pollution?), and state and/or federal statutes or regulations that may apply. In many cases, both state and federal agencies may have statutory authorities to address abandoned vessels or submerged wrecks. In these situations, the best response is a joint effort because it will allow for the sharing of resources, enforcement authorities, local environmental knowledge, and salvage expertise.

# Section 5.0 Funding Authorities

Making monetary commitments on behalf of the U.S. Government before there is an appropriation or that causes an agency to exceed the amount of appropriated funds results in a violation of the Anti-Deficiency Act (31 U.S.C. § 1341). The Anti-Deficiency Act generally requires that funding be available prior to any expenditure, with possible disciplinary action resulting from violating the Act. The OSC/COTP must always be mindful of the availability and commitment of funds prior to exercising his or her authorities.

## 5.1 Federal Funding

Funding available for abandoned vessels is directly related to the authorities that may apply to mitigating pollution and removing abandoned vessels, as discussed in Section 4.0. However, funding expressly for the removal of abandoned vessels is minimal among both federal and state agencies. Although there are some provisions in current law that make allowances for the removal of abandoned vessels, these provisions often have caveats that hinder the funding and thus delay prompt removal. Below is information on contracting and funding authorities and limitations for the key federal agencies involved in responding to abandoned vessels.

### *CERCLA Funding*

CERCLA funding, which is generally limited to $2 million and 12 months per removal action unless certain statutory criteria are met, is managed by the EPA. Section 104 of CERCLA authorizes federal removal action for a pollution incident in the following instances:

- Whenever any hazardous substance is released or there is a substantial threat of a release into the environment; or
- Whenever there is a release or substantial threat of release into the environment of any pollutant or contaminant which may present an imminent and substantial danger to public health or welfare.

There are petroleum exclusions under CERCLA, but oil is covered under CWA/OPA 90 (see CWA/OPA 90 and OSTLF section below). Subject to the EPA's CERCLA response delegations, once the EPA determines that a removal action is appropriate, EPA OSCs have no specific delegated or internal guidance restrictions limiting their ability to remove and destroy a vessel.[67] USCG OSCs cannot make the final decision, absent further approval, to use CERCLA funding to remove a contaminated vessel from the coastal environment or destroy it.[68, 69] USCG OSCs must have the Commandant's approval before using CERCLA funding to remove or destroy a contaminated vessel. However, USCG OSCs can take other types of response actions under CERCLA to address releases or potential releases of hazardous substances as well as contaminated debris that threatens the environment. In any case, the use of CERCLA funding for the purpose of removal should be carefully documented to clearly justify the use of CERCLA funds.

### *CWA/OPA 90 and OSLTF*

Similar to CERCLA, the OSLTF, also known simply as the Fund, is available to OSCs pursuant to National Pollution Funds Center (NPFC) policies and procedures when there is a discharge or substantial threat of discharge of oil to waters and shorelines or natural resources as described under CWA 311(c).

When using CWA 311(c) authority with respect to oil discharges or substantial threats, OSCs are encouraged to coordinate planned activities, including any planned assessment activities, closely with NPFC case managers to ensure appropriate funding of activities to remove a discharge or prevent or mitigate a substantial threat of discharge. This is especially important where mixed purposes are being

[67] EPA Delegations Manual, Delegation 14-2 (CERCLA Response), 7 November 2001
[68] 33 C.F.R. §1.01-70
[69] (U.S. Coast Guard) Commandant Instruction (COMDTINST) 16465.29. (1983). *CERCLA Response Authorities and Associated USCG Policies*.

achieved in removing or destroying a vessel, e.g., CERCLA, CWA, navigation safety, disaster, or vessel debris threats to the environment.

At the OSC's discretion, the decision to remove a discharge of oil or prevent or mitigate a substantial threat of discharge could be based on several factors including proximity to environmentally sensitive areas, risk versus gain and other economic impacts, whether adequate response actions are being taken by the polluter or other responder, and whether the oil is deemed a substantial threat to the public health or welfare. The OSC's authority and substantial threat determination are further defined below. For USCG OSCs, if deemed to be the most practical or cost effective method for pollution removal activities, a vessel may be removed or destroyed when approved by the Commandant.[70] Similar to the differences under CERCLA, EPA OSCs do not have any special limitations on their ability to remove or destroy a vessel under Section 311(c) of the CWA as amended by OPA—in fact that authority may be directly delegated to the OSC.[71]

Additionally, designated natural resource trustees can access the OSLTF to assess and/or restore injured natural resources associated with an OPA incident. In rare cases, vessel removal may be considered within the scope of a damage claim to the OSLTF, if debris removal is determined to be an appropriate and preferred alternative for injury compensation for an OPA incident.

### *Stafford Act and Other Funding Authorities*

### Stafford Act Funding

FEMA may fund the certain removal and disposal activities of pollutants and hazardous substances when another federal agency does not have the specific authority to fund the activity.[72] Eligible activities include:

- Separation of hazardous materials from other debris
- Specialized procedures for handling and disposing of hazardous materials
- Control or stabilization of the hazardous material
- Pumping and treating water contaminated with the hazardous material
- Clean-up and disposal of the hazardous material

FEMA has determined the following vessel removal activities are ineligible under Stafford Act:

- The removal of wreckage and sunken vessels from lands, navigable channels, and waterways which are federally maintained.
- The removal of debris from privately owned canals, waterways, and banks.[73]

FEMA may issue a Mission Assignment under ESF-3 to USACE to conduct salvage and debris management activities under the Stafford Act. Stafford Act funding may also be provided to EPA and USCG through ESF-10 Mission Assignments to conduct oil and hazardous materials response related to abandoned vessels.

### *Congressional Supplemental Appropriations to the NOAA Marine Debris Program (MDP) and the NOAA Office of Coast Survey*

Following extreme storm events, Congress has passed supplemental appropriations to NOAA to support surveying nearshore waters, mapping marine debris, disseminating survey information to assist with removal, and informing the public. This occurred after hurricanes Katrina, Rita, and Sandy, and is dependent upon congressional approval. More recently, in 2018 Congress passed supplemental appropriations to NOAA for marine debris assessment, removal, and disposal costs related to the consequences of Hurricanes Harvey, Irma, and Maria; and in 2019 for marine debris removal and disposal

[70] COMDTINST 16465.5, Vessel Removal and Destruction Under CWA and CERCLA
[71] EPA. (1993). *Delegations Manual 2-89, Removal of Discharge or Threat of Discharge.*
[72] 44 C.F.R. § 206.208(c)(2))
[73] There are limited exceptions to the above ineligibilities noted in *RP9523.5, Debris Removal from Waterways*, Section VII.B.6.

costs related to Hurricanes Florence and Micheal, and Typhoon Yutu. These funds were made available via cooperative agreements to impacted states with identified residual marine debris impacts.

### *National Marine Sanctuaries Act (NMSA)*

As noted in Section 4, where there is significant injury to sanctuary resources, NOAA may have funding available under the NMSA for removal activities within sanctuaries for removal of derelict and abandoned vessels, subject to the availability of appropriations.

Similar funds may be available through DOI bureaus, including NPS and USFWS. These funds would be made available to the respective resource trustee and are not used by OSCs.

## 5.2 State Funding

There are a variety of state programs for abandoned and derelict vessels. *Appendix C: State Abandoned Vessel Programs* describes these state programs, provides citations, and indicates whether funding is available. Many states may have programs for the removal of abandoned vessels but lack adequate or continuing funding. In many cases, the vessel can be claimed by the state after a requisite period, removed, and the costs may be partially recouped by public auction. However, as noted earlier in this document, auctioned vessels in poor condition may be abandoned again later.

## 5.3 Determination of Funding Sources for Submerged Wrecks

The figure on the following page outlines specific funding considerations for abandoned wrecks and mitigation of pollution from submerged wrecks. Decision points along the continuum will help OSCs determine the most appropriate funding source for the removal of abandoned vessels. The order of the questions is not intended to represent a preference in using one funding source over another. Further guidance on this subject can be found in Appendix D of this document.

Within USACE, federal removal of submerged wrecks and other obstructions within a federal channel (if determined to be a hazard to navigation and a responsible owner, operator, or lessee is not located) is funded under Maintenance and Operations of Dams. This is a category within the annual USACE Civil Works Appropriation, the “Energy and Water Development and Related Agencies Appropriations Act.”

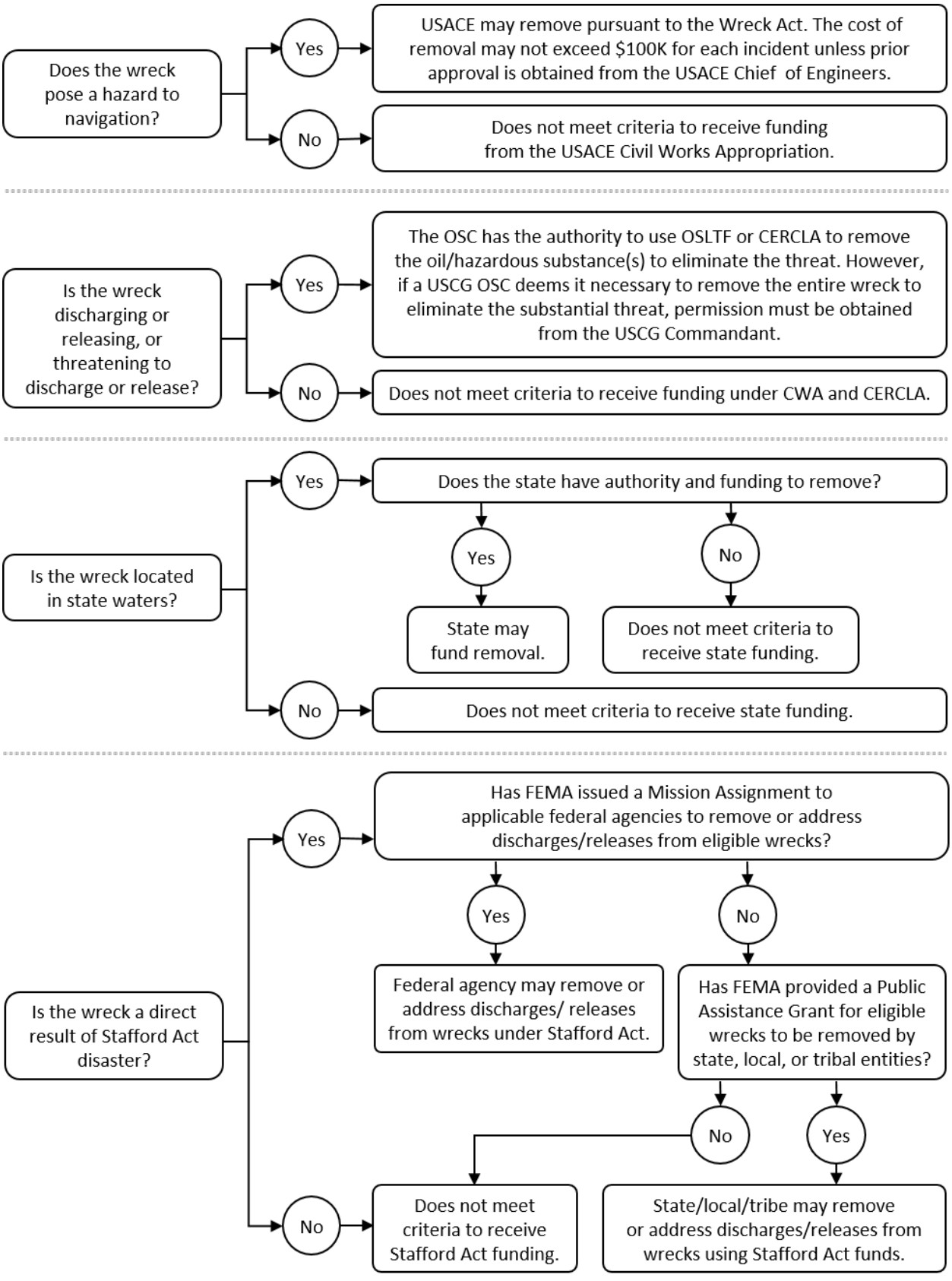



*Figure 1 – Determination of Funding Sources*

## 5.4 Navy Assets and SUPSALV Standing Contracts

SUPSALV maintains a small cadre of government employees who manage and provide technical assistance for salvage, deep search and recovery, towing, and oil spill response operations. These operations can be accomplished using civilian contractors, military assets, or a combination of both. All Navy assets, SUPSALV, and military can be accessed by EPA or USCG OSCs, when available, and at the approval of the Chief of Naval Operations (CNO) or appropriate Fleet Commander. In the case of the USCG, this is done through an established Navy-USCG MOU, which is described in Appendix B. Military assets are under the operational control of Combatant Commanders and subject to military tasking but have often been made available to support USCG missions. All military assets (to include Military Sealift Command ships) are mission funded, which means that operation costs for the OSC acting under CWA 311(c) are limited to directly-related incidentals like travel and consumables. SUPSALV civilian personnel are likewise mission funded. SUPSALV contracts require funding to activate, but in cases where SUPSALV contractors operate government equipment in support of USCG missions, only direct mission costs are charged. All SUPSALV standing contracts are competitively bid. Several may be used in a single operation. The most pertinent SUPSALV contracts are:

- *Emergency Ship Salvage Material (ESSM)* – Maintains and operates a very large array of government-owned, contractor-operated (GOCO) oil spill response and salvage equipment from manned bases in Virginia, California, Alaska, and Hawaii to unmanned facilities in Italy, Bahrain, Singapore, and Japan.
- *Deep Search and Recovery* – Maintains and operates an array of GOCO remotely operated vehicles (ROVs).
- *East Coast Salvage Contract* – Contractor owned and operated (COCO) salvage and towing for the Atlantic and Mediterranean Oceans.
- *West Coast Salvage Contract* – COCO salvage and towing for the Eastern Pacific Ocean.
- *Western Pacific Salvage Contract* – COCO salvage and towing for the Western Pacific and Indian Oceans.

# Section 6.0 Vessel Removal and Options for Ultimate Disposition

## 6.1 Introduction

The response to abandoned vessels for the purposes of removing pollution, potential threats to public health and the environment, and removing the remaining wreckage is predicated on the results of the initial assessment, determination of relevant response authorities, and applicable funding. At this point, the assessment results have been used to determine the appropriate authority and funding mechanisms. The assessment has prepared the OSC/COTP with a realistic picture of the breadth of activities required and potential stakeholders that may be involved in further decision making, e.g., those members that may make up the UC, if one is established.

The information below details tactics that were developed based on case studies of joint federal, state, and local actions to mitigate and remove abandoned vessels and cases where the use of CERCLA or OSLTF was used in conjunction with other agency or jurisdiction efforts. For USCG responders acting under CWA 311(c), removal or destruction of a vessel is a rare occurrence and must be done in accordance with USCG policy, which requires Commandant-level concurrence.

Finally, this Section contains guidance for operations where CERCLA or OSLTF may not be applicable. Processes for abandoned vessel evaluation, management and disposition are presented, although not all steps are applicable under all circumstances.

## 6.2 Discharge/Release or Substantial Threat of Discharge Release of Oil and/or Hazardous Substances[74]

If not being immediately addressed, OSCs should incorporate known abandoned vessel and legacy wrecks of significance into their ACPs and regional Abandoned and Derelict Vessel Tracking Databases. This advanced planning will help OSCs prioritize, plan, and prepare for future response activities relating to abandoned vessels and legacy wrecks. To assist in this effort, NOAA has initiated a comprehensive catalog of legacy wrecks posing a significant threat to inland and coastal zones. This activity is described further in *Appendix D: Pollution Mitigation of Legacy Wrecks.*

When a determination is made that an NCP removal action is appropriate and vessel removal is likely, response should be conducted in a manner that will assist vessel removal operations.[75] Although state and local jurisdictions may have the authority to remove vessels regardless of whether they have pollution on board, they may not have the funding or staff to accomplish the task. Use of NCP or other federal authorities in conjunction with state or local authorities often provides the best chance for a complete elimination of the offending vessel. Case studies of OSLTF- and CERCLA-funded responses consistently underscore this fact.

Abandoned vessels should be continuously monitored by agencies with jurisdiction because waste and other materials may be illegally discarded at these sites. Many abandoned vessels are used repeatedly as receptacles for the illegal dumping of oil and hazardous substances. Abatement activities should be carefully documented to help demonstrate a pattern of repeated mitigation efforts. Consistent documentation will help articulate the need for expedited removal.

If an OSC exercises authority under CERCLA or the CWA to remove and destroy a vessel, the NCP provides the protocol for safely managing and disposing offsite any hazardous substances or oil that may be encountered during the removal action, consistent with any applicable laws.

[74] Discharge includes substantial threat of discharge, and release includes substantial threat of release in accordance with the NCP, 40 C.F.R. § 300.5, Definitions

[75] To keep their historic integrity intact after oil removal, legacy wrecks should not be moved or removed. Most of the wrecks will be in such depths that they are not threats to navigation.

## 6.3 No Discharge/Release or Threat of Discharge/Release of Oil and/or Hazardous Substances

If a determination is made that a removal action, whether coastal or inland, is not appropriate, OSLTF/CERCLA funding will not be available and the authorities to respond will be far more limited. In particular, the USCG may still have a few tools and can work the safety and navigational hazard issues involved. The following are other options:

- As noted in Section 4.0 of this document, USACE has the authority to remove certain obstructions to navigation, including submerged vessels. Depending on the cost of the removal, such an operation may be approved at the District Engineer level. Certain criteria will have to be met before USACE will undertake such an operation. Responders seeking their involvement should consult with them early to ascertain whether they can assist. Aside from contacting the local USACE District, guidance can be found in 33 C.F.R. Part 245 and the "[MOU] between [USACE] and [USCG] Regarding the Mitigation of Obstructions to Navigation (2012)."
- Federal land owners may have authorities. Other government agencies (e.g., NOAA, NPS, USFWS, DOD) may have authorities that they can enact when abandoned vessels are on their land or threaten lands under their care. This has been accomplished on several occasions within the Florida Keys, Channel Islands, Monterey Bay and Gulf of the Farallones National Marine Sanctuaries, as well as the Virgin Islands and Everglades National Parks. Federal statues that authorize federal land management agencies to conduct abandoned vessel management on federal lands include the: The National Park Service Organic Act (16 U.S.C. l, 2, 3, and 4), as set forth herein, consists of the Act of Aug. 25 1916 (39 Stat. 535) and amendments thereto; the Fish and Wildlife Act of 1956 (16 U.S.C. 742a-742j) and amendments; the Federal Land Policy and Management Act 43 U.S.C. §§1701-1785 and amendments; and, the National Forest Management Act Of 1976 and amendments.
- State and local means of removal remain options. State and local methods that have been successful include utilizing state law that authorizes the removal of abandoned vessels, or even seeking a court order locally. As with the USACE process above, these methods are available regardless of whether oil or hazardous materials are on board. Please see *Appendix C: State Abandoned Vessel Programs* for a list of applicable state statutes.

## 6.4 Post Disaster Response Operations

During post-disaster response operations such as after a hurricane, severe storm, or tsunami, vessels often have a registered owner or operator, unlike traditional abandoned vessel cases where there is usually no known RP. Authorities managing vessel recovery operations should not delay in identifying the vessel owner, operator, or lessee. If a vessel is found in a precarious location, likely to refloat and become a hazard to navigation, it is advisable that the vessel be promptly removed and relocated to a temporary staging area. Additionally, in the event the owner, operator, or lessee is located, it is good practice to ensure that a definitive date of removal is established (usually associated with a legal determination that the vessel is abandoned). It should be noted that oftentimes an owner cannot be identified and/or located, or an owner may be unable or unwilling to remove a vessel. If the owner is not able to remove the vessel, or unable to do so in a timely manner, the OSC/COTP should document the date and the vessel identification, location, brief description, condition, and disposition prior to removing and relocating the vessel, if required.

Unless emergency conditions exist, a vessel should not be removed without prior arrangement for disposal, dry storage, or temporary moorage. As practical, ultimate disposition of the vessel should be considered upfront, considering the cost savings of avoiding additional temporary storage and additional vessel movements. All of the arrangements and plans must comply with applicable regulations such as approved sites for storage, etc.

Under ESF-10, and upon request from the State, Territorial, and Tribal governments (STT), the USCG may be mission assigned to assess, mitigate, and remove affected vessels that pose a pollution threat on

behalf of the STT and in accordance with the STTs vessel removal authorities. Early and close coordination with the federal agency mission assigned for debris removal under ESF-3, normally USACE, is vital to ensure that the periods of performance for the ESF-10 and ESF-3 MA align to ensure ESF-3 activities do not cease prior to the removal of all vessels requiring disposal. Early coordination should also take place with the commercial salvage industry to ensure reduced unintentional conflicts and contribute towards logistically and cost effective responses.[76] Vessels that are removed and placed in designated staging areas with the pollution threat mitigated may be considered debris if the vessels are irreparable and/or owners do not exercise their right to retrieve their vessel. The final disposition of these vessels shall be coordinated with STT and/or with the agency mission assigned for debris removal under ESF-3. State governments can request federal support for staging/storage areas from FEMA for mission assignments to appropriate ESFs under the NRF (e.g., ESF-3 or ESF-10, depending on the situation). Both EPA and USCG OSCs are encouraged to engage with local and state government officials to arrange for staging areas in support of significant natural disasters, when appropriate.

Movement and/or potential disposal of displaced vessels is only authorized under an established Mission Assignment requesting federal support in this capacity. In cases where ESF-3 is not authorized for removal activities, other federal options may include USACE authorities, as noted above, or ESF-10, if a Mission Assignment exists for oil and hazardous substances. The coordination of vessel end-state becomes increasingly important in this case so as to preclude vessels becoming abandoned in the marine environment.

### *6.4.1 Considerations for disaster-impacted cases ineligible for Stafford Act relief, OSLTF, or CERCLA funding*

As has been described elsewhere in this Guidance, there are occasions where a vessel that has been impacted by a disaster is displaced and relocated to an area outside of the scope of the Stafford Act: whether that be in a federally-maintained navigation channel, federally owned/ maintained sea floor, or upon federally-owned lands, etc. In cases such as these, if the vessel is not determined to pose an imminent and substantial threat of discharge/release by the cognizant OSC, neither Stafford Act funding nor OSLTF/CERCLA funding may be applied to a removal action. This is also the case when no Stafford Act declaration has been made. This proves especially challenging when multiple vessels are impacted but fall on different sides of property lines or can be differently characterized by the extent to which they pose pollution threats. However, there are still several options available in dealing with vessels that fall into this situation.

When the vessel is grounded or beached on federally-owned land and the vessel owner cannot undertake the removal, the land-owner is responsible for any actions to be taken, as well as funding to accompany the actions. In instances where an organized response is ongoing, the land-owner may consult with the OSC to discuss best practices and seek advice from the response organization.

The best course of action may be to apply for supplemental appropriations to offset the unforeseen costs of vessel removal following a disaster. In cases where the land-owner desires to leverage response capabilities from nearby, ongoing operations, early and frequent communication with the response is critical. Consider formalizing an agreement to coordinate use of equipment and other resources. Be prepared for the possibility that the supplemental appropriations may be delayed, and discuss options with the OSC/ UC with this reality in mind.

## 6.5 General Process for Abandoned Vessels Management

Based on a combination of federal and state requirements (as well as USCG Commandant Policy, for USCG OSCs), the following are benchmark activities that should be conducted when pursuing removal and disposition of abandoned vessels. Several management options may be available for abandoned vessels, including vessel turn-in programs, donation of vessels, recycling, dismantling, artificial reefing, and ocean disposal.

[76] Memorandum CG-MER to CG LANTAREA CG PANAREA, Emergency Support Function ESF-10 Guidance Regarding the Commercial Salvage Industry, 10 July 2019.

***General Progression for Abandoned Vessel Management***

1. Identify vessel owner or establish abandonment.
2. Can the owner be identified through state registration, insurance, or other means to determine title?
3. Determine if there is reasonable suspicion that the vessel has been purposefully loaded with waste (hazardous or otherwise) to illegally avoid disposal costs.
4. Notify USCG, EPA, State and/or local enforcement authorities. Avoid disposal if possible until law enforcement authorities have investigated. If necessary to disturb, fully document the situation to include photographic evidence.
5. Notify vessel owner in writing of intent to remove/destroy.
6. Once a vessel is determined to be abandoned, a best effort should be made to notify the last known owner of the intent to remove the vessel, and the possible disposition of the vessel post-removal.
7. Provide public notification if owner cannot be contacted/identified.
8. If the owner cannot be identified, the proposed vessel removal and disposition should be advertised.
9. Determine state jurisdiction/state programs available for removal.
10. Some state programs are funded and can assist with the removal of abandoned vessels, providing removal funding where federal funds may not be viable.
11. Consult with State Historic Preservation Officer and obtain approval if vessel is over 50 years old and has potential "historical significance."
12. Once removal authority has been determined, contact the SHPO to implement Sec. 106 consultation under the NHPA and to determine whether any restrictions exist regarding removal.
13. Initiate other federal consultations/approvals under ESA, Magnuson-Stevens Act (EFH), MMPA, NMSA, NHPA, Section 404 of the CWA, Section 10 of the RHA, Section 103 of the MPRSA, and the Park System Resource Protection Act77 as necessary.
14. Note: Certain response authorities, such as CERCLA, OPA, and NMSA, trigger RP liability for natural resource damages. Coordinate with natural resource trustees to ensure NRDA is adequately considered and accommodated during response operations.
15. Determine appropriate federal and/or state response authority and funding source, as discussed in earlier sections.
16. Determine whether a discharge or release, or substantial threat of discharge or release exists, in accordance with the NCP. The ability to obtain OSLTF or CERCLA funding is directly contingent on the previous items respectively. NPFC should be consulted and engaged in the removal process where OSLTF funds will be used to fund the response. Consider actions under USACE authority to remove obstructions to navigable waters under the Wreck Act.
17. Obtain Statement of No Objection (SNO)78 from flag state if foreign flagged.
18. If the vessel is foreign flagged and in U.S. territorial waters, a SNO should be obtained from the flag state prior to commencing removal.
19. Identify management options.
20. Includes options for ultimate disposition of vessels, discussed in Section 6.6.

[77] 16 U.S.C. § 19jj
[78] This is a Coast Guard-led activity.

21. Complete a Vessel Removal/Destruction Request Memorandum package (USCG Only).[79] This package must be completed by USCG OSCs pursuing the removal and destruction of any vessel (except under the post-disaster conditions discussed in section 6.4).

## 6.6 Considerations and Unique Challenges when Dealing with Multiple, Simultaneously Displaced Vessels

This section describes challenges involving many vessel casualties in a short time span and is divergent from the single vessel considerations articulated elsewhere in this document. It specifically addresses considerations for removing vessels that become beached, stranded, grounded, sunk, or otherwise displaced due to a mass vessel casualty event (e.g. marina fire, criminal act, hurricanes, heavy snow storms, other weather events, or other disasters which are not necessarily accompanied by Stafford Act or presidential declaration). In a case with a single abandoned vessel, dilapidation and neglect often occurs over time. However, from time to time, a catastrophic event occurs which causes a rapid and widespread amount of vessels to become displaced. The vessels are not always truly abandoned per the definition in Section 2, as there still may be a viable responsible party with insurance interested in repair or salvage.

During emergency response to multiple, simultaneously displaced vessels, prioritizing and targeting operations to maximize limited resources can be beneficial. Although this guidance should not be taken as prescriptive in developing an approach, critical considerations for such an approach by response personnel may include the following (and is not limited to the list below):

- Immediate need for life-saving and life-sustaining measures to impacted communities;
- Impact on safe use of port facilities and/or vessel traffic to conduct evacuation, to transport critical commodities (e.g., food, potable water or fuel);
- Environmental impacts or the potential for such impacts to occur particularly in designated environmentally sensitive areas;
- Land ownership where these abandoned vessels are located (e.g., private, local, state or federally-owned);
- Required minimum number of salvage and/or lightering equipment/vessels/vehicles, and associated logistics support required to operate and to maintain these assets in the designated location;
- Communications capabilities (e.g., cellular phone, electronic mail) access in impacted areas.
- Specific challenges for responders when multiple vessel casualties occur simultaneously include:
- Tracking and documentation of activities;
- Geographic scope, as in, the limitations that are inherent to remote locations; and
- Scale of causal event, as in, the magnitude of casualties overwhelming local infrastructure and storage.

These challenges can be mitigated in part by diligence in working with state and local partners in advance of casualties such as this. As a rule it is critical to lay a solid foundation in forums such as the Area Committee or Local Emergency Planning Committee (LEPC) to cover general procedures for combatting these challenges. A natural disaster event causing multiple vessels to become displaced at once (natural disaster) can have its own unique challenges compared with that of an act or omission of a third party (non-natural disaster).

[79] The requirement for USCG Commandant approval is an internal USCG requirement under *COMDTINST 16465.5, Vessel Removal and Destruction Under CWA and CERCLA*.

### *6.6.1 Natural Disaster*

Mass vessel casualties which occur as a result of a natural disaster bring their own specific and particular challenges. In particular, weather events cause damage, not only to the vessels, but also to the infrastructure that is used to respond. Furthermore, certain weather events such as snowstorms can cause vessels to sink, adding another layer of complexity for the responders.

#### Tracking and Documentation of Activities

It can be difficult to keep track of multiple vessels after a mass vessel casualty event. In the emergency response phase following a catastrophic event, so many activities occur simultaneously and responders are looking to take action quickly to mitigate damage done to the environment and property. In addition, the current ICS construct does not overtly provide templates for tracking multiple-simultaneously abandoned vessels in the same way that documentation of the other activities is comprehensively outlined. Therefore, in the "fog of war" or the rapid activation of the responders and ICS construct following a major incident, if a tracking mechanism is not built up front it may be inadvertently neglected, which will render follow-up actions, to include cost-recovery from the NPFC, much more difficult to sort out.

Involving the major stakeholders in the Regional and Area Contingency Planning and LEPC processes has proven to be an effective mechanism to best overcome the documentation and tracking challenges associated with a natural disaster as described above. When a response is conducted under the Stafford Act there may be additional stakeholders with different or modified document tracking needs. These stakeholders could include state, local, territorial and tribal governments as well as FEMA. Specific documentation procedures and list of stakeholders should be identified and communicated as early in the response as possible to ensure accurate, comprehensive, and standardized records are kept. The Best Management Practices and case studies provided in Table 2provides additional guidance on information that may be considered beneficial to include in planning to respond to multiple abandoned, or displaced, vessels.

#### Geographic Scope

When a natural disaster causes multiple vessels to become simultaneously displaced responders' accessibility to the vessels will likely be a greater challenge. The causing event may involve great storm surge or high winds, which could push a vessel onto a remote beach, cause it to sink in a waterway, or wind up in a myriad of other, less-than-accessible places. This renders the response more difficult. There are fewer access points and a contractor cannot necessarily rely on boat ramps, cranes, or the use of other commercial infrastructure to affect the pollution removal or vessel repair/ removal. Displaced vessels may also be difficult to locate, as they may eventually sink or ground in an area distant from their original mooring or docking location. Local emergency response plans and Area Contingency Plans may contain helpful information to assist responders with managing challenges imposed by the geographic scope of an event such as this. In addition, there are geographic survey resources available that could make accessibility to remote, abandoned vessels more manageable. For instance, NOAA has capabilities to find targets in hard to reach areas using their National Geodetic Survey Aerial Imagery to conduct aerial surveys. Aerial surveys can assist responders by providing real-time imagery and status updates. The responders can then grid off the areas that contain abandoned vessels and prioritize them. During emergency response to multiple, simultaneously abandoned vessels, prioritizing and targeting the approach to maximize limited resources using this sort of capability can be beneficial.

#### Scale of causal event

Different from geographic scope where vessel accessibility challenges arise, the scale of the causal event refers to the magnitude of the impacts to the vessels, and the scale or size of the swath of damage, as these pose unique challenges when a natural disaster causes multiple vessels to become displaced simultaneously. When a larger number of vessels experience casualties in a short period of time, this can overwhelm local infrastructure related to storage or disposal. In an instance of a declared disaster where activities are being coordinated under Mission Assignments, different states' policies and disaster

declarations determine the specific operating parameters of the response. Responders need to be cognizant of the authorities under which they are operating, especially when multiple states are operating under different disaster declarations simultaneously.

### *6.6.2 Non-natural disaster*

Mass vessel casualties which occur as a result of non-natural disasters also bring their own specific and particular challenges. When an act or omission of a third party, such as in the case of a marina fire, criminal action, or CBRN event, there are different challenges and considerations than with a natural disaster. Due to sensitivities of investigations that are likely to ensue, it will be important to coordinate closely with the investigating authorities and to pay specific attention to additional security measures.

#### Tracking and Documentation of Activities

It can be difficult to keep track of multiple vessels after a mass vessel casualty event. Certain elements of tracking and documenting activities where multiple vessels become simultaneously abandoned due to a non-natural disaster would be consistent with that of an act or omission of a third party. Multiple simultaneously abandoned vessels, regardless of causal event, add a level of complexity. For this reason, it is critical that the preparedness and response partners are considering potential for a mass vessel casualty event. Particular considerations for non-natural disasters focus on investigatory procedures rendering tracking and documentation critical (aside from existing agency-specific documentation requirements). It is important for responders to consider up-front the documentation needs of investigators and insurance companies, who may require careful records for their respective purposes. This includes discussing site control documentation.

#### Geographic Scope

When a non-natural disaster occurs, geographic scope will generally be more confined. Typical instances include a marina fire or crime event and for that reason would tend to be more localized, relative to the scope of a natural disaster as described above. Depending upon the circumstances and extent of the incident however, the infrastructure of local harbor or port may still be impacted, making response efforts and water access difficult. Conversely, there may be cases in which the event limits responders' and public access due to either a security measure or a hazard present within the "hot zone" of the incident.

In any case it is important that Area Committees and LEPCs are planning for contingencies and coordinating efforts, and it is encouraged to refer to ACPs and local emergency response plans to enact proper measures in a response to a non-natural disaster event as with any other. Working with state and local law enforcement and emergency responders is critical.

#### Scale of Causal Event

The scale or magnitude of impacts caused by a non-natural disaster, or act or omission of a third party, plays a role in adding complexity to the response. Depending on the specific cause of the incident, the impacts could be too many smaller vessels, or to several very large vessels with bigger capacities for carrying fuel, oil as cargo, or hazardous substances as cargo, etc. It bears repeating the importance of close coordination within the Area Committee and LEPC to establish protocols for responding when the most accessible infrastructure may become overrun.

In cases where an event is caused by an act or omission of a third party, an investigative component will also add complexity to the response. It is therefore important to plan for carefully managing documentation and site access in these cases. It is critical that responders can recall details of the case and can account for actions taken to preserve the integrity of follow-on investigations. It is also recommended that the responders coordinate with law enforcement and the relevant insurance agents to understand needs at the outset of a response.

## 6.7 Options for Ultimate Disposition of Abandoned Vessels

Once the authority for the federal OSC/COTP to assume custody of the vessel has been established, disposition options for managing these vessels include dismantling for recycling or scrapping (as well as land disposal), creating artificial reefs, vessel turn-in programs, donation of vessels, and disposal at sea. Each disposition management option is unique to the abandoned vessel, the locality in which the vessel is grounded or moored, the construction and size of the vessel, and the physical state of the vessel. There are statutory requirements and associated regulations, as well as permit processes applicable to the disposition management options mentioned above. These requirements and regulations, as well as the amount and types of materials of environmental concern that may be present on an abandoned vessel, the amount of economically salvageable parts of the vessel, and the condition of the vessel should be considered before choosing a disposition management option for an abandoned vessel.

When selecting the appropriate disposition management option for an abandoned vessel, the OSC/COTP should consider the efficiency, expedience, and stewardship of the method proposed. Is time of the essence? If not, more time may be available to seek alternative methods of mitigation that provide the greatest benefit to public health and the environment. Vessel disposition management options that provide the least impact on public health and the environment from operations are preferred—assuming they are good options when considering the following factors as well. Is the proposed method expedient or will the operation be labor intensive and slow due to limited logistics availability and infrastructure support? The OSC contemplating using federal funding (either CERCLA and/or OSLTF) should determine whether the abandoned vessel disposition management action is an appropriate use of the funding source and consult with the National Pollution Funds Center if necessary. Although this is not the sole determining factor, it is one that should be taken into account when reviewing options in their totality. Other factors include, when appropriate:

- Threat of pollution
- Hazard to navigation/potential hazard to navigation
- Impact to the environment and human health
- Proximity to environmentally sensitive areas
- Cost of management option
- Availability of needed resources or facilities (programs, dismantling yards, etc.)

Finally, state programs may be able to assist in the removal of a vessel as discussed earlier, sometimes making it far easier to respond to abandoned vessels.[80] When a vessel is under a foreign flag, the state or municipal programs that may be available for disposition of abandoned vessels may be different. Therefore it is of utmost importance that the federal responder remain in lock-step with the state and local partners throughout the response.

### *6.7.1 Vessel Turn-In Programs*

Some states, such as the State of California, have programs that allow an owner to turn over custody of a vessel in lieu of abandonment. Disposal options vary, but may include scrapping and recycling. This action alleviates the penalty that may otherwise be incurred by abandonment. Programs such as these are appropriate for small recreational vessels and are not intended for larger commercial vessels. Further, not all states have a vessel turn-in program.

### *6.7.2 Donation of Vessels*

For vessels in acceptable condition and still retaining their seaworthiness, donation to charity may be an option for the vessel.

[80] For example, the State of California Division of Boating and Waterways offers a robust program for the mitigation of abandoned vessels, including the Abandoned Watercraft Abatement Fund and the Vessel Turn-In Program. Washington State recently passed legislation authorizing a similar program.

### *6.7.3 Dismantling for Recycling or Scrapping*

According to the Occupational Safety and Health Administration, ship dismantling or ship breaking is defined as "any breaking of a vessel's structure for the purpose of scrapping the vessel, including the removal of gear, equipment, or any component of a vessel."[81] Both small recreational vessels as well as large commercial vessels may be candidates for dismantling for recycling or scrapping (both of which will likely include land disposal of remaining ship materials and waste). Dismantling a vessel will generally be done at a ship breaking facility for larger vessels or at an approved shore facility for smaller vessels. On rare occasions, a vessel's condition may require it to be dismantled in place in the waterway. There may also be occasions when after a vessel is dismantled, recycling or scrapping is not an option. In such instances, consider disposal in appropriate facilities capable of handling a given type of waste as an option for small recreational vessels or portions of larger vessels.

During the dismantling process, ships are taken apart and broken down into components and pieces of equipment that can be recycled/reused on other boats, or sold as scrap metal. Remaining pieces/materials of the ship are then disposed of at appropriate reception facilities. The sales of recycled and scrapped materials can help offset the cost of dismantling and disposal. Part of the dismantling process includes the proper disposal of waste from the vessel.

It is illegal for vessel owners to conduct ship breaking activities except in licensed areas. If a responder is developing a plan to dismantle an abandoned vessel in place or at a ship breaking facility for recycling or scrapping, then appropriate federal, state, and local agencies should be consulted to ensure that all permitting requirements are met for the operation. Responders should also consult with subject matter experts such as marine operators, salvage masters, and crane operators to determine the most safe and effective method for dismantling a vessel. Ship breaking facilities have the equipment and expertise necessary to dispose of an abandoned vessel. However, responders should ensure that ship breaking facilities are reputable and in compliance with all federal and state regulations. Responders should ensure that measures are in place to mitigate potential pollution prior to commencing any operation.

### *6.7.4 Recycling*

Recycling is the re-use of the vessel or parts of the vessel. Recycling is reserved for vessels that have some residual value as a result of their construction material or parts remaining on board. Salvors and vessel parts dealers may buy the vessel for the cost of dismantling the vessel minus the revenue generated from recycled parts. In some locations, fiberglass recycling is a growing industry; it is encouraged to seek opportunities to consider this disposal option where appropriate.

### *6.7.5 Scrapping*

The scrapping of abandoned vessels can be a source of steel. Depending on the current market value of ferrous metals, a great deal of cost can be recovered by the resale of steel from a larger recycled vessel. Further, both the copper and the machinery can be sold for a notable return. The EPA has developed a guide for ship scrappers that provides a process-by-process approach for the removal and disposal of asbestos, PCBs, oil and fuel, paint, miscellaneous ship machinery, as well as metal cutting and metal recycling. This guide is intended to provide the site supervisor of a ship scrapping facility with a good understanding of the most pertinent federal environmental and worker safety and health requirements affecting ship scrapping/ship breaking operations. The guide can be accessed at: http://www.epa.gov/compliance/resources/publications/civil/federal/shipscrapguide.pdf.[82]

[81] 29 C.F.R. § 1915.4

[82] EPA. (2000). *A Guide for Ship Scrappers – Tips for Regulatory Compliance*. Office of Enforcement and Compliance Assurance. EPA 315-B- 00-001. Retrieved from http://www.epa.gov/compliance/resources/publications/civil/federal/shipscrapguide.pdf

### *6.7.6 Artificial Reefing*

Sinking a vessel to serve as an artificial reef may be a management option for an abandoned vessel, if the vessel can be appropriately prepared and cleaned so that its use as an artificial reef will be environmentally sound. Due to the challenges with removing all pollutants, this is option is rarely employed. Artificial reefing can enhance the marine environment for fish habitat and/or recreational diving, if vessels are properly cleaned prior to sinking and the vessel is sunk at a location properly sited. The EPA and MARAD jointly released national guidance in 2006 regarding the preparation of vessels intended to serve as artificial reefs.[83] This guidance identifies materials or categories of materials of concern that may be found aboard vessels and specifically identifies where they may be found. For each material or category of material, this document provides a narrative cleanup performance goal and information on methods for achieving those goals in preparation of the vessel prior to sinking. Materials of concern include, but are not limited to: oil and fuel, asbestos, PCBs, paint, and solids/debris/floatables. If the narrative cleanup goals provided in the EPA/MARAD guidance cannot be economically achieved, for example, because of significant amounts of materials of concern present on the vessel, then the vessel would not be a good candidate for reefing. The preparation process for reefing of a vessel contains requirements and regulations that must be met, including permit processes, such as Section 10 of the RHA and/or Section 404 of the CWA, and appropriate disposal of waste generated during vessel cleanup.

### *6.7.7 Ocean Disposal*

Under MPRSA Section 102, the EPA issued a general permit for the transportation and ocean disposal of vessels. The general permit is published in EPA's ocean dumping regulations at 40 C.F.R. Part 229.3 (See Appendix F). Under the general permit, vessel sinking cannot occur unless the EPA concurs that the proposed action complies with the conditions of the permit, including removal of all toxic or hazardous substances that may degrade the marine environment prior to disposal to the maximum extent practicable. The general permit includes notification, cleanup/vessel preparation, disposal and reporting requirements, as well as the demonstration of the need for the disposal of the vessel and documentation of an adequate evaluation of alternatives to ocean disposal (i.e., scrap, salvage, and reclamation), and provisions for emergency situations. This option is also rarely employed due to difficulties in removing all toxic and hazardous substances. If ocean disposal of a vessel is a potential option, it is recommended that the EPA Ocean Dumping Program in the appropriate EPA Region be contacted as soon as possible. In addition, depending on the scope of work, authorization may be required under Section 103 of the MPRSA.

## 6.8 Cost Recovery and Documentation

Cost documentation for abatement of pollution threats from abandoned vessels using OSTLF and CERCLA is conducted using standard agency policies, Technical Operating Procedures, and for USCG OSCs, associated USCG Commandant's policy. Abandoned vessel activities associated with Stafford Act funding will be dealt with on a case-by-case basis: appropriate action will be determined in part by the specific state's programs and the nature of the state's disaster declaration, as well as defined by the specific Mission Assignment under which the action is taking place. For this reason responders are strongly encouraged to ascertain the required information to appropriately document activities throughout the response. Understand that states with abandoned vessel programs may opt to take lead on certain activities to limit cost-sharing incurred under either ESF-3 or ESF-10.

[83] The joint EPA/MARAD guidance document entitled *National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs, May 2006* can be accessed at http://water.epa.gov/type/oceb/guidance.cfm.

# Appendix A: Abandoned Vessel Response Case Studies

Note: The case studies listed below are a limited cross section in time.

Additional case studies may be shared within NRT member Agencies, and NRT committees.

| Case Study | Description and Final Vessel Disposition |
|---|---|
| 1. Barge DAVY CROCKETT | Highlights pollution abatement and dismantling in place for land disposal/scrapping of abandoned barge. |
| 2. M/V SEA WITCH | Cooperative multi-contractor effort managed by federal OSC for the abatement of significant pollution from abandoned vessels. |
| 3. M/V JIREH | Underscores the use of OSLTF to mitigate the substantial threat of a discharge and potential impacts to protected ecosystems and threatened/endangered species. |
| 4. M/V SEA BREEZE | Demonstrates cooperative state and federal efforts to remove abandoned vessels from near shore environments. |
| 5. Hurricane Ike | Demonstrates involvement of SUPSALV in debris recovery in post-disaster operations. |
| 6. Petaluma Precedent Site | Emphasizes EPA's application of CERCLA for removal of abandoned vessels and wrecks from the inland zone. |
| 7. Sacramento Lighter Aboard Ships (LASH) Barges | Underscores cooperative operations toward the abatement of significant pollution threats from derelict vessels. |
| 8. Hurricanes Irma and Maria, USVI | Demonstrates limitations of use of Stafford Act funds on federal land. |

*Table 2 – List of Abandoned Vessel Case Studies*

## Barge DAVY CROCKETT, Portland, Oregon

***Vessel Description:*** 432-foot converted Liberty Ship built in 1942 located on the northern bank of the Columbia River near Camas, Washington.

***Incident:*** During the timeframe between December 2010 and January 2011, illegal scrapping operations caused the number 3 hold on the DAVY CROCKETT to buckle, resulting in a sheen emanating down river. Additional high tides further degraded the structural integrity of the barge and weakened the keel, resulting in further oil discharges. On 27 January 2011, USCG Sector Columbia River federalized the response and established a UC with both Oregon and Washington State OSCs. Due to the lack of structural integrity of the barge, coupled with the unknown holds containing oil and contaminants, a destruction memo was drafted and approved by USCG Commandant for removal of the barge.

***Removal Actions Included:***

- Dive operations for pollution and structural integrity assessments
- USCG SERT assistance to ballast and stabilize barge
- Implementation of safety zone
- Implementation of Geographic Response Plans (GRP)
- The construction of an 850-foot metal cofferdam lined with impermeable oil and silt barriers along with sorbent oil collection boom, preventing oil sheen from discharging
- Diving teams and salvage crews to dismantle barge
- Cranes, barges, filtration systems, and other heavy equipment to remove sections of the barge, conduct dredging operations, and treat the contaminated water

***Total Products Recovered:***

- 1.6 million gallons of oily water
- 4.5 million pounds of steel, 7,500 pounds of scrap metal
- 842,000 pounds of oily debris
- 4,850 pounds of asbestos

***Cost:*** $23.3 million

Funding Mechanism for Removal: CERCLA and OSLTF

***Final Vessel Disposition***: Dismantled in place for disposal on land/scrapping.

***Significant Challenges and Solutions:***

- Illicit scrapping of structure resulted in bow sunk and stern afloat creating significantly unstable structure.
    - UC brought in USCG SERT for consultation of plan to sink stern and cut from bow to stabilize the structure.
- Initial plan was to refloat stern and bow and move to a shipyard for disposal. Due to current Superfund site issues for facilities along the Willamette River, shipyards wanted indemnification for disposal and contractor liability.
- The UC was not able to legally provide indemnification and this became a roadblock for the initial plan. The UC then had to change strategy to remove the barge by building a steel pile cofferdam and impermeable barrier around the barge and dismantling it in the river system.
- River current and high river levels resulted in water running over the cofferdam, which made operations challenging.

  - A break wall was constructed to reduce current and stress on structure.
  - Impermeable barriers helped limit water entering cofferdam when river level rose over the cofferdam sheet pile.
- Major safety concerns with unstable structure, dermal, and inhalation risks (asbestos, oil, lead, and PCBs), movement of heavy equipment and steel sections, dive operations, slips/trips/falls, and decontamination operations.
  - Employed contractor and USCG National Strike Force Safety Officers to develop, implement, and monitor comprehensive Site Safety Plan.
- Implementation of additional GRPs for protection of natural and cultural resources.
  - Conducted consultation with Advisory Council on Historic Preservation (ACHP) and SHPO and reached out to tribal representatives to protect cultural resource interests.
  - Developed additional on-water protection strategies and monitored for effectiveness.

## M/V SEA WITCH, Baltimore, Maryland

***Vessel Description:*** 700-foot container ship constructed at the Bath Iron Works in Maine.

***Incident:*** In August 2003, the Maryland Port Administration requested assistance from the Maryland Department of the Environment (MDE) to mitigate an ongoing oil release from a shell of a container ship. Kurt Iron and Metal, a salvage yard in the Fairfield section of Baltimore City, was charged with scrapping the USS CORAL SEA, a World War II era aircraft carrier. Scrapping the carrier required the removal and proper disposal and treatment of oil and oil sludge. Kurt Iron and Metal reportedly acquired the bow half of the SEA WITCH to use as a vehicle to separate the oil on the CORAL SEA from the water. However, despite this history, there was no clear record of the ownership of the M/V SEA WITCH that could be established.

During the 2003 Tropical Storm Isabel, the M/V SEA WITCH took on water and sank in the Patapsco River, where it discharged an unknown quantity of oil. USCG and MDE took responsibility and created a UC to jointly make decisions on the best options to clean up and mitigate pollution from the M/V SEA WITCH. USCG agreed to use funds from the NPFC for the cleanup. A contractor was hired and the ship was cleaned. Once divers from the U.S. Navy SUPSALV declared that the bottom of the ship was clean, the USCG recommended that the vessel be kept in place.

***Removal Actions Included:*** Employment of pollution removal and salvage elements (commercial oil spill removal organization (OSROs) and marine salvage), as well as SUPSALV. Operations included an initial assessment and removal of pollutants followed by re-mobilization, refloating, and removal of fuels from bottom tanks.

***Total Products Recovered:***

- No. 6 oil and oil-contaminated water: 478,787 gallons
- Oily mud: 50,969 gallons
- Oily sludge and debris: 161 tons

Scrap metal: 44,700 pounds

***Cost:*** $16 million

***Funding Mechanism for Removal: OSLTF***

***Final Vessel Disposition*:** Dismantled in place and recycled.

***Significant Challenges and Solutions:*** In 2008, after initial activities had been completed, an investigation revealed a double bottom, between which oil had begun leaking. It was unknown how much potential oil was present and recoverable. To further complicate matters, the M/V SEA WITCH was resting in the middle of the future Masonville Dredge Containment facility. Again, USCG agreed to pay for the cleanup through the NPFC. After much patching and welding, M/V SEA WITCH was refloated in September 2008. Once the ship was refloated, oil, oily water, and oily sludge removal began. Once the cleanup was 90 percent complete, the vessel was towed to Sparrows Point graving dock where the vessel was cut up and recycled. This project is a remarkable example of a successful federal and state cooperation to contain a large oil spill and prevent further pollution to Maryland's waterways and wildlife.

## M/V JIREH, Mona Island Wildlife Preserve, Puerto Rico

***Vessel Description:*** 202-foot Honduran flagged freight ship, 979 gross tons, built in 1963.***Incident:*** On 21 June 2012, the M/V JIREH ran hard aground on the southwest side of Mona Island, located 40 miles west of the Commonwealth of Puerto Rico. At the time of the grounding, there were six crewmembers and 78 passengers aboard. The vessel was carrying legitimate cargo reportedly bound for St. Maarten, as well as contraband hidden aboard the vessel. In the absence of an RP, the OSC accessed the OSLTF to mitigate potential pollution impacts to the wildlife reserve. The vessel was deemed a substantial threat to the environment due to quantities of oil and hazardous substances on board, as well as its quickly deteriorating condition.

***Removal Actions Included:*** The removal of petroleum products, as well as all contaminated cargo and debris in the vessel's main hold. Additionally, substantial damage to the vessel's hull required repair. In this case, the vessel was to be scuttled at sea. However, structural stability of the vessel after several storms did not allow this action. Consequently, the vessel was dismantled in place and transported by barge to neighboring Puerto Rico for disposal on land.

***Total Products Recovered:***

- No. 6 oil and oil-water: estimated 3,000 gallons No. 6 oil and 5,000 gallons of oil-water
- Contaminated/wasted cargo: 60+ tons

Scrap metal: 22.3 tons

***Cost:*** $13 million

***Funding Mechanism for Removal:*** CERCLA and OSLTF

***Final Vessel Disposition***: Dismantled in place for disposal on land.

***Significant Challenges and Solutions:***

*Sensitive Area surrounding Mona Island* – Mona Island Wildlife Reserve is one of the more sensitive areas in the region with regards to the number of threatened and endangered species present. There was some variance in opinion over what constitutes a substantial threat of discharge with regards to abandoned vessels. The NOAA SSC was consulted to help inform the determination of substantial threat in accordance with the NCP. Immediate impacts by oil and other hazardous substances to species were determined to pose an unacceptable risk.

*Hurricane Season and Procedural Delays* – Weather patterns in the Caribbean during late summer present a significant threat of tropical disturbances and hurricanes. Numerous weather delays hindered operations, causing shutdowns on several occasions and driving up the final removal cost.

Contingency plans were developed to run ground tackle from the stricken vessel, thereby preventing it from running further ashore. In areas that face significant weather patterns, planning in support of pollution removal and vessel disposal activities should be done expeditiously with consideration of continued vessel deterioration.

*Remote Location* – Operations in remote locations are more complex. The movement and staging of equipment, as well as the sourcing of specialty equipment and disposal of wastes and recyclable materials, was found to be more difficult due to the remote location of Mona Island, 40 miles west of Puerto Rico. In these cases, it is vitally important that preplanning consider all possible contingencies, such that requisite resources are available in advance of their need.

## M/V SEA BREEZE, Spruce Head, Maine

***Vessel Description:*** 35-foot lobster boat.

***Incident:*** The M/V SEA BREEZE, a wooden vessel, sank in a mooring field off Spruce Head, Maine, in December 2011. Maine Marine Patrol (MMP) had been working with the owner (to no avail) for some time on repairing or removing the vessel. The vessel sank with an unknown quantity of diesel (estimated 50 gallons), other engine oils, batteries, and other packaged hazmat aboard.

***Removal Actions Included:*** USCG and Maine Department of Environmental Protection (DEP) discussed response options, and determined that removal of the vessel was the best option. USCG explained that although it could arrange for the vessel to be raised and the pollution removed, the FOSC could not justify vessel removal under the NCP (nor the ability to use OSLTF or Superfund to do so). The state did have a statute in place that allowed for the removal of abandoned vessels after due process requirements were met (see Title 12 Maine Revised Statute Annotated (MRSA) § 1866), but could not cover the entire cost of the cleanup.

***Funding Mechanism for Removal:*** A plan was developed to use OSLTF/CERCLA funds to raise and clean the vessel, and utilize Title 12 MRSA § 1866 to remove the vessel. The actual salvage of the vessel to remove oil and hazmat had to be scheduled in conjunction with due process notice requirements under the state law allowing for removal, but the process was expedited under an emergency exception in the state law. Essentially, responders had to wait until the statutory amount of time under the state law had passed, otherwise the state would not have been able to complete the removal of the vessel after USCG raised and cleaned the boat.

***Final Vessel Disposition***: Dismantled in place for disposal on land.

***Significant Challenges and Solutions:*** At the time of the sinking, the owner had no address and was not answering his cell phone. The USCG Sector responded in conjunction with Maine DEP, and placed boom around the vessel to contain sheening. USCG utilized MMP officers to attempt to contact the owner and deliver case paperwork, including a Notice of Federal Interest. The owner was never heard from.

On the day of the response, divers noted the vessel was coming apart underwater, so it ultimately was raised in pieces. Fuel tanks were pumped dry and batteries were located and removed. The vessel was brought by barge to a nearby concrete pier approximately 100 yards away from the mooring field station where the state then removed the pieces under its authority.

Notes:

- Before engaging in this type of joint operation, OSCs need to ensure the NPFC has approved the operations. Moving a vessel after it has been cleaned so that others can remove it may run afoul of the OSLTF or CERCLA. In the case of a beached vessel or one floating at a pier, this often means the use of OSLTF/CERCLA will be of no benefit towards the ultimate removal of the vessel, since pollution removal can be accomplished in those cases without moving the vessel. In this case, a decision was made that some of the cleaning would be most safely accomplished at the pier, so movement was not considered a real issue. If a longer move is necessary, USCG and the state could arrange for the cleanup contractor to charge the entity covering the removal for the transit if costs were involved. Confirmation in writing that the state, local, or other entity intends to remove the vessel once the OSC has raised and cleaned it will help obtain that approval.
- OSCs should confer with other jurisdictions that could be affected even if they are not participating in the actual response. In the case of the M/V SEA BREEZE, the local Selectman was upset that equipment (large trucks, front-end loaders, etc.) had been brought into town by the state, apparently in excess of the weight limit on the local bridge. The Selectman then sought to fine the responders hired by the state. The situation was resolved amicably, but had responders briefed the Selectman on the plan in advance, the issue could have been avoided.

## Hurricane Ike Response, Houston/Galveston, Texas

***Incident:*** Hurricane Ike response. SUPSALV provided a representative as requested by the COTP in Houston to augment USCG in responding to environmental and/or vessel salvage incidents as a result of Hurricane Ike. Primary focus quickly shifted to supporting USACE in clearing the Intracoastal Waterway between Freeport and Galveston, Texas. SUPSALV contractors deployed to remove vessels and debris that had sunk in this 65-mile stretch of the waterway to allow resumption of tug and barge traffic. Closure of the waterway had potential impacts to national refining capabilities and significant negative impacts to the local economy. Over a six week timeframe, the salvage team worked quickly and efficiently to reopen the waterway by removing numerous vessels (primarily fishing boats) and accumulated household debris that had been swept into the waterway.

***Funding Mechanism:*** Stafford Act Funding, ESF-3

***Final Vessel Disposition***: Removed and disposed of via various methods.

***Significant Challenges and Solutions:*** Logistics of mobilizing and contracting a salvage assets and teams to remote locations along the Intracoastal Waterway to accomplish timely removal of vessels and debris was challenging. Communications with customer and command element was difficult due to operations in remote locations.

In order to maximize on-site time, federal and commercial resources contracted for a berthing barge and support craft to allow the salvage team to stay on site as they moved farther down the waterway. Communications eventually improved as infrastructure came on line. Reliance on the onsite integrated team consisting of highly trained contractor Salvage Masters (commercial salvage) and a SUPSALV representative to conduct independent real time clearance operations allowed for condensing the timeline and faster resumption of commercial traffic. Standing SUPSALV contracts allowed for rapid response and flexibility to contract for salvage assets as the situation evolved and needs became identified.

***Outcome:*** 65 miles of the Galveston Intracoastal Waterway were cleared of debris allowing for the resumption of commercial shipping in an expeditious manner.

***Notable Lessons for OSC:*** The use of Basic Ordering Agreements (BOAs) greatly improved the Incident Command's ability to mobilize and hire local contractors to respond rapidly to natural disasters in a timely and efficient manner. Use of existing MOU with SUPSALV provided the OSC with increased flexibility and the ability to augment his/her salvage expertise for timely response to natural or manmade disasters.

## Petaluma Precedent Site, Petaluma River, California

***Vessel Description:*** 11 vessels, six river debris sites, three vehicles, and three barges.

***Incident:*** In 2011, CalRecycle approached EPA Region 9 regarding the evaluation, assessment, and removal of numerous abandoned vessels and wrecks throughout the Petaluma River. Initial assessments of the inland river sites identified elevated levels of PCBs, arsenic, nickel, lead, asbestos, and substances exhibiting RCRA characteristics of hazardous waste, e.g., ignitability.

***Removal Actions Included:*** Working with CalRecycle, EPA removed all hazardous substances and abandoned vessels and debris; transported and disposed of all hazardous wastes at approved facilities; conducted confirmation sampling; and conducted underwater surveys of all submerged obstructions and potential abandoned wrecks in Petaluma River.[84]

***Total Products Recovered:***

- 445 cubic yards of non-friable asbestos
- 18 cubic yards of hazardous waste solid
- 1,090 pounds of miscellaneous hazardous waste
- 72 lead acid batteries

***Cost and Funding Mechanism for Removal:***

- CERCLA/Hazardous substances - $651,586
- CalRecycle: Solid waste - $495,000
- Sonoma County Sheriff's Marine Unit: Adjudicated Vessels Abandoned

***Final Vessel Disposition***: Hazardous substances and contaminated debris disposed of via approved facilities. Vessels and marine debris associated with the case were scrapped and disposed of via landfill.

***Significant Challenges and Solutions:***

EPA's decision to engage in evaluation and removal actions was based on several factors, including:

- Actual or potential exposure to nearby human populations, animals, and/or ecosystems from hazardous substances or pollutants;
- Actual or potential contamination of drinking water supplies or sensitive ecosystems;
- Hazardous substances or pollutants in drums, barrels, tanks, or other bulk storage containers that posed a threat of release;
- Weather conditions that may cause hazardous substances to migrate or be released; and
- Threat of fire or explosion.

[84] EPA Memorandum. (2011). Request for a Time-Critical Removal Action at the Petaluma Precedent Site, Petaluma, Sonoma County, California.

## Sacramento LASH Barges, West Sacramento, California

***Vessel Description:*** Initial evaluations by USCG, EPA, state agencies, and the Port of Sacramento identified 22 former military Lighter Aboard Ships (LASH), and four derelict vessels. Two LASH barges and one drydock became the subject of this response.

***Incident:*** On August 8, 2013, Sector San Francisco conducted a joint site assessment with EPA, state agencies, and the local port of a group of 22 LASH barges, including a dry dock located on Lake Washington, a tributary of the Sacramento River within the Sector San Francisco COTP Zone. These barges had been used as dumping grounds for many years, accumulating large quantities of petroleum, mixed hazardous materials including low-level radiation, and additional unknown hazards. The barges were in various states of disrepair and due to significant structural modifications, had questionable stability and buoyancy. This factor, coupled with the significant amount of hazardous wastes on-board, led the city, state and federal agencies involved to initiate emergency response actions. Because the potential responsible parties would not take action, the barges were acquired by the City of West Sacramento through legal injunction, and federal and state funding was accessed for the abatement of the pollution threats and disposition of non-contaminated debris.

***Removal Actions Included:*** The USCG, teaming with BOA contractors, National Strike Force, California Department of Resource Recycling and Recovery, Department of Toxic Substance and Disease Control, and EPA, successfully removed all hazardous substances, miscellaneous oils, and debris; conducted material sampling and hazard categorization; and transported and disposed of all hazardous wastes at approved facilities. Once the operations were completed, the remaining uncontaminated debris and vessel hulls were transferred to the State of California Department of Resource Recycling and Recovery for final disposal.

***Total Products Recovered:***

- 4,502 gals of oil/oil-water
- 252.5 gals miscellaneous hazardous substances
- 1,000 pounds of miscellaneous hazardous waste
- 50 lead acid/lithium batteries

***Cost and Funding Mechanism for Removal:***

- OSLTF: Cost to date - $325,320
- CERCLA: Cost to date - $0. Miscellaneous hazardous wastes, radiation sources, cylinders, and toxic chemicals were disposed of under state programs for toxic substances, thereby conserving CERCLA costs.
- Deliberate partnerships with the City of West Sacramento, State of California and USCG allowed each agency to leverage authorities for funding, ultimately keeping expenditures low, yet allowing for the complete abatement of pollution threats as well as debris.

***Final Vessel Disposition***: Hazardous substances and contaminated debris were disposed of by the State of California's Department of Toxic Substance and Disease Control via approved facilities. All oils were abated and disposed of using a commercial contractor hired by USCG. Vessels and non-contaminated marine debris associated with the response will be scrapped and disposed of via landfill.

***Significant Challenges and Solutions:***

In this case study, it was the collaborative effort of all parties that resulted in the successful outcome of the removal of all pollutants and the vessel remnants as well. However, this will not be the case in every city and state. In scenarios where the vessel may remain, OSCs should investigate vessel removal options using internal authorities or the broader federal partnerships discussed in this guidance. In the coastal zone, the USCG OSC has the option to investigate the use of the Commandant's Vessel Destruction request process. However, if this process is to be used, it is advised that District support be engaged early in the process to assist in coordinating with Area and Headquarters commands.

This case study represents the core elements for successful pollution abatement from derelict and abandoned vessels, concurrently realizing benefits to all parties and the environment, and underscores cooperative practices described in this document.

## Hurricanes Irma and Maria, U.S. Virgin Islands National Park

***Incident:*** As a result of Hurricanes Irma and Maria in September 2017, over 700 vessels sunk or went aground in the nearshore waters off of USVI. Most of these vessels were in USVI territorial waters or on territorial land, but over 200 were on federal land or sunk in federal waters/on federal sea-bottom managed by the NPS. The USCG, funded by a Stafford Act mission assignment from FEMA and utilizing a commercial contractor, worked with the USVI Department of Planning and Natural Resources to remove and dispose of over 450 vessels from territorial waters (many were removed by their owners). Stafford Act funding, however, is prohibited from being used on federal land, and the response and recovery costs are left to those federal land management agencies that have the legal responsibility and management oversight to address the damages. The NPS needed its own funding to address the sunken/stranded vessels on NPS land/sea-bottom, and it received funding for this task via supplemental appropriation signed into law in February 2018. The funding wasn't available for NPS use until June 2018, and the NPS signed an agreement with Navy SUPSALV to remove and dispose of the vessels. SUPSALV and their contractor removed over 50 vessels from NPS waters/land in August 2018 (others had been removed by their owners), completing the removals more than 11 months after the hurricanes hit USVI.

***Funding Mechanism:*** Supplemental Funding to Federal Agency (NPS); NPS agreement with SUPSALV

***Final Vessel Disposition***: Removed via crane and barge, and shipped via barge to U.S. mainland for disposal

***Significant Challenges and Observations:***

- Stafford Act limitations on use of FEMA disaster funding on federal land – a sunken vessel in territorial waters could be removed while one a short distance away could not because it was sitting on federal sea bottom.
- Time lag to get supplemental funding for NPS. Vessels sat stranded on NPS land or in NPS waters for over 11 months, posing an environmental risk. In addition, if the NPS had been able to obtain funding sooner, they may have been able to utilize the contractors already on site removing vessels from territorial waters. By the time NPS had funding available, the contractors doing the work in the territory had already demobilized. In a somewhat remote location such as the USVI, mobilization costs are significant.
- Early coordination between the federal land management agency (NPS in this case), FEMA, USCG, EPA, and SUPSALV is critical so that the situation, available funding, and any/all removal options are discussed and explored. While NPS funding was a limiting factor in this example, if funding had been available the federal land management agency could have reached an agreement with the agencies involved in the Stafford Act-funded response to utilize contracting agreements, or could have engaged SUPSALV much earlier. Employing SUPSALV worked well for the NPS in this case, although the process of establishing the agreement took some time as DOI/NPS was unfamiliar with the necessary administrative processes.

# Appendix B: Technical Specialists and Special Teams

Appendix B includes information on the following technical specialists and special teams to assist the OSC/COTP:

- SUPSALV
- EPA Environmental Response Team (ERT)
- NOAA SSC
- NOAA MDP
- USCG Marine Safety Center (MSC) SERT
- USCG National Strike Force (NSF)
- The National Strike Force Coordination Center (NSFCC)
- Area Committee Members
- RRT

Special teams are outlined in the NCP, 40 C.F.R. Part 300.145. Special teams applicable to salvage and abandoned vessel operations include SUPSALV, NSF components, NOAA's SSC, and EPA's ERT. Title 40 C.F.R. Part 300.145(e) specifically addresses coordinated efforts of special teams for the purpose of salvage operations led by OSCs, noting that OSCs should seek assistance from special teams directly to ensure proper actions are taken. Further, technical specialists can be drawn upon, such as partner Area Committee members and the commercial response industry (e.g., the American Salvage Association).

## SUPSALV

Under the Naval Sea Systems Command (NAVSEA), SUPSALV consists of four technical and operational divisions:

- The Diving Program Division is responsible for setting diving policy and approving U.S. Navy diving equipment.
- The Diving Certification Division serves as the System Certification Authority for U.S. Navy shipboard and portable hyperbaric systems.
- The Underwater Ship Husbandry Division develops techniques, procedures, and equipment to perform ship repairs.
- The Operations Division is a small cadre of government employees who manage and provide technical assistance for salvage, deep search and recovery, towing, and oil spill response operations. These operations can be accomplished using civilian contractors, military assets, or a combination.

SUPSALV has extensive experience in oil spill response and salvage in austere and logistically challenging environments. Operations include wreck re-floating, wreck removal, oil removal from submerged vessels, ship strandings/de-beaching, ship lightering, oil spill response (off shore, near shore, and in shore), towing/heavy lifting, and deep object search and recovery. Examples of SUPSALV assistance include:

- The survey of the M/V MONTEBELLO in the summer of 2011. SUPSALV sent two people to sit on the technical review board to help select the company that would perform the operation.
- The F/V MARGUN grounding near St. George Island, Alaska in 2009. The vessel was a 112-foot long fishing vessel that was grounded, requiring fuel removal to prevent pollution. Due to the remote location, it was difficult to find all the proper equipment to support the offload. SUPSALV maintains an ESSM base in Anchorage, Alaska with pre-positioned response

equipment. USCG requested 1,050 feet of 2-inch arctic grade hose that was quickly made available via C-130 transport.

- Fuel removal operations during the ex-USS CHEHALIS in Pago Pago, American Samoa. SUPSALV coordinated operations in conjunction with the Pacific Strike Team (PST) and Sector Honolulu in the removal of volatile fuels from the submerged wreck.

Under the Salvage Facilities Act (10 U.S.C. § 7361), the Navy is authorized to maintain a salvage capability that includes a capability for oil spill response. The Navy performs this function through both specialized Fleet Operating Forces (primarily salvage ships, tugs, and Mobile Diving Units) and SUPSALV. In addition, SUPSALV functions as an OSRO (33 C.F.R. Part 154) for most DOD facilities.

SUPSALV is a DOD representative to the NRT. Under the NCP, SUPSALV is designated as a special team to the OSC, and is a support agency under ESF-3 and ESF-10 when activated under the NRF for debris and pollution removal, respectively. During normal operations, SUPSALV would contract through its standing contracts, executing a military interagency purchase request (MIPR). In post-disaster operations where a disaster has been declared, unless the OSC is the DOD, FEMA may mission assign and fund this support via the Stafford Act, provided through USACE (ESF-3, as a channel clearance activity) or the USCG or EPA (ESF-10, as an oil or hazmat response activity). All Navy assets—SUPSALV and military—can be accessed by EPA or USCG OSCs, when available and at the approval of the CNO or appropriate Fleet Commander. For USCG OSCs, activities, both pre and post-storm, are accomplished with the USCG per a MOA dated June 2015 and with USACE per an Inter Service Support Agreement dated 01 January 2011. EPA OSCs would access SUPSALV assets by activation of a standard pollution removal funds authorization (PRFA) request.

### EPA ERT

The ERT is a group of EPA technical experts within the Office of Solid Waste and Emergency Response, who provide technical assistance on oil and hazardous substance releases, primarily to OSCs, in the U.S. and international waters. The ERT offers expertise in such areas as biology, chemistry, hydrology, toxicology, engineering, and health and safety. For oil spill incidents related to submerged or abandoned vessels, the ERT can perform the duties of SSC and/or serve as the head of the Environmental Unit within the ICS organization.

The ERT supports the NCP Subpart J (use of dispersants and other chemicals) program during oil spill response and recovery operations. The ERT technically evaluates alternative cleanup response technologies and assists with field implementation. The ERT can evaluate plans or implement the special monitoring of advanced response technologies (SMART) protocol. The ERT can provide advice on boom strategies/containment during abandoned vessel oil recovery operations.

For spills related to vessels, the ERT assists with hazard assessment, multimedia sampling and field analytical tools, the evaluation of the potential impacts to sensitive ecosystems and eco-toxicity risk to organisms in water and sediment, and the assessment of cleanup options. The ERT uses in-house oil fingerprinting techniques to evaluate mystery oil spills or weathered oil samples for source identification. The ERT evaluates innovative treatment methods, including potential biodegradation of oil constituents, based on analysis and rapid bench scale testing.

For submerged vessels, the ERT and EPA dive program have scientific divers, ROVs, and remote sensing tools to locate and evaluate environmental conditions in the vicinity of submerged vessels. ERT divers can provide technical support for commercial diving operations, including review of work plans and dive safety plans. The ERT and other EPA Dive Units have expertise in polluted water diving, proper personal protective equipment (PPE) for diving and topside personnel, and proper diver decontamination procedures.

## NOAA SSC

NOAA scientific support is for "all hazards." The NOAA SSC experience can benefit an OSC/COTP during emergency responses to many types of incidents, including natural disasters, ship groundings, and terrorist incidents. For example, following the devastation from Hurricanes Katrina and Rita in 2005, NOAA Scientific Support Teams played major roles in rescue support, response to the multiple large oil spills, chemical container location and cleanup, and debris removal. The NOAA SSC also frequently supports vessel salvage and abandoned and derelict vessel operations and can access the NOAA hydrographic survey resources and the National Weather Service for incident specific weather forecasts. In addition, the NOAA SSC can provide support regarding legacy and historic shipwreck assessment and remediation, including access to the Remediation of Underwater Legacy Environmental Threats (RULET) database (Appendix D). The SSC can also be the liaison for NOAA and DOI trust resource programs, including scientists responsible for oil spill and coral grounding injury assessments, and NOAA's Maritime Heritage program, which includes a significant number of underwater archaeologists that can assist with the Sec 106 NHPA reviews.

## NOAA Marine Debris Program

The mission of the NOAA MDP is to investigate and address problems that stem from marine debris through research, prevention, reduction, and removal activities, in order to protect and conserve our nation's marine environment and ensure navigation safety. The MDP has a history of assisting federal, state, and local partners with addressing abandoned vessels, from individual cases to many vessels from severe weather events such as hurricanes. Though the MDP does not have dedicated funding to support a national abandoned/derelict vessel (ADV) effort, in the past, the MDP has:

- Provided scientific support to describe the movement of floating ADVs and determine potential environmental impacts;
- Assembled spatial, environmental, and economic data vital to prioritizing ADVs for removal and disposal;
- Hosted ADV workshops providing a national forum for coastal state agencies to discuss states' unique challenges and develop solutions to address them;
- Developed an ADV InfoHub as a central source of information regarding ADVs and the policies surrounding them, by state;
- Facilitated the development of marine debris emergency response guides and regional action plans that include information on ADV policies, issues, and challenges unique to coastal states and territories;
- Provided funding for removals through Community-based Marine Debris Removal Grants and Congressional Supplemental funds; and
- Developed Best Management Practices for Removal of Debris from Wetlands and Other Intertidal Areas

## USCG MSC SERT

USCG MSC SERT is available to provide technical assistance. It has eight to ten staff engineers on call 24 hours a day, seven days a week to provide immediate salvage engineering support to the USCG COTPs and OSCs. SERT can provide technical evaluations, including assessment and analysis of vessel stability, hull stress and strength, grounding and freeing forces, prediction of oil/hazardous substance outflow, and expertise on passenger vessel construction, and fire protection and safety. SERT has mobile computing capability for on-scene deployment. The MSC maintains a database of over 5,000 hull files that can be used to generate computer models of vessels for salvage engineering. SERT maintains relationships with external agencies as well, including SUPSALV.

## USCG NSF

40 C.F.R. Part 300.145(a) speaks specifically to the preparedness and response duties of the six components that make up the NSF. The NSF's area of responsibility covers all USCG Districts and Federal Response Regions.

## NSFCC

Located in Elizabeth City, North Carolina, the NSFCC is responsible for support and standardization guidance to the Atlantic Strike Team (AST), Gulf Strike Team (GST), Pacific Strike Team (PST), Coast Guard Incident Management Assist team (CG IMAT), and Public Information Assist Team (PIAT). The NSFCC also oversees the maintenance of the OPA 90 mandated Response Resources Inventory (RRI) and OSRO Classification Program. During an incident or potential discharge, the NSFCC can provide assistance in locating spill response resources, coordinating the use of private and public resources, and implementing ACPs.

- PIAT, also located in Elizabeth City, North Carolina, is responsible for assisting OSCs in meeting the demands for public information during a response. PIAT brings interagency crisis communication experience and technical expertise to help OSCs meet their objectives of truth and transparency of operations for the public. PIAT's use is encouraged any time the OSC/COTP requires outside public affairs support.
- CG IMAT Is located in Norfolk, Virginia, and provides incident management expertise for Type 1 and 2 "all hazards" events.
- AST is located in Fort Dix, New Jersey on Joint Base McGuire-Dix-Lakehurst.
- GST is located in Mobile, Alabama.
- PST is located in Novato, California.

## NSF Strike Teams

The three NSF Strike Teams are the operational response components of the NSF and are responsible for providing highly trained personnel, technical expertise, and specialized equipment to assist OSCs during a pollution incident or threat of a pollution discharge. NSF Strike Teams assist with oil and chemical spill response, spill stabilization and containment, and monitoring or directing the response actions of responsible parties and/or contractors. OSCs may contact NSF Strike Teams directly for any assistance.

The NSF has extensive experience in oil/chemical spill response and vessel salvage assistance, usually working in concert with other special teams during salvage operations. Specific operations include product pumping capabilities, vessel damage assessment, source control, vessel lightering, protective booming, product spill containment, skimming, temporary storage, alternative response technology (dispersants and in-situ burns) components, safety oversight, and overall incident management/ICS implementation. Since its establishment in 1973, the NSF has been deployed during every major and many medium-sized pollution responses and salvage cases in the U.S.

## American Salvage Association

The American Salvage Association (ASA) was created as an association of professional salvors to provide an identity and assist in professionalizing the U.S. marine salvage and firefighting response capability. By doing so, the ASA has helped to improve marine casualty response in North American coastal and inland waters. The ASA also educates government, industry, and the general public about the role of the marine salvor in protecting life, the environment, and property from the consequences of the perils of water transportation. To achieve these goals, the ASA promotes cooperation among its members to assure an effective, successful response in major incidents. The ASA is not a Special Team, but as a commercial entity, can be a resource to the OSC/COTP during complex salvage and removal cases.

## Area Committee Members

Each OSC/COTP in the Area Committee should document, as well as possible, the abandoned, derelict, and submerged wrecks throughout his/her Area of Responsibility and determine, as close as practicable, the degree of risk posed. Regional resource capabilities should account for any threat of discharge posed by the vessel or wreck, as appropriate. The information gathered should be incorporated into each applicable ACP, documenting the threat to the region and proximity to environmentally sensitive areas. This process will help identify potential risks within the area, and foster development of response and/or protection strategies.

## Regional Response Teams

There are 13 RRTs, one for each of 10 federal regions, plus one for Alaska, one for the Caribbean, and one for the Pacific Basin. Each RRT is composed of state and federal representatives and maintains an RCP. Regional EPA and USCG officials co-chair the RRTs. Like the NRT, the standing RRTs are planning, policy, and coordinating bodies, but do not respond directly to the scene. The RRT provides assistance as requested by the OSC during an incident.

# Appendix C: State Abandoned Vessel Programs

The following summary contains applicable state statutes that relate to abandoned and derelict vessels. This section describes the statute as well as whether the program is funded. In some cases, such as Georgia, programs were funded for a time before funding was reallocated to other internal state programs. These state programs will provide the OSC/COTP with a broader awareness of possible partnership opportunities in their respective states. These partnerships can be utilized to leverage federal authorities toward pollution removal from active threats, and state authorities toward the abandoned vessel's removal and ultimate disposal. Many states are addressing the problem of abandoned vessels in their waters and many are considering new laws and regulations. This summary is only a starting point for understanding state programs and capabilities. Much of this information is maintained by NOAA on ADV InfoHub.

Note: Underlined states have unconfirmed statutes, bold states have updated statutes.

| State | Statute | Description | Funding |
|---|---|---|---|
| Alabama | No program at this time. | No definition for abandoned vessel. Although Alabama does not have an abandoned vessel law, the state's salvage laws provide that any person may take up and secure "all property adrift" (*Id.* § 35-13-1) | No |
| Alaska | Alaska Stat. § 30.30.120 | Abandoned and Derelict Vessels – A vessel left unattended for more than 30 days in state waters or on private property without authorization may be taken into custody. | No |
| California | HNC § 510-527 | Wrecks and Wrecked Property of the Harbors and Navigation Code - Sec. 522 specifically addresses abandonment and removal. | Yes |
| Connecticut | Conn. Gen. Stat.§ 15-140c | Connecticut does not have a formal abandoned vessel program. CONN. GEN. STAT. § 15-140c provides local police departments and the Connecticut DEP with the authority to take abandoned vessels into custody. | No |
| Delaware | Del Code § 1303 | Vessels Adrift or Abandoned on Public Property and Lost, Stolen, or Abandoned Property Relating to Vessels. Abandonment means 30 days without action by owner. | Yes; under Delaware National Resources and Environmental Control (DNREC) |
| Florida | FL Statutes - Title 28 FLC § 376.15 and 376.16 | Derelict vessels; removal from public waters. Florida's Fish and Wildlife Conservation Commission (FWCC) is authorized and empowered to remove any derelict vessel as defined in §823.11(1) from public waters. | Florida State Grants |
| | § 705.101 to 705.19 of Chapter 705 | Lost or Abandoned Property. Authorizes law enforcement to remove abandoned property. | |

| State | Statute | Description | Funding |
|---|---|---|---|
| Georgia | GA. Code Ann. § 52-7-72(a) | Abandoned/derelict vessels (defined as 5 days) posing a threat to public health or safety may be taken into custody. | Past funding via DNR |
| Hawaii | HI. Rev. Stat. § 200-41 – 200-55 | There is no formal state program in Hawaii. The Department of Land and Natural Resources addresses abandoned vessels through a collection of laws. | No |
| Illinois | 625 ILL. Comp. Stat.45/3C-3(a) | The Illinois lost and abandoned watercraft laws do not expressly define "abandoned vessel". However, law enforcement agencies can authorize removal of a watercraft abandoned on waters for 24 hours or more. | No |
| Kansas | KSA 32-1120(x) | Defined as "any vessel on public waters or public or private land which remains unclaimed for a period of 15 consecutive days." No formal state program addressing abandoned vessels. | No |
| Louisiana | LA Rev. Stat. § 34:843 | The Coordinator is authorized to remove any vessel described in § 30:2469(A) and recover the costs of removal from the owner or operator of the vessel or structure. State agencies have various authorities that can be utilized to remove abandoned vessels. | Varies depending on statute utilized |
| Maine | ME. Rev. Stat. Ann. tit. 12, § 1866(4) | Defined as "any watercraft that is inoperative and neglected…or that has been left by the owner in coastal waters without intention of removal." The program is managed by the ME Dept. of Agriculture, Conservation & Forestry. | Sub Lands Fund |
| Maryland | Maryland Code Title 8, Subtitle 7 | State Boat Act. 8-721 to 8-723 and section 8-725-1 state that authorities may dispose of unclaimed vessel by auction/other means. | Waterway Improvement Fund (WIF) |
| Massachusetts | MA. Gen. Laws Ch. 91 | In 2008, MA Legislature established the Abandoned Vessel Trust Fund to assist the Department of Conservation and Recreation (DCR) with the removal of abandoned vessels. | DCR Trust Fund |
| Michigan | N/A | Michigan does not have a formal state program addressing abandoned vessels. | No |
| Minnesota | MN Statute §86B.107 | For Minnesota, there is no formal state program. State statute §86B.107 requires the owner to report the submerged vehicle (including watercraft) and remove it. Political subdivisions will remove the vehicle, if the owner does not act, and can seek civil penalties. | No |

| State | Statute | Description | Funding |
|---|---|---|---|
| Mississippi | MS. Code Ann. § 49-27-71 | Mississippi Department of Marine Resources (DMR)'s Derelict Vessel Removal Program is authorized and funded through the state's Derelict Vessel Fund and Tidelands Trust Fund. | Yes |
| Nebraska | N/A | No formal state program addressing abandoned vessels. The Nebraska Game & Parks Commission requires that a vessel be reported within 14 days from abandonment. | No |
| New Hampshire | N.H. Rev. Stat. Ann. § 270-B | There is no formal program; however, the Department of Safety has removal authority under chapter 270-B and the Pease Development Authority has authority to address abandoned vessels located in the state's ports and harbors. | Yes |
| New Jersey | N.J.S.A. 12:7C-7 et seq. | Pursuant to the Abandoned Vessel Disposition Law, abandoned vessels may be scrapped or disposed of via any means once custody is obtained. Abandonment means 30 days without action by owner. | No |
| New York | Title 10, § 130-139 | Navigation Law. Derelict vessels; removal from public waters. Sheriff is authorized and empowered to remove any derelict vessel. | No |
| North Carolina | N/A | North Carolina has no formal program to address abandoned vessels. North Carolina, at one time, had a pilot program for removal of abandoned vessels in the Neuse River Basin. The program has since expired. | No |
| Ohio | OH Rev. Code § 1547.30 to § 1547.304 | There is no formal state program in Ohio that manages the removal and disposal of abandoned vessels. A collection of state laws sets forth the procedures for local law enforcement officers and private individuals to remove and claim abandoned vessels. | No |
| Oregon | Vol. 17 § 830.908 to § 830.948 | Oregon Revised Statute § 830.911. Law enforcement, federal agency, State Marine Board, or any other public body (i.e. DSL) responsible for land/water has the authority to seize/remove abandoned or derelict vessels. | Yes, biennium allocations; OSMB: $150,000 DSL: $35,000 |
| Pennsylvania | 30 PA. Cons. Stat. § 102 | There is no formal state program that addresses abandoned vessels. This citation notes legal definition of "abandoned." | No |
| Rhode Island | R.I. GEN. LAWS § 46-6-10.2 | The Rhode Island General Assembly passed RIGL 46-6-10.2 in 2012, creating the Derelict and Abandoned Vessel Obstruction Removal Commission to reimburse public entities for removal of derelict/abandoned vessels or obstructions. | Yes |

| State | Statute | Description | Funding |
|---|---|---|---|
| South Carolina | S.C. CODE ANN. § 50-21-10(1) | South Carolina has a formal abandoned vessel removal program. South Carolina's abandoned vessel removal program is a multi-pronged effort involving a variety of state agencies and local governments. | Yes |
| Texas | TX Nat. Res. Code § 40.108 | The Texas General Lands Office (GLO) has an Abandoned Vessel and Structure Removal Program. | No |
| Virginia | VA Code: § 28.2-1210, § 28.2-1204.2, and § 15.2-909 | Virginia does not have a formal program to address abandoned vessels. Virginia Marine Resources Commission has authority to remove obstructions from state waters. | Marine Habitat and Waterway Improvement Fund |
| Washington | Title 79, Chapter 79.100 | 79.100 - After gaining custody, an authorized public entity may use, sell or dispose of the vessel. | Yes |

***Table 3 – Summary of State Abandoned Vessel Programs***

Note: The NOAA Office of Response and Restoration's Marine Debris Program maintains a website to provide information on pertinent abandoned and derelict vessels' state laws. This resource can be accessed at: *https://marinedebris.noaa.gov/discover-issue/types-and-sources/abandoned-and-derelict-vessels*

# Appendix D: Pollution Mitigation from Legacy Wrecks

This Guidance defines "submerged legacy wrecks" as entirely beneath the surface and not presenting a hazard to navigation. Submerged wrecks are almost never economical to salvage for their intrinsic value. However, circumstances that may require raising sunken wrecks include intelligence value (e.g., GLOMAR EXPLORER operations) and historical interest (e.g., USS MONITOR). More frequently, the cargo or contents may be of interest, sometimes for historical artifacts (e.g., TITANIC) or intrinsic value (e.g., precious metals), but increasingly, sunken wrecks may need to be addressed to remove a potential environmental hazard from oil or hazardous substances. It is in this latter case that OSC responsibilities from the NCP most commonly intersect with submerged wrecks and, hence, the removal of oil and hazardous substances from these wrecks is the focus of the following discussion and flowchart.

## Assessments

NOAA has spent a great deal of time and effort researching wreck assessment programs throughout the world and has applied its work toward the RULET program. In 2010, Congress directed NOAA to develop a list of the most ecologically and economically significant potentially polluting wrecks in U.S. waters, focusing on threats from oil pollution. NOAA ranked vessels as high, medium, or low potential oil pollution threats based on a broad multi-disciplinary weight of evidence that combines the historical evidence, archaeological interpretation, salvage engineering, and ecological and economic modeling.

NOAA noted other pollution threats and hazards, including chemical cargoes and munitions when known, but these non-oil threats were not used in the ranking. Each vessel identified in the RULET assessment has been assigned a risk profile by NOAA, which has subsequently been delivered to each RRT and USCG Sector with recommendations based on the agencies' scientific, technical, and resource trustee expertise. The national RULET report and the 87 individual risk assessments are available at: http://sanctuaries.noaa.gov/protect/ppw/.The following list of characteristics was used by NOAA analysts to help determine the risk posed by latent pollution threats aboard legacy wrecks:

## Characteristics and Remarks

- **Vessel Age:** Vessels built prior to 1891 most likely did not use oil as their primary fuel source and therefore would not carry quantities posing a significant threat.
- **Vessel Location:** Although any discharge is harmful, those wrecks within the U.S. EEZ located closer to environmentally sensitive areas warrant further scrutiny.
- **Vessel Construction:** Vessels constructed during and after the 20$^{th}$ century will likely be constructed of steel, iron, or other resilient material.
- **Vessel Type:** The vessel's service (e.g., tank ship, freight carrier, or passenger vessel) can give indications as to its potential capacities and fuel type.
- **Casualty Information:** Whether the vessel sank due to catastrophic explosion or grounding will make a great difference as to its potential remaining cargo aboard.
- **Route of Service/Logs:** Consideration should be given as to the vessel's route of service and the type of cargo. If the vessel was beginning her voyage, it is probable she would be laden with fuel. Logs may also indicate where bunkers were last taken on.
- **Proximity to Sensitive Areas:** Identify the geographic area of oiling to water column, water surface, and shoreline resources, considering threatened resources at risk.
- **Socio-Economic Impacts:** Spills from sunken wrecks have the potential to cause significant social and economic impacts, including fisheries, tourism, commerce, water supplies, and archeological sites.

Based on this NOAA assessment work, the figure below provides a guide for pollution threat decision making. The decision tree, which only evaluates physical integrity, was developed by the USCG SERT

and used by NOAA in the development of the RULET Risk Assessment Vessel Profiles, and should be used to help inform OSCs on the decision-making process for potential pollution mitigation activities.

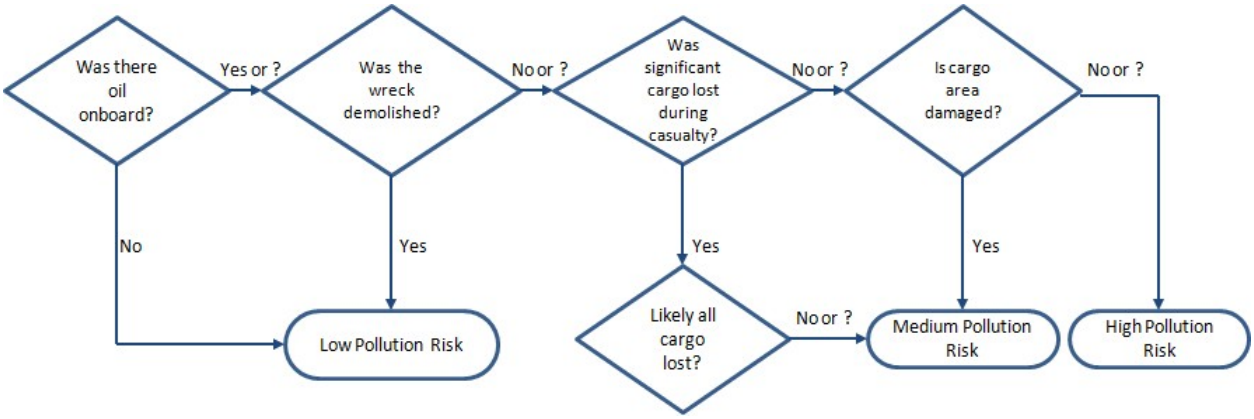



***Figure 2 – Pollution Risk Decision Guide*[85]**

Typically, plans of the vessel or similar vessels are available. In addition, conditions of bunker and cargo loading may be on record. For 47 of the 87 vessels scored, an initial survey has been conducted or diver information is available that can give an idea of the condition and orientation (upside down, on side, or on keel; the more upright, the less chance of fuel remaining). This data can provide an idea of the likelihood of oil or hazardous substances remaining entrapped. From the total oil or hazardous substances potentially remaining on board, as well as the orientation, compartmentalization, and condition of the vessel, an idea of the quantity and likelihood of a worst case discharge (WCD) can be derived. At that point, an assessment of the fate and trajectory of a WCD, given the type of oil, climatology, and currents can be performed through NOAA or other models. From this modeling, the probability and severity of potential impacts to environmentally sensitive areas can then be ascertained. No action or a plan for future defensive action (booming/skimming/dispersants if a discharge occurs) may be the most cost effective and environmentally benign alternative.

## Authorities and Funding

The designated OSC/COTP has the authority to identify and address an environmental threat as described in previous sections of this document. In most cases of legacy submerged wrecks, however, the RP is either unknown or the subject of legal disputes of indeterminable longevity, and the eventual payment for operations or damages is questionable. Weighing the environmental risks against cost, the OSC/COTP can decide to proceed using the OSLTF (when the source is discharging or substantially threatens to discharge oil) or other appropriate government funds in these cases. Examples of this include the SS PRINCESS KATHLEEN (Alaska), M/V MONTEBELLO (California), and ex-USS CHEHALIS (American Samoa).

## Priorities

Response priorities with regard to submerged wrecks have many influencing variables. However, there are several paramount response priorities that remain constant:

- Safety of responders and the public
- Minimize adverse impacts to the environment
- Minimize impacts to commerce infrastructure
- Public affairs outreach
- Stakeholder/community engagement

[85] Michel, J., Schmidt Etkin, D., et al. (2005). *Potentially Polluting Wrecks in Marine Waters.* Proceedings of the 2005 International Oil Spill Conference. American Petroleum Institute, Washington, D.C.

Key actions and decisions by the OSC/COTP that become the underpinning of the response include:

- Determining authority and identifying funding
- Conducting the initial assessment and determining courses of action
- Operational planning/management and execution
- Assessing current operational plan and making plan adjustments
- Reviewing public affairs program/transparency of operations

## Contract Management

In cases where the RP is not known or in doubt, the OSC can choose to work with either a commercial contract (SS PRINCESS KATHLEEN, M/V MONTEBELLO), government assets (ex-USS CHEHALIS) or a combination. USCG OSCs should also engage their respective NPFC case manager, as well as the SILC Contracting Officer, prior to commencing operations.

With commercial contractors doing large projects, competitively bid contracts are usually required and must be carefully administered so that lengthy delays, generated by contractor protests, are not encountered. Bidders should be required to include a preliminary safety analysis and plan. In addition, to avoid extra costs, the SOW must be detailed enough to describe the full requirement/end state. However, the SOW should not be so detailed as to be overly prescriptive as to technical method of fulfilling the requirement (divers vs. remote operated vehicles (ROVs), identity/type of platform, testing/sampling methods, etc.). The proposed technical methods must, however, be required to be disclosed by bidders so that the Technical Reviewers can fairly compare value and risk between proposals.

The required cost structure can prescribe fixed mobilization and demobilization costs combined with an operational day rate with number of shifts and estimated days to complete or, alternatively, an overall firm fixed price. Most other cost structures make price difficult to predict and control. Cost predictability and clarity is greater with government pre-negotiated contracts (BOAs, SUPSALV), but their use may not be appropriate and they may or may not be cheaper.

In the Action Plan Development section below, there are a number of decision points that should be reflected in the SOW. Foreseeable operational decisions made before the contract is competed will reduce both cost and controversy.

## Action Plan Development

Assuming the initial assessment identifies a potential environmental threat that may be cost beneficial to remove, an Action Plan must be developed that, in rough form at least, informs the SOW. Key decisions include:

- ***Should removal actions be combined with the survey?*** In most cases, the assets required to remove oil or hazardous substances are different and considerably greater than those required to conduct a survey. Further, much is known about some wrecks and little about others. While the decision is a case-by-case judgment call, in most cases it is easier to control cost and risk by conducting a detailed survey that can inform removal planning (M/V MONTEBELLO, ex-USS CHEHALIS, and USS MISSISSINEWA). There are cases, however, where much is known of the wreck and necessary removal assets are reasonably available. In these cases, it may be cost beneficial to combine the survey and the removal operations (SS PRINCESS KATHLEEN).
- ***What tanks/areas should be accessed?*** Ships can have large cargo tanks; will have bunker fuel tanks, oil in machinery sumps/crankcases, small machinery space “day” tanks, and oily waste tanks; and may have oil or hazardous substances in drums and/or containers. These may have leaked and oil or hazardous substances may be trapped in spaces above. Due to difficulties locating and accessing these materials, it may take considerably more risk, time, and cost to either survey or remove oil or hazardous substances from some areas than others. Typically, the larger tanks are the easiest to access. At some point, there is usually a point of diminishing returns

where large amounts of risk/cost are chasing small potential pockets of oil or hazardous substances. This point should be carefully analyzed and decided upfront.

- ***Divers vs. ROVs:*** By far the greatest determining factor in the efficient use of divers is depth. Interior surveys and the mechanical work associated with removal require surface-supplied or surface- tethered (vice free swimming scuba) divers at any depth. As depth and decompression requirements increase, the logistics footprint and cost increase dramatically. Shallower than 60 feet, most tasks can be done without delay for decompression. Depending on the dive profiles, a step increase in cost occurs somewhere in the 60 – 90 foot range as many dives may require decompression stops. Costs ramp up steeply between 100 – 190 feet as most dives require decompression stops, which become quite lengthy at the upper end. Another large step increase occurs at the 190-foot depth as divers must shift to mixed gas. Somewhere in the 120 – 300-foot range, depending on the work needed, saturation diving becomes more efficient and represents an exponential cost increase. Pressurized diving becomes impossible at around 1,500 feet and usually completely impractical well before that. Atmosphere (non-pressurized) diving is possible to around 2,000 feet and can be efficient in some applications; however, the cost, bulk, and handling requirements usually do not represent a worthwhile gain. Small, man-handled ROVs are typically simple optical/sonar sensors commonly used for searches, external inspections, and to monitor or guide divers. They are cheap and effective but do not have the power to perform the work necessary for surveys (sample hole drilling/grinding) or extraction operations. Larger working ROVs with sufficient power and manipulator functionality to perform mechanical work require extensive handling systems, skilled operators, and on-board technicians. Specialized tools for the specific extraction must usually be developed and tested on the ROV. That said, somewhere in the 190 to 1,000-foot range, ROVs become the best option in terms of cost and risk, especially for surveys. Useful work can be performed to around 20,000 feet but size, handling requirements, and logistic support increase dramatically with depth.
- ***Platforms:*** Platforms can range from a small boat to support a shallow external survey to a number of large ships and barges supporting a large recovery operation. The following focuses on larger platforms to support large operations. Platforms must be capable of supporting diving and/or ROV operations in the depth and weather conditions contemplated for the duration required. Action Plan development must specify the expected and worst case weather conditions, personnel and cargo transfer, and requirements for berthing, deck space, fueling for topside equipment, communications, freeboard for both handling over the side (maximum) and weather (minimum), fendering, station-keeping, waste disposal (especially in waters where overboard sewage discharge is not permitted), decontamination, and recovered product storage. The platform from which the underwater work is to be performed can be either a barge or a ship. Barges are much cheaper than ships, but must typically be fitted with portable living accommodations and weight handling equipment. In addition, ships or barges are safer, more reliable, and more stable in underwater operations than smaller platforms. However, barges typically must be moored. This can be done to thousands of feet but becomes less and less cost effective and less positionally secure as depth increases. Generally, the shallower and longer an operation, the more likely a moored barge or ship is the best option. If an unmoored ship is to be used as the underwater work platform, it must be able to maintain station either by constant maneuvering or with a dynamic positioning (DP) system. DP systems are designated DP1 through DP3 with increasing numbers reflecting increased redundancy and safety. Station keeping is tiresome and difficult to maintain without DP and risk of ROV accidents increases. Manned underwater operations require at least level DP2. Another consideration is the reliability of the ship's engineering plant. All the support equipment, ROVs, and divers are idled but being paid if the ship has an engineering casualty. Further, ships must have enough open deck space to support the operational footprint. The cost and availability of suitable ships varies greatly with spot market conditions.

- ***Oil or hazardous substances removal methods:*** The basic technique for removing oil or hazardous substances from a submerged tank is a "hot tap" system, essentially a bolt-on flange with a valve mounted on it through which a hole is drilled into the tank. After the valve is closed, hoses and pumps can be mounted. As depth and fluid viscosity increase and temperature decreases, products become more difficult to pump. Injection of steam or hot water and/or use of a ring of injected water to reduce hose friction have made pumping possible to deeper depths (SS JACOB LUCKENBACH, SS PRINCESS KATHLEEN). However, depending on the viscosity and temperature, at some depth pumping through hoses becomes impractical and a specifically engineered solution must be devised. With the M/V PRESTIGE, a tanker sunk off Spain, a lowered aluminum bell arrangement captured oil and it was raised and lowered to over 10,000 feet, at huge expense. Hot tap arrangements are unsafe for gasoline but work for diesel and all heavier oils.
- ***How clean is clean?*** This is related to the issue above (what tanks/areas should be accessed). There will invariably be small pockets of oil remaining in tank webbing and framing that have had product removed. Consider that the most easily available access points for tanks may not be at the absolute highest point. Will the decision be made to cut larger or new accesses and remove remaining pockets? The Action Plan should discuss at what point accessed tanks/areas are clean enough.
- ***Disposal of recovered oil or hazardous substances:*** The Action Plan should address the disposal of recovered product all the way to final disposition. Failure to have the disposal arrangements in place, permitted as necessary and verified, before product (characterized as hazardous waste) is removed can result in delay and increased costs. Removed oil or hazardous substances can be pumped to a barge, tanker, tank, or bladder. These in turn must take the oil or hazardous substances to a permitted facility ashore where it must be transferred by road or rail to a disposal or reuse facility.
- ***Wildlife Operations:*** Potential wildlife operations may be necessary (as with the LUCKENBACH operation) to protect state and federal trust resources. Best Management Practices (BMPs) should be identified during the consultation phase of operational planning. Increased wildlife operations may require additional support on site, including observer platforms as well as the potential for prepositioned equipment and emergency response resources.
- ***War Graves and Historically Significant Wrecks:*** Procedures need to be in place to record and avoid disturbing artifacts and address human remains, if found.
- ***Operations Safety:*** The Action Plan should identify anticipated safety issues. In this regard, the Action Plan informs the SOW. In turn, the SOW will facilitate contract bidder requirements to include a preliminary safety analysis and plan. More detail appears below in the site safety section.

The following decision diagram should be used to develop an operational plan based on initial assessments of the wreck against a WCD, as described above.

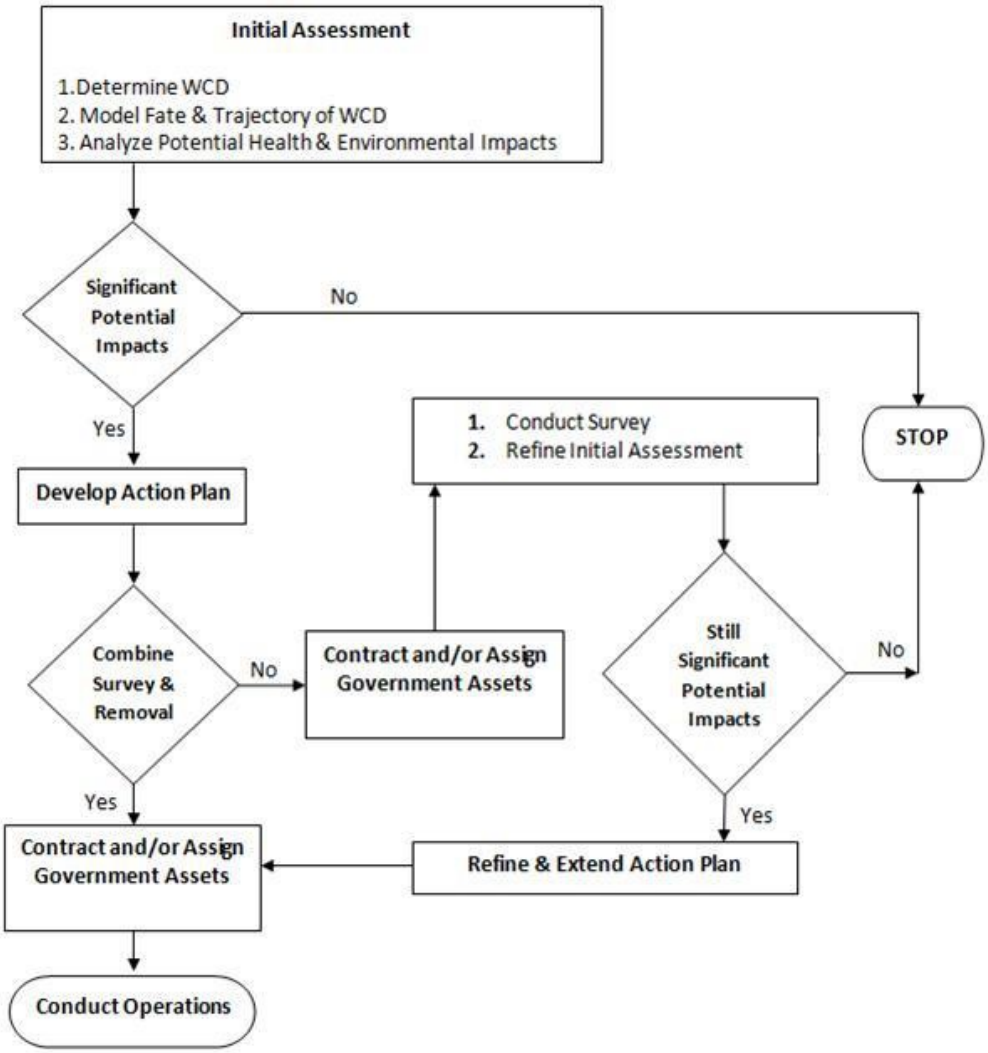



*Figure 3 – Operations Plan Development*

## Site Safety Issues

Site safety and risk analysis are the most important part of any mission. Salvage and wreck operations are certainly no exception. Diving operations and fuel transfer make these types of operations even more hazardous. Thus, site safety should remain a top priority of all involved. Risk analysis begins with a job safety analysis, e.g., what are the tasks being conducted and what are the risks posed to responders/workers? A combination of the General Assessment of Risk model, as well as the ICS-form 208, Emergency Response and Site Safety Plan, will provide an excellent starting point.[86] Although not an inclusive list, some major safety issues may include:

[86] It is important to note that the General Site Safety Plan is a requirement set forth in Title 29 C.F.R. 1910.120(b)(4), as well as the Dive Safety Plan required by Title 29 C.F.R. § 1910.420 and § 421(d).

| Hazard | Mitigation |
|---|---|
| Diving | |
| Cold water diving | Adjust dive tables to account for colder temps. |
| Wildlife contact | Implement Wildlife Monitoring Teams to monitor and report wildlife activity. |
| Depth of diving/amount of work required below surface | Diver work/rest should be regularly monitored. Dive Supervisor will ensure this activity is conducted. |
| Decontamination of personnel diving in contaminated waters | Expedited emergency diver decontamination should be established in advance to support rapid decontamination and employment of surface decompression in chamber. |
| Product Removal | |
| Explosion/static accumulation of oil product in containers | Ensure proper transfer protocols are followed and that safety precautions are taken to mitigate possible explosive atmospheres. |
| Hydrogen sulfide ($H_2S$) exposure from removed product (heated bunker oils, crudes, etc.) | Some operations require product to be heated. Ensure atmospheric monitoring and exclusion zones are appropriately established based on OSHA permissible exposure limits/ American Conference of Governmental Industrial (ACGIH) threshold limit values.[87] |
| Flammable vapors (gasoline, naphthalene, jet-a, etc.) | Ensure proper transfer protocols are followed and that safety precautions are taken to mitigate explosive atmospheres. |
| Heavy lift/overhead operations | Crane operations are common during major operations such as this. Proper site safety protocols include safety zones, licensed operators, and safety observers among others. |
| General Safety | |
| Slips, trips, and falls | General awareness should always be taken when on-site, considering the number of trip and fall hazards present. Non-essential personnel should be limited. |
| On-water operations | Personal Floatation is required for all on-water operations. |
| Thermal exposure (heat/cold stress) | Exposure standards should be consistent with OSHA recommendations, included in the Site Safety Plan, and briefed to all teams. |
| Crew fatigue | Exposure standards should be consistent with OSHA recommendations, included in the Site Safety Plan, and briefed to all teams. |

***Table 4 – Major Site Safety Issues***

[87] It is recommended that operational action levels be established that recognize the most stringent exposure level.

## Fuel and Pollution Mitigation

Experience has shown that there are many ways to remove product from a submerged wreck. Numerous technical papers have been written on the subject and present good case studies on a variety of removal methods, including tank stinging, hot-tapping, and direct transfers. Considering that more than one option exists, OSCs should consider all options, and in many cases, a combination of options available to mitigate the pollution threat remaining aboard.

Within each of the above removal tactics, there are a multitude of activities and associated resources that make up a successful removal operation. The hot-tapping process is further described in the removal description noted in the case narrative on the SS PRINCESS KATHLEEN below.

## Product Removal Process

The product removal process contains many steps, but will always generally contain the same five core activities, noted below.

**Mobilize Appropriate Resources**

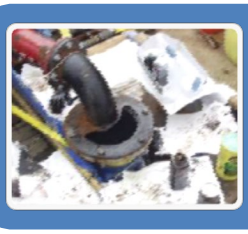
- Identify essential elements
- Logistical lead time
- Suited for operational environment

**Prepare Storage Facility for Use**

- Establish mooring system
- Contingency to move during operation if needed

**Determine Access Points**

- Minimize intrusions to wreck
- Maintain ability to secure operations if needed



**Fuel Removal**

- Heat material to pour point [24/7 ops while pumping]
- Monitor flow rates and vessel stability

**Decontamination**

- Minimize waste stream (materials, product, byproducts, etc.)
- Restore equipment to service

***Figure 4 – Product Removal Process***

Operations of this nature seldom include just one contractor or salvor. In many cases, operations will require multiple response entities, each providing a separate technical specialty. These providers should be managed by a project manager designated by the OSC for the purposes of coordinating the multi- faceted operation. The project manager should work in concert with the designated Operations Section Chief.

## Product Removal Case Examples

The following examples consist of two methods of removal of product from a submerged wreck. These processes should be developed by the salvor after assessments have been completed and as much information has been captured as possible.

Despite the raging fire that sank her, the ex-USS CHEHALIS was able to keep her cargo of volatile aviation gasoline intact. Normally, a less volatile product could be removed using the "hot tap" method, as was used during the SS PRINCESS KATHLEEN. However, this method could have created an explosive environment when considering the cargo remaining within the tanks of the ex-USS CHEHALIS. To circumvent hot tapping the tanks, a buoyed oil skimming system was introduced into the cargo tanks via the wreck's cargo hatches. The product was then removed using a pneumatic pump on a floating platform above the wreck. Several precautionary measures were put in place to prevent static accumulation, which is a universal risk with light cargos such as gasoline.

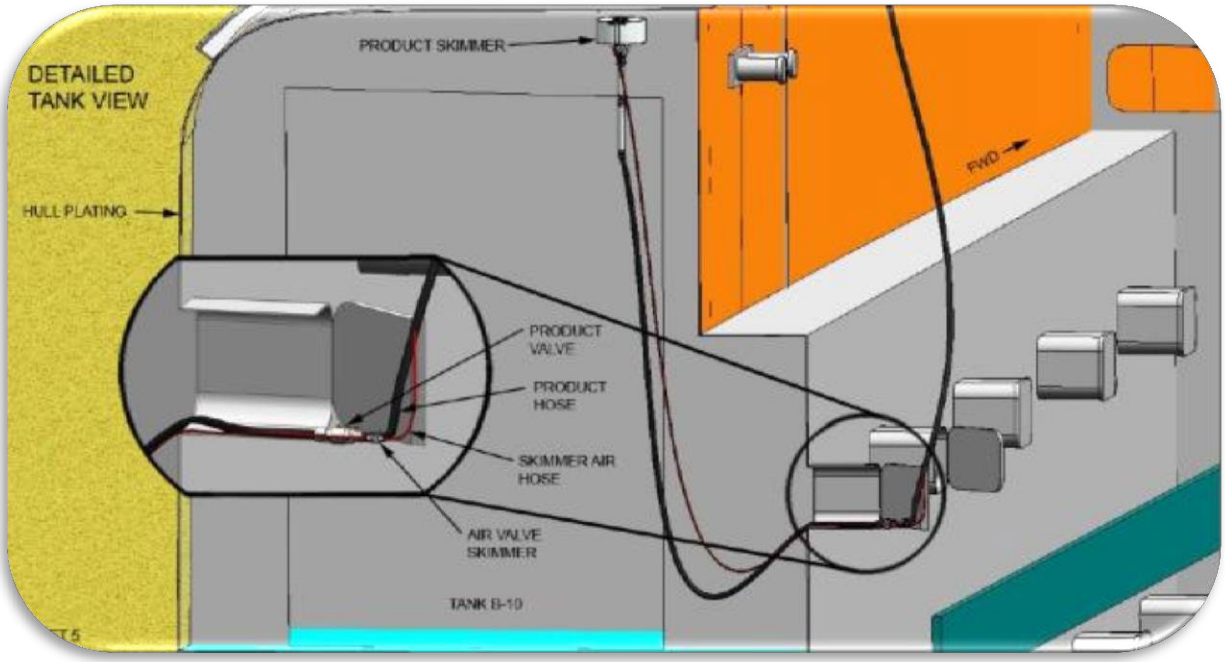



*Figure 5 – EX-USS CHEHALIS Product Removal Process*

In the early planning phases of the ex-USS CHEHALIS, it was assumed Singapore would receive the offloaded cargo as they had done for the USS MISSISSINEWA wreck oil operation. When the Singapore Port Authority was presented with a formal agreement, representatives from Singapore (Singapore National Environment Agency (NEA)) refused to allow any barge with recovered product to enter the country, citing the Basel Convention. This forced a last minute change to a critical element of the operation. Ultimately, a plan was developed whereby the recovered product was shipped back to the U.S. and transported and incinerated in Kansas.

To facilitate removing the cooled viscous bunkers of the SS PRINCESS KATHLEEN, the operations team developed a closed-circuit system of heating, re-circulating, and recovering bunkers from the wreck. A 20,000 gallon portable tank with heating coils was fastened to the deck of the primary work platform along with a hot water boiler, pumping, and heating equipment. The tank was filled with water and heated. The tanks on the SS PRINCESS KATHLEEN had been fitted with landing plates and flanges in advance using hot tap. A closed circuit loop was established from the tank being defueled on the wreck to the heated portable tank topside. As product was drawn from the wreck, clean heated water was gravity-fed back to the wreck via a closed-recirculation loop, cycling heated water through the tanks and freeing the viscous oil.

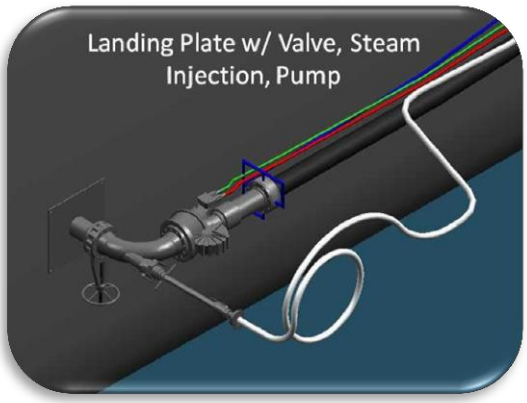



*Figure 6 – SS LUCKENBACH Transfer Operations (1)*

During the SS PRINCESS KATHLEEN's removal phase, once product was offloaded, the removed bunkers, when heated, created a higher level of $H_2S$ than was expected from the original product analysis. Although atmospheric monitoring was regularly conducted and logged throughout the removal operation, additional measures were immediately activated after a mandatory stand-down, including vapor barrier; respiratory protection during tank monitoring and skimming; establishment of restricted areas; and chemical additives cycled through the product to reduce $H_2S$ vapor.

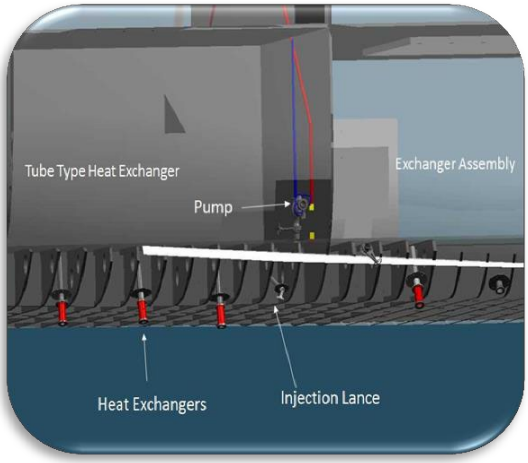



*Figure 7 – SS LUCKENBACH Transfer Operations (2)*

The regular, daily evaluation of on-site operations proved to be a valuable effort throughout the operation, allowing the Operations and Planning staff to make minor operational adjustments and plan augmentations where necessary.

The SS JACOB LUCKENBACH, mitigated in 2003, drew many similarities to the SS PRINCESS KATHLEEN removal operations. The contents of the SS JACOB LUCKENBACH, however, were far more viscous, in some cases measuring nearly 200,000 centistokes. In an effort to remove the oil from the wreck, the oil within the tanks needed to be heated to over 78 degrees Fahrenheit. This was accomplished by hot-tapping the hull of the vessel and inserting specially designed heat exchangers and steam lances to increase the internal temperature of the tank and thereby decrease the oil's viscosity.

Additionally, the submersible pumps were affixed with an annular water injection flange. The flange, affixed to the pump with a collar, injects a water sleeve within the discharge hose, thereby lubricating the inside of the hose and allowing the heavy viscous oil to move more freely with less internal surface tension. The operations removed nearly 94,000 gallons of fuel oil.

# Appendix E: Abandoned Vessel Program Development

This appendix provides example programs proven successful in abandoned vessel removal and makes recommendations for local and regional abandoned vessel program development. The best programs are those that work in concert with one another. The following proposal for Regional Standardized Control Systems considers the cooperation of federal, state, and local agencies. The example programs in this Guidance can be shared with Area Committee and regional workgroup members to assist in developing regional solutions to the issue of abandoned vessels.

***Utilization of a Central Reporting Entity and Database for Tracking of Abandoned Vessels***

A central clearinghouse for abandoned vessel reports should be accessible by any entity, such as a local marina or harbormaster. Reports should be followed up on by the appropriate state environmental response entity. Vessels of significant threat should be documented in local ACPs.

***Warning System***

State and federal entities with jurisdiction over safe navigation and environmental protection should develop and deploy warning communication systems at the local level, either via the local COTP office, or through engagement with harbormasters and marinas. A warning system should clearly establish and articulate penalties for vessel abandonment. If state/local authorities can track or identify ownership interests before a vessel presents a hazard, it will help with administrative processes preceding removal.

***Actions by State and Federal Entities to Identify Owners***

The identification of a documented vessel owner is the best chance of removing a vessel that has been abandoned. Vessel registration is required in most states and can be used to track ownership.

***Adoption of Standard Criteria for Hazard to Navigation and Environment***

Criteria such as those used by USACE for hazards to navigation and USCG and EPA for environmental concerns should be employed as a benchmark for regional programs.

***Establish Measures to Encourage Owner-Removal***

Some state programs offer vessel turn-in opportunities or reimbursement of a percentage of disposal fees. These programs encourage owners to properly dispose rather than abandon.

***Strict Liabilities for Non-Compliance of Vessel Disposal and Marking Requirements***

Increased civil penalty standards may discourage owners from abandoning vessels when considering an affordable, legal alternative.

***Award Rights to Marinas/Harbormasters***

In the event of vessel abandonment within a marina or public harbor, states and local municipalities should consider the ability to award rights to the marina or harbormaster to facilitate removal and disposal. Further, regional programs should reimburse marina/harbormasters for the cost of recovery and disposal.

## *Example of an Abandoned Vessel Program*

**Washington State Derelict Vessel Removal Program (DVRP)**

This program has been developed for authorities in the State of Washington and is only presented here as an example.

Washington's 2001 Legislature authorized the use of money in the state toxics account for a grant program for local governments to clean up and dispose of hazardous substances on abandoned and derelict vessels. The 2002 Washington State Legislature then passed the Derelict Vessel Act, which provides certain local and state agencies with the authority and funding for the removal and disposal of derelict and abandoned vessels from the waters of the state. Prior to the 2002 legislation, the DNR had to rely on cooperation by the vessel owners, lengthy legal approaches such as trespass and nuisance abatement actions, and federal actions to address derelict vessels. The Program was further strengthened on May 13, 2013 when the governor signed legislation to hold vessel owners more accountable (to help prevent vessels from becoming derelict or abandoned in the first place), improve enforcement, and bolster funding.[88]

***Key Elements of the 2013 Enhancements to the DVRP:***

- Permanently establishes the $1 surcharge on vessel registration that was set to expire at the end of 2013.
- Gives authority to the Washington Department of Ecology and authorized public entities to board vessels that meet the definition of "abandoned" or "derelict" for the purpose of assessing and correcting any potential threats to health, safety, and the environment.
- Changes registration-related offenses (such as failing to register) from a criminal misdemeanor to a civil infraction, making enforcement and collection of fines more realistic and efficient.
- Increases owner accountability by requiring owners of vessels longer than 65 feet and older than 40 years to obtain a vessel inspection before transferring ownership of the vessel to another party.

***The DVRP Provides:***

- Reimbursement of up to 90% of the cost of removal and disposal.
- Authorized public entities not able to undertake the removal of a derelict vessel may ask DNR to assume the lead.
- Priority for the use of funds for vessels in danger of breaking up, sinking, or blocking a navigational channel, or vessels that present a risk to human health, safety, or the environment.
- Funding for the Program comes from an additional fee placed on annual vessel registration fees.
- Only authorized public entities in Washington State (DNR, Department of Fish and Wildlife Service, Parks and Recreation Commission, Metropolitan Park Districts, Port Districts, and any city, town or county with ownership, management or jurisdiction over the aquatic lands where the vessel is located) may participate in this program.

[88] http://www.dnr.wa.gov/BusinessPermits/News/Pages/2013_05_20_derelict_vessels_nr.aspx

# Appendix F: EPA Ocean Disposal Permitting Program

40 C.F.R. Part 229.3 Transportation and disposal of vessels.

(a) All persons subject to title I of the Act are hereby granted a general permit to transport vessels from the [U.S], and all departments, agencies, or instrumentalities of the [U.S.] are hereby granted a general permit to transport vessels from any location for the purpose of disposal in the ocean subject to the following conditions:

(1) Except in emergency situations, as determined by [USACE] and/or [USCG], the person desiring to dispose of a vessel under this general permit shall, no later than 1 month prior to the proposed disposal date, provide the following information in writing to the EPA Regional Administrator [RA] for the Region in which the proposed disposal will take place:

(i) A statement detailing the need for the disposal of the vessel;

(ii) Type and description of vessel to be disposed of and type of cargo normally carried;

(iii) Detailed description of the proposed disposal procedures;

(iv) Information on the potential effect of the vessel disposal on the marine environment; and

(v) Documentation of an adequate evaluation of alternatives to ocean disposal (i.e., scrap, salvage, and reclamation).

(2) Transportation for the purpose of ocean disposal may be accomplished under the supervision of the District Commander of [USCG] or his designee.

(3) Except in emergency situations, as determined by [USACE] and/or the District Commander of [USCG], appropriate measures shall be taken, prior to disposal, by qualified personnel to remove to the maximum extent practicable all materials which may degrade the marine environment, including without limitation:

(i) emptying of all fuel lines and fuel tanks to the lowest point practicable, flushing of such lines and tanks with water, and again emptying such lines and tanks to the lowest point practicable so that such lines and tanks are essentially free of petroleum, and

(ii) removing from the hulls other pollutants and all readily detachable material capable of creating debris or contributing to chemical pollution.

(4) Except in emergency situations, as determined by [USACE] and/or [USCG], the dumper shall, no later than 10 days prior to the proposed disposal date, notify the EPA [RA] and the District Commander of [USCG] that the vessel has been cleaned and is available for inspection; the vessel may be transported for dumping only after EPA and [USCG] agree that the requirements of paragraph (a)(3) of this section have been met.

(5) Disposal of these vessels shall take place in a site designated on current nautical charts for the disposal of wrecks or no closer than 22 kilometers (12 miles) from the nearest land and in water no less than 50 fathoms (300 feet) deep, and all necessary measures shall be taken to insure that the vessels sink to the bottom rapidly and that marine navigation is not otherwise impaired.

(6) Disposal shall not take place in established shipping lanes unless at a designated wreck site, nor in a designated marine sanctuary, nor in a location where the hulk may present a hazard to commercial trawling or national defense (see 33 C.F.R. Part 205).

(7) Except in emergency situations, as determined by [USACE] and/or [USCG], disposal of these vessels shall be performed during daylight hours only.

(8) Except in emergency situations, as determined by [USACE] and/or the District Commander of [USCG], the [COTP], [USCG], and the EPA [RA] shall be notified forty-eight (48) hours in advance of the proposed disposal. In addition, the COTP and the EPA [RA] shall be notified by telephone at least twelve (12) hours in advance of the vessel's departure from port

with such details as the proposed departure time and place, disposal site location, estimated time of arrival on site, and the name and communication capability of the towing vessel. Schedule changes are to be reported to the COTP as rapidly as possible.

(9) The Nautical Data Branch, N/CS 26, Station 7350, National Ocean Service, NOAA, 1315 East West Hwy, Silver Spring, MD 20910, shall be notified in writing, within 1 week, of the exact coordinates of the disposal site so that it may be marked on appropriate charts.

# Appendix G: References and Additional Reading Materials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# Appendix H: Acronyms

**ACHP:** Advisory Council on Historic Preservation

**ACGIH:** American Conference of Governmental Industrial Hygienists

**ACP:** Area Contingency Plan

**ADV:** Abandoned/Derelict Vessel

**ASA:** Abandoned Shipwreck Act

**AST:** Atlantic Strike Team

**BMP:** Best Management Practice

**BOA:** Basic Order Agreement

**CG IMAT:** Coast Guard Incident Management Assist Team

**CBRN:** Chemical, Biological, Radiological, or Nuclear

**CERCLA:** Comprehensive Environmental Response, Compensation, and Liability Act

**C.F.R.:** Code of Federal Regulations

**CNO:** Chief of Naval Operations

**COCO:** Contractor Owned and Operated

**COMDTINST:** (U.S. Coast Guard) Commandant Instruction

**COTP:** Captain of the Port

**cSt:** centistokes

**CWA:** Clean Water Act

**DCR:** Department of Conservation and recreation

**DEP:** Department of Environmental Protection

**DMR:** Department of Marine Resources

**DNR:** Department of Natural Resources

**DNREC:** Delaware National Resources and Environmental Control

**DOD:** (U.S.) Department of Defense

**DOE:** (U.S.) Department of Energy

**DOI:** (U.S.) Department of the Interior

**DOJ:** (U.S.) Department of Justice

**DP:** Dynamic Positioning

**DVRP:** Derelict Vessel Removal Program

**EEZ:** Exclusive Economic Zone

**EFH:** Essential Fish Habitat

**E.O.:** Executive Order

**EPA:** (U.S.) Environmental Protection Agency

**ERT**: Environmental Response Team

**ESA:** Endangered Species Act

**ESF:** Emergency Support Function

**ESSM:** Emergency Ship Salvage Material System

**FEMA:** Federal Emergency Management Agency

**FWCC:** Florida Fish and Wildlife Conservation Commission

**FWPCA:** Federal Water Pollution Control Act

**GAO:** Government Accountability Office

**GLO:** General Lands Office

**GOCO:** Government Owned, Contractor Operated

**GRP:** Geographic Response Plan

**GST:** Gulf Strike Team

**$H_2S$:** Hydrogen Sulfide

**Hazmat:** Hazardous Materials

**IC:** Incident Commander

**ICS:** Incident Command System

**ID:** Identification

**IHSA:** Intervention on the High Seas Act

**IMDCC:** Interagency Marine Debris Coordinating Committee

**LASH:** Lighter Aboard Ships

**MARAD:** (U.S.) Maritime Administration

**MARPOL:** International Convention for the Prevention of Pollution from Ships

**MDP:** NOAA Marine Debris Program

**MDE:** Maryland Department of the Environment

**MIPR:** Military Interagency Purchase Requisition

**MISLE:** Marine Information Safety and Law Enforcement

**MMP:** Maine Marine Patrol

**MMPA:** Marine Mammal Preservation Act

**MOA:** Memorandum of Agreement

**MOU:** Memorandum of Understanding

**MPRSA:** Marine Protection Research and Sanctuaries Act

**MRSA:** Maine Revised Statute Annotated

**MSC:** Marine Safety Center

**NANPCA:** Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990

**NAVSEA:** Naval Sea Systems Command

**NCP:** National Oil and Hazardous Substances Pollution Contingency Plan

**NEA:** (Singapore) National Environment Agency

**NHPA:** National Historic Preservation Act

**NMFS:** National Marine Fisheries Service

**NMS:** National Marine Sanctuary

**NMSA:** National Marine Sanctuaries Act

**NOAA:** National Oceanic and Atmospheric Administration

**NPFC:** National Pollution Funds Center

**NPS:** National Park Service

**NRF:** National Response Framework

**NRT:** National Response Team

**NSF:** National Strike Force

**NSFCC:** National Strike Force Coordination Center

**OCMI:** Officer in Charge, Marine Inspection

**OPA 90:** Oil Pollution Act of 1990

**OSC:** On-Scene Coordinator

**OSHA:** Occupational Safety and Health Administration

**OSLTF:** Oil Spill Liability Trust Fund

**OSRO:** Oil Spill Removal Organization

**PCBs:** Polychlorinated Biphenyl

**PIAT:** Public Information Assist Team

**PPE:** Personal Protective Equipment

**PRFA:** Pollution Removal Funds Authorization

**PST:** Pacific Strike Team

**RA:** Regional Administrator

**RCP:** Regional Contingency Plan

**RCRA:** Resource Conservation and Recovery Act

**RHA:** Rivers and Harbors Act

**RP:** Responsible Party

**ROV:** Remote Operated Vehicle

**RRI:** Response Resources Inventory

**RRT:** Regional Response Team

**RULET:** Remediation of Underwater Legacy Environmental Threats

**SERT:** Salvage Emergency Response Team

**SHPO:** State Historic Preservation Office

**SILC:** Shore Infrastructure Logistics Center

**SMART:** Special Monitoring of Advanced Response Technologies

**SNO:** Statement of No Objection

**SOW:** Statement of Work

**SSC:** Scientific Support Coordinator

**SUPSALV:** U.S. Navy Supervisor of Salvage

**TSCA:** Toxic Substances Control Act

**UC:** Unified Command

**USACE:** U.S. Army Corps of Engineers

**U.S.C:** U.S. Code

**USCG:** U.S. Coast Guard

**USFWS:** U.S. Fish and Wildlife Service

**USVI:** U.S. Virgin Islands

**WCD:** Worst Case Discharge

**WIF:** Waterway Improvement Fund

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