

Nominating Historic Shipwrecks to the National Register of Historic Places: A Best Practices Guide for the Bureau of Ocean Energy Management



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ABOUT THE COVER

Photomosaic of shipwreck 15377 [BOEM].

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List of Abbreviations and Acronyms

Short form	Long form
BOEM	Bureau of Ocean Energy Management
BSEE	Bureau of Safety and Environmental Enforcement
EEZ	Exclusive Economic Zone
MMS	Minerals Management Service
MPS	Multiple Property Submission
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRHP	National Register of Historic Places
NRIS	National Register Information System
PMOA	Programmatic Memorandum of Agreement
RULET	Remediation of Underwater Legacy Environmental Threats
USCG	United States Coast Guard
WWII	World War II

1. Introduction

This document proposes a “Nineteenth-century Shipwrecks of the Gulf of Mexico” Multiple Property Submission (MPS) as the framework for an effective, uniform best practices approach to the determination of eligibility, and the nomination and listing of shipwrecks in the US EEZ by the Bureau of Ocean Energy Management (BOEM). It contextualizes and explains how this best practices approach for BOEM is facilitated by developing a focused historical context study that relates to and connects with the themes addressed in National Register of Historic Places (NRHP) nominations and National Historic Landmark studies for Criteria A and D considerations. Through contextualization and an application of maritime cultural landscapes, this document provides the template for assessing individual vessels part of a larger area through continuation sheets. This process follows existing NRHP approaches and protocols, and a precedent-setting best practices approach used by the US Coast Guard, the National Oceanic and Atmospheric Administration (NOAA), and the National Park Service for World War II wrecks (Marx and Delgado 2013). It can be applied to shipwrecks anywhere in the Gulf of Mexico (Gulf), as indeed BOEM has already applied the World War II MPS to wartime losses and wrecks in the Gulf.

With a larger context study on the maritime activities in the Gulf in the nineteenth century as the background, individual vessels or closely related groups of vessels can be assessed and nominated more expeditiously and without writing an extensive, individual nomination for each wreck. The completion of the historical context study for nineteenth-century wrecks in the Gulf of Mexico will provide the necessary template for assessing wrecks from the period, and a historic context study for twentieth-century wrecks could do the same for wrecks from that period. This document also discusses a best practices approach represented by BOEM’s extensive library of technical and scientific studies and its leadership in developing both three-dimensional models and unrectified two-dimensional orthomosaics in shipwreck documentation as key elements in a best practices model for shipwreck nominations.

2. Approach

This document has been prepared for BOEM under contract to address some of the requirements of BOEM’s Environmental Studies Plan GM-21-02, “Of National Significance: The Gulf’s 19th -Century Shipwrecks.” The problem to be addressed by a larger study, as summarized, is:

BOEM’s regulation 30 CFR 550.194 implementing the requirements of Section 106 of the National Historic Preservation Act requires establishing a “reason to believe” archaeological resources may exist in a given lease prior to requiring the operator to conduct an archaeological survey and submit a report of findings. Previous efforts at developing “high probability” model based on historically reported losses to guide the decision-making proved insufficient owing to an incomplete historical record and inaccurately reported loss locations. Instead, it is believed that a “landscape” model based on a more thorough understanding of the development, extent, and frequency of maritime transportation in the Gulf of Mexico would be a more effective approach. At the same time, this information will help support the nomination to the National Register of Historic Places of a backlog of NRHP-eligible properties that have been subject to archaeological analysis but not yet nominated. National Register listed properties would provide additional support for the Regional Director’s “reason to believe” (BOEM 2020).

The study to address the problem was funded by BOEM and awarded to SEARCH Inc. through a competitive bid process in 2021. The specific task that this paper addresses is BOEM’s directive to “develop a best-practices document to facilitate the efficient creation of future nomination packages by BOEM subject matter experts [and] Develop nomination packages for 12 shipwrecks that are likely eligible to fulfill BOEM’s requirements under Section 110 of the NHPA.”

Direction on the nominations and specific questions posed by BOEM was:

The contractor will use guidance provided in National Register Bulletins 12, 15, 16A, 16B, 20, 21, 28, and 36, combined with previous site investigation data and site reports on file with BOEM, to produce national register nominations for the below listed sites. The contractor will also produce a comprehensive historic context document for 19th-century shipwrecks in the Gulf of Mexico and incorporate that information into NRHP nomination forms and a multi-property listing (BOEM 2020).

2.1 Specific Research Question(s)

1. How do these twelve shipwrecks demonstrate the critical elements for eligibility themselves and for others not yet discovered?
2. Overall, how do these resources contribute to our understanding of our Nation's nineteenth-century heritage?
3. Are any of the sites that are not included eligible under the multiple property listing?
4. How does each site individually meet the criteria for listing in the NRHP?

The answers to these questions rest with an approach that reflects the evolution of approaches to seeking determinations of eligibility for and nominating historic shipwrecks (and to an extent historic ships) to the NRHP.

As background, an overview of the evolution of the approaches to nominating and the history of nominations of shipwrecks to the NRHP, undertaken separate from and not part of this study by the author and colleague Deborah Marx, proved informative and helped guide this document (Delgado and Marx, in press). This is the first time such an overview of shipwrecks and the NRHP has been prepared, and it provided an essential background to the subject that has informed this discussion of current

perspectives and approaches leading to the recommendation for a best practices approach for the nineteenth-century shipwrecks in the Gulf. A review of the federal assessment of historical and archaeological significance before and after the creation of the NRHP in 1966 lead to the following conclusions on the state of the art or best practices for shipwreck nominations as of 2022:

1. An increased focus on more detailed, well-documented nominations with sufficient contextual background to the shipwreck in question and specifically how it relates to Criterion A discussions of how the site reflects and/or connects to the National Historic Landmark/National Register Thematic Framework (National Park Service 1994).
2. The need for research design questions to formulate research design-driven arguments for significance under Criterion D.
3. An increased focus on more effective nomination strategies for handling large numbers of shipwrecks through geographically focused local and regional, and thematic assessments that are processed as multiple property nominations.
4. The introduction of maritime cultural landscape theoretical perspectives into more recent nominations of historical and archaeological districts that include shipwrecks, such as the currently-listed Wilmington Historic and Archeological District (NRIS 74001364) in North Carolina, the Mallows Bay-Tidewater Historic and Archeological District (NRIS 15000173) in Maryland, and the now-pending nominations of Salt Point Landing Historical and Archeological District in California and the Twelvemile Island Ships Graveyard in Alabama.
5. Larger-scale Multiple Property Submissions (MPS) have, as of the last few years, become the favored approach, as large-scale nominations now all use the MPS model. This is evidenced by the Great Lakes Shipwrecks of Wisconsin MPS (NRIS 94500716), Shipwrecks of Minnesota's Inland Lakes and Rivers MPS (NRIS 99000189), Minnesota's Lake Superior Shipwrecks MPS (NRIS 64500286), and the largest geographical area MPS, the "World War II Shipwrecks along the East Coast and Gulf of Mexico" MPS (NRIS 64501184), which spans the entire U.S. Atlantic and Gulf coasts and potentially 182 wrecks associated with the "Battle of the Atlantic" (Marx and Delgado 2013). To date, twenty of the 182 wrecks have been listed as part of the World War II Shipwrecks MPS. An increased understanding by the historic preservation community that National Register nominations are dynamic documents that can and should be expanded and updated over time, especially as new themes and contexts are revealed and historically underrepresented or marginalized communities are considered.

What is proposed as the best practices approach for BOEM, a "Nineteenth-century Shipwrecks of the Gulf of Mexico" MPS, builds on these now-established precedents and specifically the "World War II Shipwrecks along the East Coast and Gulf of Mexico" MPS. MPSs, though larger in scale (i.e., Gulf-wide and for an entire century), provide a clear and consistent approach that is time- and cost-effective and can be applied to other centuries (i.e., the twentieth), and with regionally-based context studies, for other areas in the US EEZ managed by BOEM and other agencies. Also, the recommended approach can provide the framework for other agencies and for state or local managers to assess and nominate shipwrecks implementing the basic core nomination prepared from the historic context study. This approach does not mean that all sites might be eligible for listing, but it does provide a detailed contextual and consistent process of assessing how each shipwreck meets or does not meet the criteria for listing.

2.2 The World War II Wrecks Multiple Property Submission: The Best Practices Precedent and Its Results to Date

In response to “mystery spills” of oil from shipwrecks in US waters, NOAA developed a database of potentially polluting shipwrecks; in 2010, a Congressional appropriation to NOAA tasked the agency to “provide recommendations to the U.S. Coast Guard (USCG) about which wrecks posed the most significant potential pollution threats to socio-economic and ecological resources in U.S. waters,” and in May 2013 “NOAA completed an iterative, multi-disciplinary process and delivered the Risk Assessment for Potentially Polluting Wrecks in U.S. Waters, a national assessment of the most significant potentially polluting wrecks in U.S. waters to the USCG (NOAA 2013). This national report was accompanied by risk assessments for the 87 priority wrecks in the dataset known as the Remediation of Underwater Legacy Environmental Threats (RULET) that assessed over 20,000 wrecks and determined that 87 of these wrecks were potential threats (Symons et al. 2013:783). Because the US Coast Guard would coordinate and often contract for the remediation of polluting wrecks, and some of these wrecks were potentially eligible for listing in the National Register, the US Coast Guard was required under Section 106 of the National Historic Preservation Act (NHPA) to consider adverse effects to these historic properties (Symons et al. 2014: 2024). In an emergency response situation, there was likely insufficient time to adequately comply with the NHPA, or to determine if a wreck warranted mitigation. What was needed was a proactive approach that streamlined the process. With 87 wrecks and potentially then 87 separate National Register determinations of eligibility for most of the wrecks, which had been lost in US waters during the Battle of the Atlantic campaign of 1941–1945, NOAA proposed a best practices approach through a MPS that encompassed the entirety of the geographic and temporal span of the Battle of the Atlantic (Symons et al. 2014:2026-2028).

This was proposed to “proactively test and refine the potential NRHP eligibility well in advance of any oil spill incident.” After meetings with the Keeper of the National Register, who agreed with this approach for the largest MPS nomination ever proposed and undertaken in the history of the National Register, the project proceeded (Symons et al. 2014: 2025). The Department of the Interior and the Department of Commerce both agreed that the process would incorporate the entirety of the US Exclusive Economic Zone (EEZ), to a boundary two hundred miles offshore. The “World War II Shipwrecks along the East Coast and Gulf of Mexico” MPS nomination’s sixty-four-page contextual overview incorporated, as previously noted, 158 merchant ship losses, five US military vessels lost to U-boats, seven US military vessels lost to mines, and twelve known German U-boats (Marx and Delgado 2013:E39- E46).

After the larger contextual study, NOAA’s Maritime Heritage Program, within the Office of National Marine Sanctuaries evaluated three representative (of the larger group of 87) shipwrecks with a high pollution potential to determine which characteristics and historical associations would be eligible for the NRHP, meet the definition of a historic property, and would then be subject to either Section 106 consultation or use of the ‘97 PA should the USCG move forward with assessment and pollutant recovery activities (Symons et al. 2014:2025).

The three wrecks nominated as tests of the MPS were the WWII combat losses of the SS *Lancing*, SS *Empire Gem*, and SS *Coimbra*. All three were pollution risks and lie off the coasts of North Carolina and New York. They were accepted and listed in the NRHP (NRIS 13000781 and 13000782). This outcome was significant in testing the model of a larger MPS as part of a streamlined, best practices approach to large-scale evaluation of shipwrecks, and as was noted,

the practical advantage of this approach is that, should one of these wrecks be declared a substantial threat and pollution recovery considered the consultation process would be shortened facilitating the response. The part of the Section 106 consultation process that would be streamlined centers around determining if a shipwreck is historic, as well as an

analysis of a site’s historical significance and archaeological integrity. Both the RULET assessments and the nominations aid the ‘97 PA’s implementing steps. Information compiled in either, such as precise locational data, orientation, setting, and an archaeological assessment would be essential for project planning and in water pollutant recovery efforts. The NRHP nomination package allows the federal agency, THPOs, SHPOs and ACHP to more efficiently review potential impacts from assessment and recovery activities and determine if any remediation efforts are needed (Symons et al. 2014:2032).

Additional nominations by NOAA and BOEM followed to further test the MPS, this time in relation to NOAA’s plans to expand USS *Monitor* National Marine Sanctuary to incorporate and protect significant wrecks from the Battle of the Atlantic, and by BOEM as it nominated wrecks as part of its legislative mandate to determine the eligibility of shipwrecks in the US EEZ. Among those nominated and listed are those listed in Table 1.

Table 1. List of shipwrecks nominated in the World War II MPS

Shipwreck	NRIS	Location	Date Listed
<i>SS Lancing</i>	NRIS 13000451	North Carolina, Monitor NMS	6/26/2013
<i>SS Empire Gem</i>	NRIS 13000782	North Carolina, Monitor NMS	9/25/2013
<i>SS Coimbra</i>	NRIS 13000779	Long Island, NY	9/25/2013
<i>SS Dixie Arrow</i>	NRIS 13000781	North Carolina, Monitor NMS	9/25/2013
<i>SS E.M. Clark</i>	NRIS 13000780	North Carolina, Monitor NMS	9/25/2013
U-85	NRIS 15000805	North Carolina, Monitor NMS	11/12/2015
U-352	NRIS 15000804	North Carolina, Monitor NMS	11/12/2015
U-576 and <i>SS Bluefields</i>	NRIS 15000864	North Carolina, Monitor NMS	11/12/2015
U-701	NRIS 15000806	North Carolina, Monitor NMS	11/12/2015
<i>HMT Bedfordshire</i>	NRIS 15000421	North Carolina, Monitor NMS	7/31/2015
<i>SS Gulfoil</i>	NRIS MP100002556	Gulf of Mexico	6/13/2018
<i>SS Gulfpenn</i>	NRIS MP100002557	Gulf of Mexico	6/13/2018
<i>SS Halo</i>	NRIS MP100002558	Gulf of Mexico	6/13/2018
<i>SS Virginia</i>	NRIS MP100002559	Gulf of Mexico	6/13/2018
<i>SS Alcoa Puritan</i>	NRIS MP100002560	Gulf of Mexico	6/13/2018
<i>MV Scheherazade</i>	NRIS RS100002555	Gulf of Mexico	12/7/2018
<i>SS R.M. Parker, Jr.</i>	NRIS RS100002561	Gulf of Mexico	12/7/2018
U-166 and <i>SS Robert E. Lee</i>	NRIS 100002558	Gulf of Mexico	12/7/2018

These World War II wrecks in the Gulf had previously been evaluated and recommended for nomination (Enright et al. 2006; Church et al. 2007; Brooks et al. 2016; Ball and Damour 2016). The listing of twenty World War II Battle of the Atlantic shipwrecks off the coasts of New York, North Carolina, and Louisiana demonstrates the efficacy of the concept and the design of that large-scale MPS. This suggests, and it is the recommendation of this study, that the best practices approach for BOEM is to follow the World War II precedent with a “Nineteenth Century Shipwrecks of the Gulf of Mexico” MPS.

2.3 The Best Practices Approach in the Gulf: Criteria and Context

The NRHP lists districts, sites, buildings, structures and objects that possess integrity of design, location, setting, materials, workmanship, feeling, and association that meet one or more of the four National Register criteria:

- a. Associated with events that have made a significant contribution to the broad patterns of our history; or
- b. Are associated with the lives of significant persons in or past; or

- c. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d. That have yielded or may be likely to yield, information important in history or prehistory.

As part of the contract for this Best Practices document, BOEM also commissioned a Historic Context Study for Maritime Activities in the Nineteenth-century Gulf of Mexico. That document shares a powerful narrative that speaks to the overarching historical significance of the Gulf to the larger patterns of US maritime trade and commerce, as part of a broad regional transportation network in the decades leading up to the Civil War and postwar reconstruction and other activities (such as naval and other government agency actions) that can provide the focused contextual background for the “Nineteenth Century Shipwrecks of the Gulf of Mexico” MPS.

As part of this best practices approach, the questions of individual vessel identity, i.e., a name, is less important than determining the historic context of the nineteenth-century wrecks being assessed under Criterion A. Decades of thinking and practical application with the NRHP for shipwrecks has arrived at this as the preferred approach as of 2021–2022. It is also important to note that while there is a certain level of archaeological intactness with the deep-water sites, Criterion C is not the recommended best practices approach for BOEM to consider with the MPS. In Criterion A consideration, however, the questions of eligibility and integrity is the question of “intactness,” and as is the case with “ruined” structures on land, the relative rarity of historic Gulf vessels afloat (the National Historic Landmark designated *Governor Stone*, NRIS 91002063 being the only nineteenth century merchant vessel afloat in the US) supports the contention that shipwrecks have sufficient integrity and are eligible. Collectively, the nineteenth-century shipwrecks of the Gulf are the largest and most diverse collection of vessels that illustrate the multiple themes in the region and the nation’s maritime history.

The Criterion D argument is paramount, as has been noted with ship graveyards, also listed as part of larger MPS nominations:

Their significance is not limited to the intactness, level of preservation, or ability of individual ships to inform us about ship-building techniques. Rather, the archaeological remains at these sites, irrespective of their temporal depth, are imbued with meaning and significance that can shed light upon past human behaviors. Hence, abandonment is not simply a label or historical detail – encased within the acts and processes of discard are transitions in values and intentions, themselves clues to undocumented human interactions (Richards 2013:12).

Though any MPS nomination, in accord with NRHP guidelines, identifies sites within the MPS as individual entities, and in some cases offers an association with a “remarkable ship left behind,” with potential significance based on association with historical events or their place within “technological or anatomical typologies,” what is key to understanding the overall significance of a Gulf MPS is those wrecks as “an amalgam of local, regional, national, and global contexts, each interpreted from historical, archaeological, anthropological and philosophical perspectives” (Richards 2013:14).

The other key consideration is linking Criterion A discussions in nominations to the existing National Historic Landmark/National Register Revised Thematic Framework (National Park Service 1994). The thematic framework was first developed after the Historic Sites Act of 1935 as the National Historic landmark program was created, and was subsequently revised in 1970 and 1987, and most recently in 1994 (National Park Service 1994). The purpose of the framework is its use as:

A conceptual tool for evaluating the significance of cultural resources within or outside the NPS is the service's "thematic framework" for history and prehistory. The framework is an outline of major themes and concepts that help us to conceptualize American history. It is used to help identify cultural resources that embody America's past and to

describe and analyze the multiple layers of history encapsulated within each resource (National Park Service 1994).

The current thematic framework is used for a variety of purposes by the National Park Service and others, but pertinent to this discussion is “evaluating the significance of resources for listing in the National Register of Historic Places, for designation as National Historic Landmarks” (National Park Service 1994).

The thematic framework is people-focused, addresses change over time, but is also focused on place “Because place is the concrete context in which our history unfolds, a richer reconstruction of the past must include local and regional experience to help build appreciation for our national experience” (National Park Service 1994). Another key observation pertinent to this discussion is how people, time, and place interconnect:

One example that can be used to illustrate this interconnectedness is a Southern plantation dating from the 1830s. A quick survey suggests that the significance of this site cuts across every category of the outline. The move of a planter, his family, and his sizable household of slaves from Tidewater Virginia to land purchased from the Choctaws in Alabama would fall obviously under “Peopling Places,” but the economic imperatives and agricultural developments that triggered the move and the adaptation of the plantation system to the new environment would fit under “Developing the American Economy,” “Expanding Science and Technology,” and “Transforming the Environment.” While the lives of the plantation's white and black, male and female inhabitants fall under “Peopling Places” and “Creating Social Institutions and Movements,” the design and construction of the distinctive “big house” and other plantation architecture illustrates the theme of “Expressing Cultural Values.” The transfer of the planter's political power from Virginia to Alabama and the role of the planter class in antebellum Alabama falls under “Shaping the Political Landscape.” Finally, the planter's dependence on the cotton economy and his influential role in international trade on the eve of the Civil War tie directly into “Developing the American Economy” and “Changing Role of the U.S. in the World.” The outline suggests that users think broadly, not narrowly, that they look beyond traditional categories of historical significance in an effort to recapture the larger meaning and depth of past experience (National Park Service 1994).

The best practices approach for the nineteenth-century shipwrecks of the Gulf therefore can connect multiple themes into a multiple property nomination and be the basis of the Criterion A discussion.

The key to the new thematic approach is less “check the box” and more “thoughtful consideration of larger trends and broader contexts. It should foster discussion of the fundamental social and economic structures...” (National Park Service 1994). Specific to this discussion, the use of the new thematic framework and Multiple Property Submissions work together to emphasize “that American history did not occur as isolated events,” and therefore, the nineteenth-century shipwrecks in the Gulf, though themselves isolated shipwreck events, were not isolated in terms of their activities and how those activities fit within the broader contexts of Gulf and US history. This connects the Gulf not only to the broader themes of US and global maritime trade by sea, but it also reflects the integration of the Gulf into the broader regional transportation in the US; maritime trade in the Gulf and out onto the ocean encouraged the development of river trade networks and railroads that tied New Orleans and other ports to the heartland of the nation, as well as to each other. After the Civil War, the expansion of rail lines as well as the improvements to port infrastructure reflect how the Gulf was linked to the interior of the US as a result of its increased maritime activity in the nineteenth century.

A review of themes in the revised framework that connect to nineteenth century maritime activities in the Gulf are:

1. Peopling Places, which includes the sub-themes of migration from outside and within and encounters, conflicts, and colonization.
2. Shaping the Political Landscape, which includes military institutions and activities.
3. Developing the American Economy, which includes distribution, and consumption, transportation, and communication (the latter being the most common theme for ships and shipping), but also the subtheme “workers and work culture” in relation of the aspects of crew life on board and labor.
4. Changing Role of the United States in the World Community, which includes commerce, expansionism, and imperialism.
5. Expanding Science and Technology, with the subtheme of technological innovation, as ship design and the changes in steam machinery reflect the adoption and refinement of marine engineering and naval architecture, and in that, regional variation and modification; the last phase of maritime trade in the Gulf under sail, for example, witnessed modification of older nineteenth century vessels in the last decades of the century into towed barges, and this may be the context for the Vernon Basin 2109 wreck (15831).

The National Park Service’s example of the Lower Mississippi Delta Heritage Study offers a relevant Gulf example of how the theme of “peopling places” was organized in chronological categories; those relevant to the nineteenth century were broadly defined as “U.S. Western Expansion and Antebellum period 1800–1860,” and “Civil War, Reconstruction, Populism” (National Park Service 1994). For the best practices nineteenth century shipwrecks of the Gulf MPS, we propose the following subthemes that fit within the National Park Service themes:

1. Integrating the Gulf into the American and Global Economy: Gulf and Caribbean Trade, 1800–1860.
2. Integrating the Gulf into the American and Global Economy: Coastal Trade to the American Atlantic Ports, and Transatlantic Trade, 1800–1860.
3. Immigration and Migration to the Gulf by Sea, 1800–1860.
4. The Slave Trade in the Gulf, 1800–1865.
5. Privateering, Piracy, and Its Suppression, 1800–1840.
6. Naval Conflict in the Gulf, 1800–1860.
7. Whaling and Fishing in the Gulf, 1800–1900.
8. The Use of Steam in Gulf Migration, Immigration and Trade, 1820–1900.
9. Civil War, 1861–1865.
10. Maritime Trade and Rebuilding the Southern Economy, 1865–1900.
11. Technological Innovation and Application in Gulf of Mexico Vessels and Trade, 1800–1900.

2.4 Nineteenth-century Gulf Shipwrecks: How Test Case Nominations for the Multiple Property Submission Fit the Criteria

The potential population of Gulf shipwrecks that may fall within the purview of a larger Gulf MPS is large. BOEM estimates thousands of shipwrecks in the Gulf of Mexico, four hundred of which are mapped based on remote sensing survey data, with an estimated 2,200 “reported shipwrecks... that number is likely only a fraction of the vessels that have been lost in the Gulf” (BOEM 2021: 34). Of that number, BOEM has documented forty wrecks that are potentially eligible for listing in the National Register of Historic Places. Nine World War II and two nineteenth-century wrecks that fall under BOEM’s mandate are listed. Twenty-one nineteenth-century wrecks have been discovered and reported to BOEM. As BOEM notes, most of these discoveries have come because of surveys focused on the development of oil and gas infrastructure off the deep-water approaches to the Mississippi River and the port of New Orleans “primarily in the Mississippi Canyon and Viosca Knoll areas” (BOEM 2021:38).

Few of these wrecks have been identified and accordingly they are designated with a site number in BOEM’s Archaeological Resource Database, “the oil and gas project that discovered it, its general geographic location, or a diagnostic feature of the site” (BOEM 2021:39). A number of available studies discuss the nineteenth-century wrecks located and studied to date (see, for example, Atauz et al. 2006, Brooks et al. 2015, Church and Warren 2008, Ford et al. 2008, Ford, Borgens and Hitchcock 2010, Horrell and Borgens 2017, Irion and Ball 2001, Irion 2013).

The “Nineteenth-century Shipwrecks of the Gulf of Mexico” MPS is the best practices means to answer to the first question of how the BOEM-identified nineteenth-century shipwrecks demonstrate the critical elements for eligibility for themselves and wrecks not yet discovered. It is also the answer to how the resources contribute to our understanding of our Nation’s nineteenth-century heritage; they do so both individually and collectively. An overarching and interconnected set of marine activities, all linked to the maritime cultural landscape of the Gulf, is the contextual basis for the “Nineteenth-century Shipwrecks of the Gulf of Mexico” MPS, which follows the precedents of MPS for geographically and thematically linked shipwrecks with the larger scale as the specific precedent to follow as a best practices approach to NRHP determinations of eligibility and nominations for and by BOEM.

The questions posed by BOEM in setting the stage for this study were:

1. How do these twelve shipwrecks demonstrate the critical elements for eligibility themselves and for others not yet discovered?
2. Overall, how do these resources contribute to our understanding of our Nation's nineteenth-century heritage?
3. Are any of the sites not included eligible under the multiple property listing?
4. How does each site individually meet the criterion for listing in the NRHP?

The multiple property nomination process offers the likely answers, which will ultimately come from review, determinations of eligibility and listing. The history of more recent (2000–2021) listings and the increased acceptance and use of MPSs strongly suggests that a Gulf-wide geographical and Criteria A and D contextual nomination, with individual section 7 and 8 discussions for each site included in the initial and subsequent nomination process will be an effective means of achieving BOEM’s Sec. 110 responsibilities, as well as assisting the Sec. 106 process.

In BOEM’s contract award, twelve sites of likely and known nineteenth-century shipwrecks were selected as potentially eligible for nomination to the NRHP. As to the eligibility of the twelve sites included in the contract, and ultimately the thousands of other not yet discovered wrecks, the logical step is the contextually organized nomination of those twelve wrecks, with a possible thirteenth, in the initial “Nineteenth-century Shipwrecks of the Gulf of Mexico” MPS submission to the Keeper of the National Register. That initial nomination of the wrecks as part of the overarching MPS submission is the best test of both the process and its results. It is our opinion that most, if not all, the selected sites will be determined eligible and listed under Criteria A and D. As part of that submission, we recommend that two previously listed sites, Wreck 236 (USS *Hatteras*) and Wreck 365 (SS *Josephine*) have either revised versions or their existing nominations be included as part of the MPS. Each site recommended for inclusion in the MPS is represented by tangible physical remains with visible hull structure and artifacts, and there is a reasonable assumption based on the site formation process inherent with deep water sites that there is buried structure, artifacts, and forensic archaeological data.

Table 2. Gulf of Mexico Shipwrecks with BOEM Site Numbers

BOEM Site No.	Shipwreck
236	USS <i>Hatteras</i>
337	Green Lantern Shipwreck
344	SS <i>New York</i>
365	SS <i>Josephine</i>
15169	Mica Shipwreck

BOEM Site No.	Shipwreck
15303	Viosca Knoll Shipwreck
15321	Mardi Gras Shipwreck
15373	7,000 Foot Wreck
15377	15377 Shipwreck
15401	Ewing Bank Shipwreck
15563	Probable Brig <i>Industry</i>
15577	Monterrey A Shipwreck
15578	Monterrey B Shipwreck
15583	Monterrey C Shipwreck
15831	Vernon Basin Shipwreck

After consideration of the initial list and discussion with BOEM, SEARCH sought and received a contract modification to add wreck 15563, the probable whaling brig *Industry*, to the group of wrecks included in the nomination. This replaces the Vernon Basin Wreck in the initial submission (15831). However, the Vernon Basin Wreck is included in the list above because it was part of the initial group of wrecks. The wreck has no visible cargo or other diagnostic artifacts, so it will be the subject of later consideration. If not included in the MPS at this time, the Vernon Basin Wreck and others could be included in a follow up nomination or group of nominations of other nineteenth-century wreck sites as part of the MPS after the initial nomination is reviewed and listing determinations made for the MPS and the first twelve wrecks. All of these wrecks that are not yet listed retain archaeological integrity and represent and are associated with the subthemes developed for the BOEM Nineteenth Century Maritime Heritage contextual study and referenced earlier in this document.

The Best Practices MPS nomination for the Nineteenth-century Shipwrecks of the Gulf is documented using the National Park Service’s Form 10-900b Multiple Property Documentation Form,¹ which documents the associated historic contexts as they relate to the NPS themes; a more detailed, source-cited statement of historic contexts; a description and statement of significance for each shipwreck; a summary of the archaeological and other scientific work done in the Gulf relating to nineteenth-century shipwrecks; and major bibliographic references. Each of these sections in the nomination create a cohesive narrative that will address each wreck site with a detailed description of the site; what is known as a result of any and all work to date, ranging from scientific observation to more detailed studies, including excavation; and how each of the sites fits within the various identified Gulf subthemes and how they in turn fit into the existing NRHP themes of the National Park Service. As needed, the nomination will incorporate documentation through supplemental continuation sheets for nominations, National Park Service Form 10-900a².

With the completion of the Nineteenth-century Shipwrecks of the Gulf of Mexico MPS and the final decision on listing by the Keeper of the National Register, clear guidance will be on hand for next steps. If some wrecks are determined not to be eligible for listing, but others are, then that information provides a metric by which to assess subsequent nominations of wrecks within the parameters of the MPS. This suggests that a prudent practice would be for the BOEM Federal Preservation Officer and General Counsel to consider all likely to be assessed and added to the MPS nomination to be potentially eligible, and be the basis of a Programmatic Memorandum of Agreement (PMOA) with the Advisory Council on Historic Preservation and the Keeper of the National Register to streamline Sec. 304 of the National Historic Preservation Act consultations to deny the release of sensitive shipwreck location being sought

¹ See <https://www.nps.gov/subjects/nationalregister/upload/NPS-Form-10-900b-NRHP-Multiple-Property-Documentation.docx>

² See <https://www.nps.gov/subjects/nationalregister/upload/NPS-Form-10-900a-NRHP-Continuation-Sheet.docx>

by third parties through a FOIA request. The World War II Shipwrecks MPS offers another example of a best practices, streamlined approach in assessing individual sites within a larger context without an extensive new written undertaking with each shipwreck that is discovered and sufficiently documented to allow for its supplemental addition to either of the two larger MPS packages in the future. A Programmatic Memorandum of Agreement would therefore be a more effective management tool and cost-beneficial than the preparation of an original Sec. 304 Determination of Eligibility request.

Subsequent nominations can and would therefore consist of supplemental continuation sheets for any new site being considered individually or as part of a second group. The level of work required is essentially the same level of detail as that required for a formal determination of eligibility, but requiring less time as the major overarching contexts and historical discussion have already been achieved with the larger MPS documentation. While each supplemental wreck may not be listed, the process in time will establish clear parameters for assessing the likely eligibility of shipwrecks encountered in the Gulf and reported to, or studied by BOEM and other partners and test the efficacy of the MPS as a best practices tool and for streamlined management.

2.5 Fitting the Test Group of Gulf of Mexico Nineteenth Century Shipwrecks into the Subthemes

2.5.1 Integrating the Gulf into the American and Global Economy, 1800–1860

The Mica shipwreck, Ewing Bank shipwreck, and the Monterrey A, B, and C wrecks appear to be early nineteenth-century ocean-going commercial traders, working throughout the Gulf and Caribbean and both coastal and transatlantic trade.

The nineteenth century was a critical time in the history of the Gulf. The Gulf of Mexico, as part of a larger *Golfo-Caribe* sea, or as an “American Mediterranean,” assumed a larger role in international trade in the nineteenth century during the rise of the American “empire” as the US expanded its borders, trade and economy, with much of that activity focused on and through the port of New Orleans (see Reinders 1964; Redard 1986; Benítez-Rojo 1996; Marler 2013; Faber 2016; Muller 2018; Vidal 2019; Guenin-Lelle 2020).

The maritime story of the Gulf was then linked to larger global patterns through maritime trade. Ships engaged in trade that directly linked the Gulf and Cuba, the Caribbean islands, Panamá, Nicaragua, Honduras, Mexico, or the United States to market centers in the rest of the world. This was the period in which the center of global economic activity “clearly moved from Western Europe to the United States (Jones, Frost and White 1993:5-6; also see Boelhower 2010).

This was due to two factors. The rise of monoculture agriculture in the subtropical and tropical zones that surround and include the Caribbean and the Gulf supported the growth and harvest of abundant crops of cotton, tobacco, sugar cane, and fruit. The US, after its acquisition of the Mississippi and Mobile River valleys, dominated the global cotton trade. US merchants and ships from New England and southern Atlantic ports such as Savannah and Charleston, undertook voyages connecting to the cotton ports, especially as those on the Gulf Coast, became the dominant centers of that trade, also made voyages that were linked to the sugar cane, tobacco, and fruit trades of the region (see Kennedy 1860; Herbst 1975; Redard 1986; Heitmann 1987; Daggett 1988).

2.5.2 Immigration to the Gulf by Sea, 1800–1860

Wreck 15377 is an early (pre-1850) vessel with the characteristics of a packet ship.

The population growth of the Gulf region following the US acquisition of French Louisiana and the end of British and Spanish rule was powerfully influenced by this maritime trade network. Key to it was the

rise of New Orleans, and in time, Mobile, connected by ships to Havana and to smaller ports. The ports were part of an intra and extra-Gulf maritime network that saw American coastal trade shift from the West Indies to incorporate the Gulf, and the growth of the packet trade. Packets, ships that sailed on regular schedules, some belonging to established lines, as well as transient packets who sailed when a cargo or sufficient passengers were booked, were part of a coalescent US linked by maritime trade. Small ships gave way to larger ones, ownership shifted from individuals to shareholders, and fleets—harbingers of later steamship companies—were formed (Larsen 1978).

As coastal trade blossomed, from local and regional short voyages to national-linking voyages, global trade did as well, especially as New York rose to prominence as the oceanic gateway to Europe as well as to the cotton market of the south and especially the Gulf. New Orleans and New York both prospered. Immigration flowed into America on packet ships, and both cities and the country grew with regular voyages that utilized the cotton triangular trade that expanded both the population and the economy of the US (see Kennedy 1860; Hopkins 1950; Albion 1965; Redard 1986; Howe 2007; Beckert 2014; Beckert and Rothman 2016).

2.5.3 The Slave Trade in the Gulf, 1800–1865

Monterrey C was a larger ocean-going vessel, with Spanish characteristics, and was possibly escorted by a pirate or privateer that had seized it. The wreck indicates it had an “empty” hold that suggests a voyage made “in ballast” without cargo, or a perishable cargo that in that period, especially for a “Spanish” vessel, might have been enslaved persons. This is a possibility that requires archaeological testing.

The Gulf was the heart of the US slave trade after 1808, increasing in scope in the decades leading to the Civil War. This was the consequence of the rise of the cotton, sugar cane and rice economy of the Southern states, the internal, or domestic slave trade, the “second Middle Passage,” and the ongoing illegal foreign slave trade that relied on Cuban complicity and maritime traffic between Cuban ports and the more isolated sections of the Gulf coast (see Gudmestad 2003; Deyle 2005; Gutlerl 2008; Forret 2020; Pargas 2015; Schermerhorn 2015).

2.5.4 Whaling in the Gulf, 1800–1900

Shipwreck 15563, the probable whaling brig *Industry*, is the only known whaler lost in the Gulf in the nineteenth century (1837).

Any extractive industry in the Gulf region that could be brought to market in the rest of the US and Europe in the nineteenth century brought increased shipping and trade. This included whaling, one of the US’ greatest maritime industries of the nineteenth century, as additional profits were to be made at the conclusion of a longer voyage by sailing into and whaling on an increasingly US Gulf. With whaling, no stops at port were necessary; it was another stop at sea in an US-dominated global industry. In all, at least 214 whaling voyages stopped and hunted in the Gulf from the late eighteenth through the late nineteenth centuries (Starbuck 1878; Reeves et al. 2011).

2.5.5 Naval Conflict in the Gulf, 1800–1860

The Mardi Gras Wreck and the Monterrey A, B and C wrecks reflect privateering, piracy, and its suppression, as well as the broader picture of naval conflict in the Gulf.

The Mardi Gras wreck and Monterrey A are early nineteenth-century armed vessels that do not have the characteristics of naval vessels, and which may be pirates or privateers. Monterrey B and C were located by archaeological survey close to Monterrey A and may have been captured vessels in a convoy. Another possibility is they were part of a convoy from Mexico to Cuba or from Cuba to Mexico. These activities were linked to the efforts made by the British and US navies to suppress them, but they were also linked

to naval conflict as the means by which Latin American countries seeking independence from Spain used privateers to wage war at sea.

Changing geopolitical fortunes and the rise of US power saw the Gulf dominated by conflict. Piracy had been a factor in maritime trade and naval actions by colonial powers in centuries past, continuing into the nineteenth century. After the Napoleonic Wars, the weakened state of Spain as a colonial power and the rise of independence movements in Spanish America made the Gulf as an active center for privateering. Havana's role as a highly protected central point for Spanish shipping and commerce, with its fortified harbor and the fortifications guarding Veracruz, Cartagena, and Portobello, led to *guerre de course* in the Gulf and Caribbean.

The first half of the nineteenth century in the Gulf was a period of enhanced maritime conflict with armed vessels from each of the major regional and European navies. British, Spanish, US, and French naval ships were employed in the varied conflicts within the Gulf, including the Battle of New Orleans during the War of 1812, the Mexican War of Independence against Spain, Texan and Mayan revolutions against Mexico, the Pastry War, and the Mexican-American War in 1846 (Bauer 1969). Privateering in the Gulf was at its height during the first two decades of the 1800s, with major encampments in Louisiana, Texas, and Cuba. Gulf privateers and pirates were often employed during the Latin American wars of independence in Mexico, Venezuela, and Colombia to act as *de facto* navies against Spanish shipping (Davis 2005; Irion 2013).

Spanish-American privateering conducted by Americans was illegal because it violated US neutrality, piracy, revenue, and slavery laws, but was nonetheless popular in the Gulf (Head 2015). Both the US and England had fleets stationed in the region with ships in the West Indies and the former with an additional naval station at New Orleans. Newly-formed republics in Texas and Mexico created navies that, through accident of loss or fiscal deficit, were lost and then replaced, each in essence having two almost separate navies. The US and British were a constant presence in the Gulf as both actively monitored political activities (and *juntas*) in Texas and Mexico and the rampant privateering.

Following the War of 1812 and its naval actions in the region, privateering and piracy led to an increased naval presence to patrol the seas and protect commerce. This brought the US Navy into the Gulf, establishing anti-piracy patrols and naval establishments and giving rise to a stronger military presence at Pensacola and Key West. At the same time, antislavery patrols, notably those of Britain, also patrolled off the Florida Keys and Cuba. Foreign interventions on colonial missions, in the region's waters, including actions by the US, were part of "gunboat diplomacy" of the century. Yet another was the active anti-slavery patrols of the British and Spanish navies off the coast of Cuba and Florida. The movement to create an independent Texas and the creation of two naval fleets by the nascent republic, and the outbreak of war between the US and Mexico closed out the first half of the nineteenth century with increased naval presence and military action in the Gulf (see Howe 2007). The outbreak of Civil War in the US, however, was the major military action in the Gulf in the nineteenth century.

2.5.6 The Use of Steam in Gulf Immigration and Trade, 1820–1900

Two Gulf steamship wrecks, the SS *New York* and *Josephine*, have been archaeologically identified.

The nature of trade and voyages in the Gulf expanded to assume older ports and patterns of former trade under Spanish authority; US interests working with international partners established mail and cargo service by sea, carried passengers, and regularly sailed to and from Gulf ports to again link Havana with Mexico, and reintegrate Panama as part of the global network of maritime commerce. The discovery of gold in California in 1848 and the resultant rush by sea truly opened the Gulf to steamships as steamers bound for Panama, Nicaragua, and Mexico called at ports that served as waypoints for those who crossed Central America to reach ships on the Pacific for voyages to California (Kemble 1943, Folkman 1972).

Ocean-going steamships connected Gulf ports with each other, and to the major eastern seaboard ports in the US; others ran from Gulf ports, primarily New Orleans, to European ports. Steamships started replacing oceangoing packets before the Civil War, and postwar they dominated the trade. As steam took precedence in the postwar period, steamers brought about the economic rebirth of the port of New Orleans as a center for importation and exportation of goods, including Southern lumber, cotton, coffee, and other commodities. They also assumed the role of being a major means of transportation by sea for immigrants heading to Gulf ports and thence settling in the region or up the rivers. (see Morrison 1958; Baughman 1968; Ridgely-Nevitt 1991; Irion and Ball 2001).

2.5.7 The Civil War, 1861–1865

The USS *Hatteras* has been archaeologically identified and is currently listed in the National Register.

The Civil War history of the Gulf is historically well documented by the activities of blockade runners, Confederate privateers, the Union blockade, naval actions including the cruise of CSS *Alabama*, the naval assaults to reopen the Mississippi and take New Orleans, and the battles to retake Galveston and Mobile. A wide range of Civil War wrecks, many of them in shallow water, have been identified and studied and a number of them listed (Wise 1991; Roberts 2004; Gaines 2008; Cotham 2010; Browning 2015).

2.5.8 The Maritime Trade and Rebuilding the Southern Economy, 1865–1900

The Ewing Bank Shipwreck (15401), and the Green Lantern Shipwreck (337), the Viosca Knoll Shipwreck (15303), the 7,000 Foot Wreck (15373), and the Vernon Basin Shipwreck (15831) are nineteenth-century wrecks with probable and possible post-1850 losses. There are competing archaeological analyses of some of the wrecks, which have more consistent dating to the later part of the nineteenth century than the earlier part. The Vernon Basin Wreck stands out as an articulated lower hull of a nineteenth-century vessel with few visible remains of ship fittings from rigging or life on board (such as no stove) and evidence of fire. It appears to be the first archaeological example of a common late nineteenth-century practice of “cutting down” older wooden sailing ships for use as barges that were towed by steamers. The cargo, if it caught fire, as the evidence suggests, may have been timber or coal, both common for the period.

2.5.9 Technological Innovation and Application in Gulf of Mexico Vessels, 1800–1900

Josephine, USS *Hatteras* and the Vernon Basin Shipwreck (15831) wrecks reflect major technological shifts in the nineteenth century through the adoption of steam, and the shift away from sailing vessels by the last decade of the century and the technological modification of older hulls into barges. Assessment of other wrecks—in regard to technologies inherent in hull design, the adoption of sheathing the hull, steering apparatus, and a range of other aspects of technology inherent in the role of these vessels in Gulf, American and global maritime trade, and any armed vessels and their reflection of changing technologies in armament suggest this subtheme—would have applicability to many of the wrecks identified for the initial test-case MPS.

The end of the Civil War and the resumption of maritime trade in the next decades brought increased steamship traffic into the Gulf as the primary means of marine transportation, with cotton again as the principal commodity. The slow recovery of the regional economy, especially for port cities like Mobile, Alabama and Galveston, Texas and the rise of the southern and Gulf coast lumber industry in the last decades of the century contributed to economic growth, as did steam-power opening regular trade to distant ports (see Ridgely-Nevitt 1981).

New Orleans continued to dominate large volume trade, but the rise of Galveston and the regrowth of traffic to and from Mobile also contributed to the Gulf’s reentry into the global economy (see Doyle 1990). At the same time, the backbone of maritime trade and activity in the Gulf was the business of small schooners, sloops, and brigs engaged in coastal trade, pelagic fishing, shrimping, and oyster fishing

(see Goode 1887). Whaling persisted post-war through the 1870s, and then declined to the point of no longer being even a peripheral industry in the Gulf (see Starbuck 1878; Reeves et al. 2011).

The brief but significant war with Spain in 1898 marked a major geopolitical shift as the US emerged as a naval power and expanded its empire with the acquisition of Puerto Rico and the occupation of Cuba following the war. As the twentieth century dawned, the Gulf was indeed dominated by the US, but dependent on the larger connections of that sea to the world ocean and into the interior of the US via rivers and rail.

3. Conclusions

In addition to the overarching application of a multiple property submission (MPS), the use of Criteria A and D are the best practices approach. Criterion A is specifically relevant. The largest assemblage of known historic shipwrecks in the Gulf of Mexico (Gulf) date to the nineteenth century (BOEM 2021: 35). The nineteenth century, as previously noted, was the period in which the Gulf was more fully integrated into both the global and the US economies as the sugar, cotton, and lumber markets shifted in response to geopolitical events in the region and to the expansion of the US into the Gulf region. The nineteenth century was also a time of expanded global trade networks that spanned the world oceans, including industries such as whaling (Delgado 2022). This pattern of events, or historical trends, as discussed in National Park Service Bulletin 15, is key to Criterion A consideration and use of the themes and subthemes as suggested (National Park Service 1995).

Mere association with “Gulf trade” patterns is not enough to list, but the specific association is. If the context of a vessel (wreck)’s commercial connotations is discernable, or can be inferred, as suggested, and because these are key aspects in the shaping of the Gulf in the nineteenth century as it evolved into the “American Mediterranean” in large measure through the activities of ships and shipping, then a Criterion A argument is sustained. In other words, even if a vessel’s name is not known, the type of vessel, its relative age, and indications of the type of trade or activities in which it was engaged can be discerned or suggested and it can be listed. In this regard, the Vernon Basin Shipwreck is likely eligible.

The Monterrey A and Mardi Gras wrecks are likely privateers or pirates, and Monterrey B and C may be prizes, perhaps a Mexican Gulf trader (Monterrey B?) bound to New Orleans, and Monterrey C is possibly a vessel engaged in a perishable commodity trade. Wreck 15377 is a packet ship of the 1830s-1850s period, and 11563 is a whaler. Such questions of the vessels’ identity and purpose are all Criterion A questions that can further be tested and refined by research design-focused questions that are discussed in the Criterion D discussion of the MPS.

A key aspect of Criterion D to remember is the **potential** to answer research questions in whole or in part. The “Nineteenth Century Shipwrecks of the Gulf of Mexico” MPS, as it is being prepared, will include a discussion of research potential. It will pose a basic nineteenth-century Gulf-wide research design that looks at the broader patterns, assesses archaeological potential to answer research questions, and assesses hypotheses and address current data gaps. Though the overarching nomination form will take the macro-view, the individual Sections 7 and 8 sheets for each site will assess specific questions that focus on each individual site’s potential to answer site-specific as well as larger questions. With this, we return to a key point raised in the current theoretical approach to the archaeology of ship abandonment, as well as cultural landscapes.

The significance of the wrecks is not limited to the intactness, level of preservation, or ability of individual ships to inform us about ship-building techniques. Rather, the archaeological remains at these sites, regardless of their temporal depth, are imbued with meaning and significance that can shed light on past human behaviors. Hence, abandonment is not simply a label or historical detail, encased within the acts and processes of discard are transitions in values and intentions, themselves clues to undocumented human interactions (Richards 2013:12). Though at this time it is unknown how many, or if any, of the vessels wrecked in the Gulf were purposely scuttled, that type of act is in itself a reflection of human agency in the deposition of vessels into the depths of the Gulf.

The vast maritime cultural landscape that is the Gulf in the nineteenth century contains thousands of shipwrecks whose locations reflect human choices in undertaking voyages, the consequences of those decisions, and the driving economic, social, and political factors that likely affected those choices. Those factors are otherwise known as the contexts for these losses. Patterns of vessel traffic, the effects of storms, and coastal topography and the presence of infrastructure ashore and at sea are also reflected.

By looking at the entire population of nineteenth-century shipwrecks in the Gulf, and even beyond the Gulf in looking at wrecks lost en route to or after leaving the Gulf, informs a broader, richer understanding of the period and its archaeological remains. In that, individual nominations in and by themselves, as can be inferred from the review of the history of National Register of Historic Places (NRHP) nominations, was very much an evolution to seeing the forest instead of the trees. Individual sites are important, but collectively they offer much more, as we have noted in and around the vast Pacific coast port of San Francisco (Delgado, Schwemmer and Brennan 2020). In that regard, this best practices approach for and by the Bureau of Ocean Energy Management (BOEM) may have applicability for other agencies and State governments.

The World War II MPS initially prepared by the National Oceanic and Atmospheric Administration (NOAA) for the Battle of the Atlantic has proved advantageous to BOEM. The “Nineteenth Century Shipwrecks of the Gulf of Mexico” MPS is not by necessity defined by or confined to deep water wrecks. Existing nineteenth-century shipwrecks listed in the NRHP in shallow Federal (NOAA and National Park Service) and State waters, as noted in the discussion of how wrecks fit within specific contexts under a larger nineteenth-century MPS, suggests that the State Historic Preservation Offices (SHPOs) of Florida, Alabama, Louisiana, Mississippi, and Texas might also use and benefit from the “Nineteenth Century Shipwrecks of the Gulf of Mexico” MPS.

The work done to date for and by BOEM, BSEE, and their predecessor, the Minerals Management Service (MMS), is in and by itself best practices. The consistent record of ongoing research, beginning with surveys and characterization, and continuing with return assessments, environmental studies, the development of larger context studies that assess patterns of shipwreck distribution, historical patterns of navigation, and vessel-specific studies is exemplary. It also has created an extensive and readily available amount of data that can inform substantive and well-researched nominations and specifically for a nineteenth century shipwrecks MPS in the Gulf region. Moving forward, ongoing work by BOEM and other partners to assess and document these sites is critical to a best practices approach in the assessment of and nominations of shipwrecks to the NRHP.

Another important aspect has been BOEM’s work with NOAA and other partners to conduct systematic ROV surveys of shipwreck sites to gather the data necessary to create three-dimensional photogrammetric models of the sites (Irion and Sorset 2018; Sorset 2020). At this time (2021), BOEM has produced four orthomosaics of nineteenth-century deep-water shipwrecks in the Gulf: Monterrey A, Monterrey B, Monterrey C, the Vernon basin Shipwreck, and Shipwreck 15537. These provide a to-date rare level of documentation that is of exceptional value. They address the need to address often inadequate data necessary to assess a shipwreck site, including documentation of biota and environmental aspects of a site. BOEM has addressed this in its FY 2020 Environmental Studies program notice for Characterizing the Seafloor in the Mesophotic Zone (GM-20-02 Rev.4.21.20).

Using “bottom time” to conduct a systematic gridded survey with overlaps on each transit and angled views, and then composing a post-cruise video and orthophotos provides a digital surrogate that allows for extensive post-cruise assessment of the site and enables ongoing research. The value of these data for preparation of further reports and, in this instance, NRHP nominations, is considerable. In more emphatic terms, these orthomosaics and associated data are game-changing. This aspect of deep-sea site characterization should be incorporated into a best practices approach whenever possible for exploration and assessment dives. As part of a best practices approach in nominations, orthomosaic documentation of shipwrecks should be included as a key part of nominations of deep-water shipwrecks both for assessment during the nomination process, and as imagery to be included in the actual nominations. By doing so, when and where that data are available, BOEM will further develop what we believe will be the next iteration of best practices NRHP nominations that will have a positive effect on the program and the practice of cultural resource significance assessment.

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