

ASSESSING THE MANAGEMENT PRACTICES OF HISTORIC WRECK SITES
CONTAINING HUMAN REMAINS: USS *MONITOR*, *H.L. HUNLEY*, USS *ARIZONA*, SS
CARIBSEA AND HMT *BEDFORDSHIRE*

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April 2018

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This thesis analyzes the complex practices associated with the management of wreck sites that contain human remains through the comparison of two historic eras of ferrous hulled or clad vessels and the differing management approaches. The research seeks to understand the motivation behind management decisions and ascertain if the decisions are linked to a specific variable, such as public significance or association with a specific historic era. Through the examination of management documents and literature associated with each wreck site, the research will reveal commonalities between five case studies that factor into each management decision.

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A Thesis

Presented to the Faculty of the Department of History

East Carolina University

In Partial Fulfillment of the Requirements for the Degree

Master of Arts in Maritime Studies

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2018

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ACKNOWLEDGEMENTS

There are many people I wish to thank for helping me with my thesis. First, I would like to thank my thesis director, Dr. Lynn Harris, for her guidance and support while throughout my research and writing. She was very supportive and accommodating of my hectic work schedule. I would like to thank my committee, Dr. Donald Parkerson, Dr. Kennetta Perry, for their input, expertise, and guidance in my course work and my research.

This research would not have been possible without the help from some of the managers of my case studies. Joe Hoyt and Will Sassorossi with the National Oceanic and Atmospheric Administration's Monitor National Marine Sanctuary provided me with documents about the HMT *Bedfordshire* management acquisition and clarified some management approaches. Crystal Canterbury for providing me information of the British Cemetery, Paul Mardikian, Emily Schwalbe, and Dr. Brent Fortenberry at the Warren Lasch Conservation Center were invaluable for providing documents and information of *H.L. Hunley*. I am grateful to Kara Davis, of the Defense POW/MIA Accounting Agency, for her advice and help researching SS *Caribsea*. I would like to acknowledge the service men and women, especially those who perished while on duty. Their commitment and sacrifice is the reason proper wreck site management is crucial to their memory.

I would like to personally thank many people for reviewing and editing my thesis including my mom Elizabeth Carroll, my dad Robert Carroll, and Emily Schwalbe. They read my prospectus and thesis drafts time and time again without hesitation. I appreciated the honest feedback and encouragement.

I would also like to thank the people who have supported me throughout this writing process, including Seth Cox who provided me with many late-night coffees and endless support. I would like to thank everyone at the Queen Anne's Revenge Conservation Lab, who helped me as much as they could while I was working there, especially Courtney Page who listened to me talk about my thesis extensively. I would like to thank the staff at the St. Augustine Lighthouse and Maritime Museum for supporting me while I finished writing and defending, especially Allyson Ropp, my roommate at the time in St. Augustine, Florida.

Lastly, I would like to thank my family and friends for supporting me through my education; especially my puppy Sookie, who always listened to me when I needed to talk to someone and while readily providing me with comedic relief when work and school felt overwhelming.

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LIST OF ACRONYMS

AIA – Archaeological Institute of America
ASA – Abandoned Shipwreck Act
BAREG – Battle of the Atlantic Research Expedition Group
ECU – East Carolina University
NAGPRA – Native American Grave Protection and Repatriation Act
NAS – Nautical Archaeology Society
NPS – National Parks Service
NRHP – National Register of Historic Places
NOAA – National Oceanic and Atmospheric Administration
NUMA – National Underwater and Marine Agency
POW/MIA – Prisoner of War/Missing in Action
RPA – Register of Professional Archaeologists
ROV – Remotely Operated Vehicle
SCUBA – Self-Contained Underwater Breathing Apparatus
SHA – Society for Historical Archaeology
SMCA – Sunken Military Craft Act
UNESCO – United Nations Education, Scientific, and Cultural Organization
USAR – USS *Arizona* Memorial
WLCC – Warren Lasch Conservation Center
WWII – World War II

CHAPTER ONE: INTRODUCTION

Death is an inevitable part of war. The management of human remains associated with war-related shipwrecks continues to be a contentious and controversial issue. Presently, there is an intense debate between the proponents of exploring historic wrecks that contain human remains for the pursuit of scientific information and their opponents who believe the same wrecks should remain undisturbed out of respect for those individuals who died (Sullivan and Mackay 2012:552). The locations where people die, such as shipwrecks, are commonly respected and honored by the society to which the site or the heritage belongs (Lenihan et al. 2001:178). It reminds the society of mortality and becomes a memorial for those who died (O'Donnabhain and Lozada 2014:1). In the United States of America, sites revered as memorials, ever-present reminders of mortality, can be seen across the country despite a comparatively short, modern history as a nation. Battles and the heroic acts during the American Revolutionary War, the American Civil War, and the World Wars have been regularly honored through dedicated locations and monuments, together with revering the final resting places for those who participated in or perished during the wars. Arlington National Cemetery is one example of a memorialized site for those fallen after protecting United States. These locations serve as a commemoration of events and as tribute to the lives lost (Russell et al. 2004:54).

A wreck site resulting from a military engagement may be the location of the physical memorial of the event. The memorialized site may contain the final resting place for those interred in the wreck itself. Since naval wrecks can be considered emotionally charged and sensitive, management of the site can present a unique challenge for the responsible party. Presently, there is not a policy creating a standardized methodology for the management of the wreck sites of war-related vessels containing human remains. The sites' management

organizations are independent of each other; thus, each site has an individualized plan. The management methodology is dependent upon what is considered to be the best outcome for the distinct situations of the individual wreckage according to different professional archaeological organizations (Society for Historical Archaeology 2018). Individualization is an important factor when assessing a site and its management, because each site is unique and contains varying significant factors. However, without a more standardized methodology of management protocols, plans have the potential to become misconstrued, allowing for mismanagement of sites. The goal of the proposed research, using a spectrum of case studies, is 1) to assess the catalysts behind the instigation of specific decisions from management plans for shipwreck sites with human remains; 2) to assess whether the management of these wrecks follow standardized ethics produced for professionals within the field; and 3) to assess if the evaluated management practices could be developed to create a more nationally systematic approach to managing sensitive wrecks that contain human remains in the future. This research will utilize USS *Monitor*, *H.L. Hunley*, USS *Arizona*, SS *Caribsea*, and the HMT *Bedfordshire* wreck sites for the management case studies.

Research Question

In far too many cases, shipwrecks serve as the final unintentional resting place for those who perished while aboard the vessel during a catastrophic event. Today, the management practices for those vessels containing human remains have varied considerably. These widely differing management procedures result from site-specific individual assessment and a lack of standardized protocol for shipwreck management. For example, recreational Self-Contained Underwater Breathing Apparatus (SCUBA) divers can use certain vessels with human remains as

dive sites, while other sites are heavily regulated. Similar vessels are also excavated, wholly or partially, for scientific research or for profit, while other vessels are intentionally left to naturally decay out of respect for those who perished when the vessel sank. The motivations behind the management decisions of these vessels are based on laws and regulations from the site's governing body, professional archaeological standards, the need to protect the site, including the information contained within the site, significance of the wreck off the history of the United States, and the public perception of the wreck.

Primary Research Question:

This research will address the question: Do the policies, treaties, and motivations associated with the management of sunken vessels that contain human remains follow the ethics and guidelines associated with major archaeological professional societies?

Secondary Research Questions:

In order to study this, the following questions must be answered:

- What are the specific policies, practices, and legislation associated with the management of wrecks containing human remains?
- How do the policies, practices, and legislation affect the individual case studies selected?
- Are there common or reoccurring decisions made about the management of case studies that are based on precedent of previous cases?
- Are there distinct differences in decisions made about the management of case studies that are based on precedent of previous cases?

- What is the historical significance, based on primary sources, for each case study?
- How has the archaeological record complemented or contradicted the historical record?
- Why should or should not each case study be eligible for a nomination to the National Register of Historic Places (NRHP)?

Previous Research

Evolving from English Common Law, case law and statutory law, individual jurisdictions have developed laws that govern the disposal and internment of human remains (Greene et al 1906: 128-137). Out of respect for the deceased, there are legal regulations enacted by each state for the treatment, burial or cremation, and transportation of the remains. Within the context of archaeology, the management of human remains is a volatile and debated topic. Much of the literature on this topic is specific to terrestrial archaeology and the management of ancient or Native American remains, and how the remains should be treated because of the association to Native American tribe. The Native American Grave Protection and Repatriation Act (NAGPRA) is legislation that emerged from this debate. This is a federal mandate for a standardized, ethical treatment of all Native American remains (United States Congress 1990).

Additionally, NAGPRA sets a precedent for the standardization of protocols associated with handling human remains in other situations such as war-related shipwrecks. When considering more modern human remains, specifically aboard or related to shipwrecks, there is much less literature dedicated to the explicit discussion of the management of these remains. However, in 2001 United Nations Education, Scientific and Culture Organization (UNESCO) set an international professional precedence for human remains to remain *in situ* if possible

(Maarlevld et al. 2013). Discussed below are important pieces of academic literature relevant to the discussion of human remains and their associated management perspectives, such as whether wrecks should be considered gravesites and remain undisturbed, or whether wrecks should be considered as case studies for academic pursuits.

Policies and legislation are the initial guides for management plans and coupled with professional standards. Two major legislative initiatives include the 1988 Abandoned Shipwreck Act (ASA), and the 2004 Sunken Military Craft Act (SMCA). The ASA is the foundational piece of legislation on which the management of shipwrecks in the United States' water is predicated. ASA, however, did not reference the topic of human remains aboard a sunken vessel, was not focused on federally managed vessels, and was not specific enough for the US Navy's wreck management policy (Torpy 2015:97 and Varmer 2014:3). The SMCA is much more applicable to the chosen case studies because of the specific naval battle associations of the vessels. When a vessel belongs to the military, all associated content of the vessel and crew fall under the protection of the SMCA (United States Congress 2004). However, this Act fails to address two distinct issues: how should war-related wrecks not associated with the US Navy be managed, and whether or not the wreck should be disturbed for the sake of management and academic research. This is a source of much debate. The US Department of the Interior's National Parks Service (NPS) is much more explicit in the discussion of human remains, from which many archaeological standards are based. According to the NPS, the disturbance of any human remains should occur only if there are no other ethical options (Department of the Interior 2006:ch5.3.4). This is in "respect for the memory of those whose lives were lost at these sites and whose unrecovered remains are often still interred" (Department of the Interior 2006:ch7.5.9). Similar

to the debates associated with NAGPRA, much of the associated literature regarding human remains aboard vessels is regarding whether or not the site should be disturbed.

Ian MacLeod (2008), the Manager of Care and Conservation of the collection at the Western Australian Museum, noted that management of human remains from shipwrecks is not widely written about or discussed from a maritime conservator's prospective. He lists many important shipwrecks around the world and discusses the management practices, including two case studies being examined in this research: *H.L. Hunley*, and *USS Arizona*. MacLeod asserts that from standard archaeological perspectives the discussion of human remains and their management is widely explored. In contrast, from the perspective of conservation and management of these sites there needs to be more deliberation and purposeful discussion regarding the preservation of the remains (MacLeod 2008:5). This research proposes to begin to address the issue of managing human remains when associated with in the United States and war-related loss of craft.

For many academic researchers, shipwrecks provide a unique and occasionally undisturbed window into the society aboard the vessel at the time it sank. This allows researchers to better understand the environment surrounding the sunken vessel, increasing the body of knowledge associated with the vessel and its inhabitants. Many aspects onboard vessels are not wholly reflected through traditional resources, such as literature and personal accounts, and may only be uncovered through archaeological exploration. Slow and deliberate excavations yield the best results, but many argue that this information is not worth disrupting the site and the remains of those who died during the sinking of the vessel (Broadwater 2013:73). Renee Elizabeth Torpy, J.D., (2015:83) advocates for the exploration of wreck sites for the sole purpose of gaining educational data. She argues that the information contained in sites is more important than

potentially losing the information that both the site and the remains can provide because of sensitivities. She argues that the sites should be respected, but does not consider academic research to be disrespectful (Torpy 2015:103). Sean R. Nicholson, J.D. (1997:140), agrees with this sentiment, asserting that stipulating that the sites remain untouched is an “extreme form of conservation”.

Nicholson does, however, express the concerns for the relatives, or those left to claim this heritage, in greater detail than Torpy. Using the topic of relatives only to bolster her argument rather than expressing both supporting and dissenting arguments, Torpy (2015:95-96) argues only that families appreciate the closure received by the research. However, Nicholson acknowledges that more modern events such as the sinking of RMS *Titanic* have survivors whose opinions matter. In an interview with Nicholson, Ruth Becker Blanchard, a survivor of *Titanic*, expressed her concern with studying the wreckage. Blanchard believes that the wreck should be left “undisturbed” because the event was too recent. She argues that the information gained would only be collected to satisfy curiosities rather than for true academic pursuit (Nicholson 1997:140). For Blanchard, the sinking event is still part of active memory, meaning it is a fluid thought, rather than a stagnant thought that is now a part of history. While for researchers, the memory is no longer active within society, therefore is researchable without a large amount of emotional backlash (Seeberg 2016:2). Nicholson does not directly state a supporting or dissenting opinion about the general issue of disturbing the bones, however, he acknowledges both arguments have merit. He states that intensive regulations in the management plans might be considered too extreme and counterproductive. He does acknowledge that without recognizing the management issue, the wrecks would lose academic value after having been salvaged by a profit-oriented company (Nicholson 1997:167).

Ole Varmer, J.D. takes a similar opinion to Nicholson, supporting the dissenting argument of willingly disturbing wrecks with human remains. He acknowledges the fact that many survivors and their families do not want what they consider graves to be disturbed just for the sake of “salvage.” Varmer cites examples, such as the Titanic Maritime Memorial Act, as examples of when sites should not be disturbed. He also cites *Estonia*, a ferry sunk 1994 between Estonia, Finland, and Sweden as an example of a site revered as a memorial, with criminal penalties associated with disturbing the wreck (Christianson and Engelberg 1999 and Varmer 1999:293-294). Varmer also discusses the case study USS *Arizona* in reference to the unique challenge of managing warships wreck sites. He states USS *Arizona* is intentionally restricted to the public to avoid the potential of the wreck being disturbed in some other manner, such as commercial fishing. The author distinctly notes that the more people who can claim a portion of the wreck, the more of a management issue is created (Varmer 1999:293-294).

Since noting the confusion associated with the logistics behind shipwreck management, Varmer, an Attorney-Advisor for National Oceanic and Atmospheric Administration (NOAA) in the Office of the General Counsel, with the help of aides, created a spreadsheet and legal guide with explaining the legislation associated with the management of underwater cultural heritage entitled “Underwater Cultural Heritage Law Study.” In this guide, Varmer details legislation from state through international law, the purpose behind these laws when applied to underwater cultural heritage, the legislative history behind the laws, the scope the laws cover, and the logistical issues associated with each. Varmer attempts to clarify areas of debate when discussing the legislation, however, the document is factual, not based on ethics, which does not allow for much opinion to be expressed on the subject of archaeological survey in an area with human

remains. Varmer states the professional trend in archaeological shipwreck management is to leave the vessel and associated content *in situ* unless intervention is required (Varmer 2014:17).

In *Contesting Human Remains in Museum Collections*, Tiffany Jenkins details the debate from a distinctly dissenting opinion. Although the book was not specifically about maritime archaeology, it is included in the debate about archaeological human remains and management. Jenkins is against the unprincipled display of human remains in a museum. She argues that many academics attempt to be respectful of the remains; however, they are always trying to regulate who lays claim to the management of the remains. As relatively minor parties, academics tend to prioritize their management and work over the interests of the comparatively secondary parties with more immediate claims to the heritage of the remains in which they are studying. Jenkins notes that one researcher is cited saying that the further away the human remains are historically from the claim maker, the less valid their claim as a heritage member (Jenkins 2011:35-36).

Although Jenkins' book is focused more on ancient human remains, such as Egyptian mummies, the concept is applicable to the debate discussed in the previously mentioned articles (2011:121). Contrary to Jenkins' argument, Torpy insists that many of the relatives of those who perished aboard the vessel would be relieved to know about the outcomes of their family members' lives, but does not acknowledge the validity of the potential for a dissenting opinion like Nicholson and Varmer. Nicholson and Varmer were more centric in their opinions while Jenkins and Torpy argue their respective extremist viewpoints. These varying perspectives are why important legislation, though vague, was passed, and why academics in the field, such as MacLeod, insist that further research must be done and that clarity to this debate must be achieved.

Methodology

To provide a sample variety of management styles to wrecks with similar issues, the case studies were specifically chosen because of their similarly historically significant wrecking events, the material composition of the hull or plating protecting the hull, and the relative importance to the public. Two vessels associated with the American Civil War and three vessels associated with World War II were selected for comparison and analysis. Originally, there were only two selected to represent WWII; however, soon after the topic was selected, the author learned that a unique management decision would be made regarding HMT *Bedfordshire*. The management of this vessel, adding a unique and modern comparison to the management of the other case studies, convinced the author this management approach should also be documented and used for comparison. This allows for a historic comparison of two different eras of American history almost 80 years apart. The five case studies are limited to ferrous-hulled vessels or vessels protected by ferrous armor, ensuring the presence of some of the structure. Ferrous materials allow for a higher chance that more intact hull structure remains, over traditional organic building materials such as wood. An intact hull structure allows for better comparison of the remaining physical maintenance, and management. With a varying material type of the hull structure, the management strategies could change, creating inconsistencies in the case studies. The wrecks are all located in salt water as well, whether it was in a bay or the open ocean. The presence of an intact, or partially intact, structure in salt water provides similar circumstances for the preservation condition and the expectation for conservation. The final criterion regarding each case study is site significance and presence of human remains and its effects on management. This is assessed through the eligibility or presence on the NRHP, its association with one of the two wars, and the presence of remains aboard (Delgado 1985:5-6).

This analysis of the various management styles relies on the information provided through the management plans for each case study and the selected professional organization's codes of ethics. The correlation between the actions taken on behalf of each of the individual case studies and the practices condoned by the professional organization, pertaining to the management of human remains, were assessed through a direct comparison. The management styles vary greatly, causing the motivations and justifications of management decisions to be vital to the study. The management actions taken and analysis of the motivations behind the actions will be compared to that which is advised by the relevant professional organizations, that which is legally required, and what the professionals at each of the case studies argue is the best courses of action for each individual site. The synthesis and analysis of this data may provide part of a foundation for the creation of standardized guidelines for the management of wrecks meeting the criteria of a case study in this study.

The gathering of the management plans associated with each wreck, the analysis of this information with prescribed code of ethics from multiple professional societies, and the application of the understanding of the pertinent legislation allowed the author to create a comprehensive examination of the management of naval, ferrous hull/protected vessels with human remains aboard. This research was performed through an analysis of the management decisions associated with each wreck. The author sought to uncover the motivations behind the associated management styles through research. These decisions influencing the management styles were justified and explained in their associated management documents, such as management reports and memorandums of agreements. If the information was not available through publicly accessible documents, the author contacted their offices for access to more information regarding these important decisions and the motivations behind the management

style. The author obtained this information and documents through communication with the associated projects or visit the facilities associated with individual projects, such as the Warren Lash Conservation Laboratory (WLCC), and contacting managers such as NOAA to assess the documents not readily available online, archives, or through interlibrary loan.

To obtain the documents associated with the "best practices," or ideal practices of a professional within the historic preservation and archaeological community, the author obtained the guidelines for managing the remains of a human for the associated professional organizations. Then the author compared the organizations' suggestions to what is being practiced through the active management of the case study sites and analyzed the differences and similarities between suggestions and the practices of each case study. Since these are professional organizations, the ethics are accessible, and the author has found up-to-date copies on their association's ethics websites. This includes, but is not limited to, the United Nations Educational, Scientific and Cultural Organization (UNESCO), Society for Historical Archaeology (SHA), Registered Professional Archaeologist (RPA), and the British Museum. This allowed the author to assess if the ethics were followed.

To quantify data readily available, the author assessed literature published and available through the East Carolina University (ECU) search engine OneSearch. The author utilized IBM SPSS statistical analysis software to create a document to use for the analysis. Using coded categories, the author cataloged each selected article and signify the main subject, or subjects, of the articles, such as history, management, or archaeology. From this, the author assessed if management, specifically that of the human remains, was a topic specifically discussed in publications and gray literature frequently, or a subject left out from the case studies and general management articles. This provided information about the frequency of the topic being

mentioned in texts available to the public and associate a potential quantifiable significance to the frequency of management articles. See Appendix D for the Code Book for Statistical Analysis.

For historical and legal background, the author utilized Joyner Library on the campus of ECU and associated resources to perform a majority of the research. The author contacted the NRHP for the forms regarding each wreck; justify the vessel's importance and validate that the wrecks meet the study's requirements for being on, or eligible for, the NRHP. When necessary, the author contacted and traveled to the National Archives and Records Administrations in College Park, MD. These resources provided primary and secondary sources for the research pertaining to the histories associated with most case studies, primary and secondary sources for the analysis of the data, and primary and secondary sources for the legal basis of the management decisions. The resources provided conservation and management logs, relevant newspaper articles about the discovery and management of the sites throughout time, cultural resource management reports written with management updates, and various other resources required for the site.

Analysis

The qualitative data for Analysis One was performed by first creating a list of management documents associated with each case study. Before assessing the documents, the author created a standardized rubric from which the management documents were assessed. The rubric contained fill in the blank responses to standardized questions meant to illuminate the vital management factors associated with the study. For this study 16 management documents were assessed using this rubric. From this, the case studies' management practices were compared to

what is considered best practices created from federal organization's standards, professional codes of ethics, and legislation.

The data for the analysis was performed after first creating a succinct list associated with each of the determining factors associated with the study. The first list was created from a selection of professional organizations and their requirements for the management of human remains. The next was a list of legislations specifically dealing with the regulations associated with the management of human remains on sunken vessels that effect the management of wreck sites in the study. Finally, a list of the decisions made while managing the vessel and if given a list for the reasons behind these decisions was created. Then the analysis, with these known basic principles was performed with the predetermined rubric.

The quantitative data for Analysis Two was collected using available literature produced data in numerical form for analysis. From information, the author could assess the significance of variables associated with management decisions and literature. The quantitative spreadsheet was used to assess 142 examples. For most of the case studies, the number assessed was only a small fraction of the articles pertaining to the search results, however, if there were enough articles, the first 45 relevant articles were selected for analysis. These numbers are discussed further in Chapter 5: Analysis and Chapter 6: Results. A copy of the spreadsheet and codebook are available in Appendix B and Appendix D respectively.

The comparison from this data illuminated the potential of specific trends for these case study vessels, or if the vessels a managed independently from each other, without influence. It revealed which specific policies, treaties, and challenges affect the individual case studies selected. The goal was to determine if common, reoccurring decisions were made creating a pattern, or if distinct decisions were made about the management of case studies that are based

on the similar challenges between case studies. From this, with a comparison to the professional ethics list, the author could see whether the case studies' management followed what was considered professionally accepted as ethical but generally not legally mandated across all wrecks with human remains. This research has the potential to create a comparative standard created for managers of future wreck sites to use as management guideline was assessed. The author could decipher what factors instigated the decisions that were made, while noting the decision and the outcome of the management, and see how the decisions corresponded with the ethical guidelines issued by many professional societies. This may allow future resource managers an additional resource guidance for making effective management decisions while utilizing some of the country's most significant historic wrecks that are highly managed and unmanaged historically significant wrecks as precedent. The research could yield a basis on which an archaeological site may be influenced and become properly, effectively managed, preserving the history and its significance.

Conclusion

The purpose of this study is to research a spectrum of management styles with regards to the management of wreck sites that presently or previously contained human remains by managers. By specifically picking examples to represent a unique management aspects and compare case studies to see the similarities and differences, corresponding evidence showed if trends exist in the management styles. The following chapters discuss the history of the vessels, the management practices associated with each case study, a summary of professional guidelines, an analysis of the data derived, and discussion of what this research produced and the effects it could have on future management of wreck sites following the same criteria.

Chapter 2 describes the history of the war each case study is associated with and the history of the significant wrecking event that created the management environment for each case study. Chapter 3 is the summary of the management each case study has undergone since discovery or active management, and the present management tactics taken. Chapter 4 is focused on the definition of professionalism and the application to each case study. This is applied in general terms for professionalism and more specifically the guidelines associated with the management of human remains and the application thereof to case studies. Chapter 5 provides an analysis of the information gleaned from the management documents and statistical analysis of literature associated with each case study. Chapter 6 discusses of the information provided through the analysis and the conclusion that may be made from the information learned.

CHAPTER TWO: THE HISTORIES OF THE CASE STUDIES

One of criterion for inclusion in the study was that the wreck was associated with specific military events in history. As stated in the previous chapter, two vessels associated with the American Civil War and three vessels associated with WWII are selected for comparison and analysis. This allows for a succinct comparison between two different, important, and impactful eras of American history. The wars, separated by 80 years, provide a significant time lapse, allowing for the wrecks to be considered historic and from two different eras but consistent in protective hull material composition.

Another criterion regarding each case study is whether it is judged to be significant enough to require management. This is assessed through the eligibility or presence on the NRHP (Delgado 1985:10). The NRHP is a nationally recognized listing of significant places that are protected under the National Historic Preservation Act of 1966 (United States Congress 1966). In the National Register Bulletin 20, the nomination process for historic vessels is clearly explained, including shipwrecks (Delgado 1985:3). To be considered for listing on the NRHP, a vessel must fit certain criteria. It must be: (A) associated with a historic event, (B) associated with a historic figure, (C) embody distinctive characteristics not usually seen, and (D) have or will provide important information about history. All case studies fall under criterion A, while some case studies fall under criteria C and D as well.

In conjunction with the physical properties of the case studies, the emotional properties of associated with the case studies is equally important. The Civil War and WWII were two wars that altered the realities of many American citizens across the country. Through this social attachment, management becomes increasingly more scrutinized and important. The case studies selected are important through their naval associations and histories.

History of the American Civil War and Each Case Study

The Civil War was a divisive time for the United States that spurred advances in naval technology. The war pitted the young country's individual states against each other, each side fighting for what was believed to be a just cause. The Confederate States of America, also known as the Confederacy or the South, was the secessionist group of eleven states fighting for their perceived state's right and to maintain their society's way of life, which included the enslavement of African Americans. To do this, the Confederacy attempted to secede and gain independence from the United States of America, also known as the Union or the North. Many argue that the war was an example of the struggles between agrarian society and industrializing society during an era when the world was rapidly changing with increasing technology. This war was fought on both land and sea, allowing for this war to affect all facets of American life (Hicks and Kropf 2002:15). The first case studies, *USS Monitor* and *H.L. Hunley*, were two important vessels during the Civil War and are representative of technologies associated with both the Union and the Confederacy.

USS Monitor

USS Monitor was an iron-sided vessel designed by Swedish-American engineer John Ericsson for the Union Navy during the Civil War (Broadwater 2013:45). The vessel's design, as shown in Figure 2.1, placed Ericsson among the most influential designers of the Industrial Revolution (Broadwater 2013:40). The hull of the vessel was not completely composed of ferrous materials; the inner portions of the ship were composed from wood such as oak beams and pine deck planking, while the outer structure had iron plating used as armor (Broadwater

2013:ix; Broadwater 2013:83). The vessel was 179 feet long, 41.5 feet in beam and a draft of 10.5 feet with a gun turret, shown in Figure 2.2 (Silverstone 2006:4).

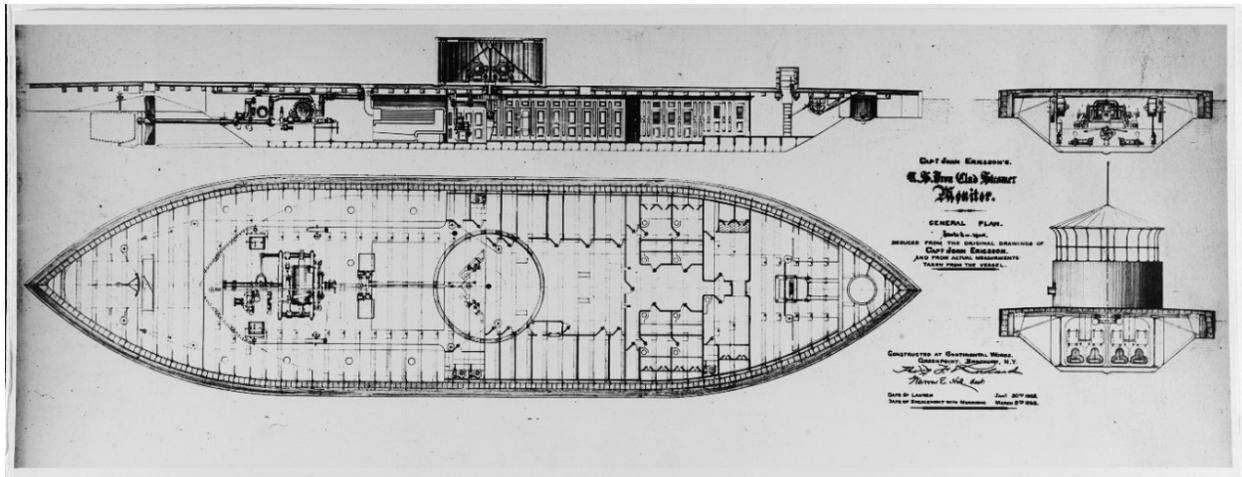


FIGURE 2.1. Lines drawing of USS Monitor (US Naval History and Heritage Command 1862).



FIGURE 2.2. Image of two men and the turret aboard USS *Monitor* (Gibson 1862)

USS *Monitor* was one of the most influential vessels in naval history and technology. The existence of the ironclad war vessels, such as USS *Monitor*, revolutionized the concept of

modern naval vessels (Broadwater 2013:28). The durability of these ironclad or iron-sided vessels against contemporary guns allowed for the creation of a new class of war ships known specifically as the Monitor class, after USS *Monitor* (The USS Monitor Center 2018a). With the innovation of these iron-clad vessels, wooden vessel quickly became obsolete for the purposes of fighting naval battles. The Battle of Hampton Roads proved that metallic hull structures were significant to the design of future war vessels because of the increased durability during combat (The USS Monitor Center 2018a).

USS *Monitor* is most famous for battling the Confederate ironclad CSS *Virginia*, constructed from parts of the USS *Merrimack*, at the Battle of Hampton Roads in Virginia. This battle was the first time two ironclads fought in battle. Neither vessel sank the other, but the battle provided both naval powers with an example of how these vessels performed against the tradition wooden unprotected hull structure (Sheridan 2004:1-22). The vessels' post-Industrial Revolution battle proved the modern iron and steam vessels outperformed the wooden and sail vessels in battle (Broadwater 2013:28). This is significant, because in a single battle many of the previous technologies associated with naval tactics became obsolete, making the creation and implementation of USS *Monitor* an important turning point in naval technology.

Months after the Battle at Hampton Roads, which ended in a draw between the two ironclads, USS *Monitor*'s crew planned to sail to Beaufort, NC. On 20 December 1862, the vessel left port following the steamship *Rhode Island*. The vessel was traveling well until the seas began to change off the coast of Cape Hatteras. The violence of the seas increased until nightfall, when the vessel's Worthington pumps and bilge injectors were unable to keep up with the water entering the vessel. In a vain attempt to save the vessel, the crew was ordered to use the ADAMS' centrifugal pump, which was more efficient than the pumps previously used. The last

attempt was for the men to use a bucket brigade alongside the pumps but they were unable to keep up with the rising water. USS *Monitor* signaled to *Rhode Island* for assistance. The vessels launched three lifeboats that assisted thirty of the crew from USS *Monitor*. The vessel was sinking and the rescuers were unable to access the men who had remained on board because of the weather. All the crew who had made it to the lifeboats were transported safely to *Rhode Island*. However, after midnight, on 31 December 1862, though the vessel was close to the destination, the entire crew did not make it to safety. USS *Monitor* sank below the surface off the coast of Cape Hatteras (New York Times 1863; Broadwater 2013:5-13).

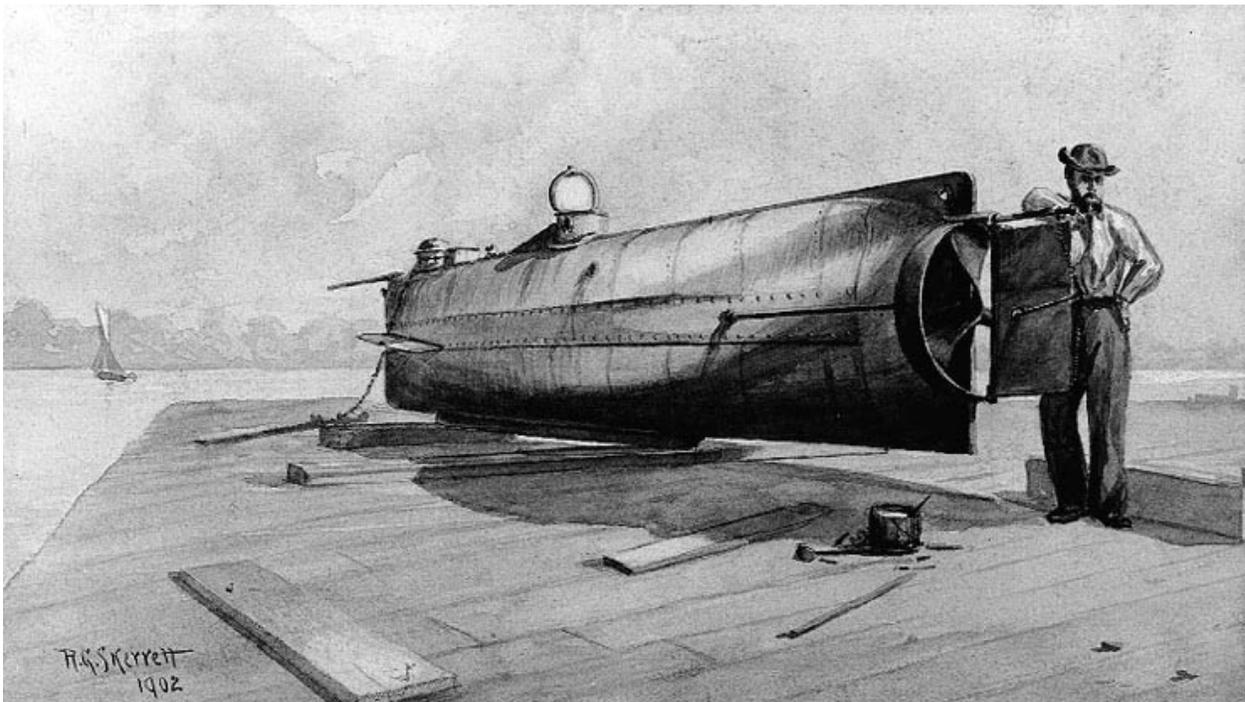


FIGURE 2.3. Sketch of H.L. Hunley based off another drawing (Skerrett 1902).

H.L. Hunley

The second case study is *H.L. Hunley*. This vessel was the first successful naval submarine in history. The Confederate States Navy acquired *H.L. Hunley* from the civilians who built the vessel (Neyland and Brown 2016:16). *H.L. Hunley* was built to use in naval warfare

against the Union Navy (Mardikian et al. 2006:13-15). The vessel was roughly 40 feet long and 3.5 feet in beam (Silverstone 2006:166).

The history of the multiple crews of *H.L. Hunley* is bleak. The first crew of eight men met a tragic end when the new skipper, Lt. John A. Payne, accidentally stepped over the dive plane's lever, causing the vessel to submerge while the hatches were still open. Payne and three others were the only survivors of the first of the three sinking events of *H.L. Hunley* on 29 August 1863 (Friends of the Hunley 2014c). The second crew was captained by Horace Hunley, one of its builders, for whom the vessel was named. The crew came from Mobile, Alabama, where the vessel was built and was then transferred to Charleston, SC. It was a crew who knew the functions of the vessel well, although, this experience proved to be worthless. On 15 October 1863, the crew was performing a routine diving exercise and never resurfaced. When divers located the crew, they could see the submarine's bow buried deep into the mud at a 30-degree angle. It is hypothesized that the vessel became flooded during a malfunction and the crew did not have time to rectify the situation or that the ballast tank became flooded while attempting to control the buoyancy of the submarine (Friends of the Hunley 2014d; and Neyland and Brown 2016:25).

Finally, on 17 February 1864, eight men boarded *H.L. Hunley* and became the historic third crew who sank USS *Housatonic* off the coast of Charleston, South Carolina (Friends of the *Hunley* 2014a). The eight crewmen were used as the power source for the vessel. They sat at hand cranks inside the small hull structure which was only four feet in height. These hand cranks were connected to the propeller shaft of the submarine, allowing for it to move under the surface of the water (Drye 2004a). The third crew rammed the spar torpedo into the hull of USS *Housatonic*, detonated it, successfully completing their mission. For unknown reasons, the crew

and the submarine disappeared into the harbor. *H.L. Hunley* was not discovered until 1995 with the crew, Lieutenant George E. Dixon, Arnold Becker, Corporal J. F. Carlsen, Frank Collins, Lumpkin, Miller, James A. Wicks, and Joseph Ridgaway, entombed inside the submarine (Friends of the *Hunley* 2014a and Friends of the *Hunley* 2014e).

H.L. Hunley approached the target with stealth, so much so that the initial report of the sinking was that the vessel succumbed to severe weather damage and sank (New York Times 1864b). When reporting on the sinking of USS *Housatonic*, in Charleston, South Carolina, the ability to move underwater was significant. In the sinking announcement, the Union noted that the water was “smooth” when the submarine sank. *H.L. Hunley* was clearly a mystery to the Union because in the same article, the Union Rear Admiral John A. Dahlgren announced that there was to be a reward for anyone able to sink a “torpedo boat” or provide the navy with information regarding the design of the vessel (New York Times 1864a). However, the idea of catching this exact vessel would not come to fruition, because the vessel would not be discovered again for over 100 years (Hicks and Kropf 2002:152)

History of World War II and Associated Case Studies

The Japanese attack on the naval base at Pearl Harbor, Hawaii, in December 1941 prompted the United States’ official military entrance into World War II (Russell et al. 2004:54). WWII was a war between the Allied and Axis powers. The United States only became involved after a direct declaration of war. The war was fought on multiple continents simultaneously, with the United States’ involvement lasting for years after the initial attack on Hawaii (Russell et al. 2004:54). WWII was arguably the single most universally destructive event in modern history (Murray and Millet 2001:554). Since the war was fought on both Atlantic and Pacific fronts,

naval, amphibious, and terrestrial tactics were required. Naval campaigns were important during the war, thus allowing for a selection of vessels to select from which to select case studies.

USS Arizona



FIGURE 2.4. Broadside view of USS *Arizona* (National Archives and Records Administration 1917)

The third case study selected is USS *Arizona*. On 7 December 1941, this naval vessel was attacked by Japanese bombers as it sat at anchor. Pearl Harbor is a port located on the Hawaiian Island of Oahu (Daniel 2006:3). The sinking of this vessel, alongside the destruction other major

portions of the naval base located in Pearl Harbor resulted in a massive loss of life. Presently, USS *Arizona* is the final resting place for over a thousand Sailors and Marines who lost their lives aboard the vessel (Russell et al. 2004:54).

USS *Arizona*'s keel was laid down in 1914 and was commissioned in 1916. The vessel was 608 feet in length and 97 feet in beam, displaced about thirty thousand tons and drafted about 30 feet (See Figure 2.4. for image from 1917 of the vessel). The battleship was remodeled twice before joining the Pacific fleet in 1921. The vessel had to be updated again in 1931. The Norfolk Naval Shipyard modernized the vessel with more weapons and better protection against contemporary modern arms. In October 1941, the vessel docked in Pearl Harbor and underwent repairs (National Parks Service 1996:8-9).

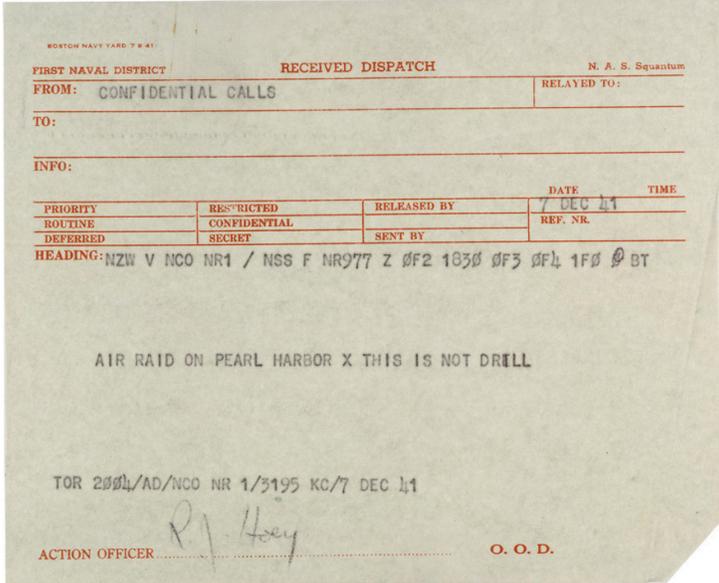


FIGURE 2.5. Pearl Harbor Air Raid Telegram (United States Navy 1941b)

On 7 December 1941 at 0755, Japanese aircraft attacked Pearl Harbor dropping bombs that resulted in explosions throughout USS *Arizona*. By 0815 the vessel sank with many of the men still on board. The order to abandon ship did not occur until 1030. USS *Arizona*'s sinking resulted in the loss of 1,177 of the 1,510 men aboard the vessel (National Parks Service 1996:8-

10). With the dispatch of a telegram stating “AIR RAID ON PEARL HARBOR X THIS IS NOT A DRILL” (seen in Figure 2.5) and the a speech by President Franklin D. Roosevelt (1941) declaring war on the “Japanese Empire” the following day, the United States entered into World War II (US Navy 1941). The sinking of the battle ship *USS Arizona* was one of the most visible and infamous events resulting in loss of life and property for the United State Navy during WWII (see Figure 2.6). Since *USS Arizona*’s sinking, the vessel became an inspiration to fight during the 1940s and presently has become a place to mourn and remember after the war has ended (Russell et al. 2004:54).



FIGURE 2.6. Image of *USS Arizona* after the attack (United States Navy 1941a).

HMT Bedfordshire

The fourth case study is the *HMT Bedfordshire*, a British wreck from WWII located off the coast of the United States. The vessel was originally built in 1935 by the Smith’s Dock Company as a trawler, however, during WWII there was an increased need for vessels to aid in

the war effort. This caused commercial vessels to be retrofitted as naval vessels (Lloyd's Register 1939 and NOAA 2010a). The vessel was selected to aid the war effort and then transferred to the Royal Navy in 1939. HMT *Bedfordshire* was 162.3 feet in length, 26.6 feet in beam and 15.3 feet in depth. HMT *Bedfordshire*'s Battle of the Atlantic position was to be as an anti-submarine vessel, escorting vessels from the United State to England through the Atlantic Ocean during the middle of the campaign (National Oceanic and Atmospheric Administration 2010a). (See Figure 2.7 for image).

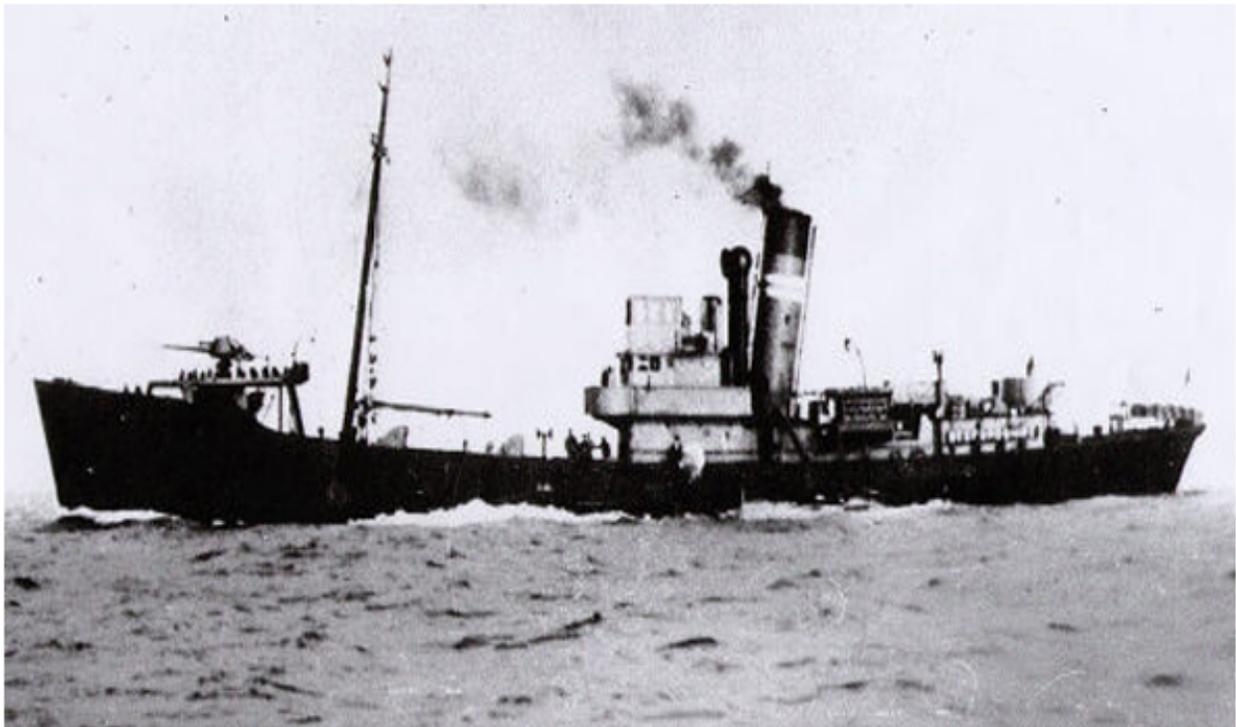


FIGURE 2.7. Image of HMT *Bedfordshire* (Monitor National Marine Sanctuary 2016a).

The vessel then began working off the coast of North Carolina in waters notorious for *Unterseeboot*, or U-boat, attacks. In late April 1942, HMT *Bedfordshire* left the port of Morehead, NC for patrol, near where Type VIIC U-558 was also on patrol. The U-558 spotted the patrolling HMT *Bedfordshire* and attempted to sink the vessel. The first of two torpedoes

were unsuccessful, however the second attempt resulted in a large explosion (Hickam 2014:202-204).

Two bodies washed ashore 14 May on Ocracoke Island after the vessel was sunk by U-558 on 12 May 1942, and a few days later two more bodies were recovered near the island. There with no survivors; the vessel sunk with everyone on board. Eventually a total of six bodies were recovered from the vessel (National Oceanic and Atmospheric Administration 2010a). Initially, even with positive identification of two of the crew, it was believed that HMT *Bedfordshire* was not harmed and the deaths were likely the result of an accident. It was not until days later that the US Navy considered the vessel likely to have been sunk. Four of the crew members were buried in Ocracoke, one was buried in Hatteras, NC, and one in Oak Grove Cemetery in Creeds, VA. The rest of the crew are considered to still be at sea.

The crews of trawlers, such as HMT *Bedfordshire*, were considered to be some of the bravest men and the best examples of the Royal Navy acting in and protecting US waters. The trawlers suffered more casualties than they inflicted, however, these men returned to service fighting a much more prepared enemy each day (Hickam 2014:207-208).

SS Caribsea

The final case study is *SS Caribsea*. The vessel was a cargo freighter operating in the Atlantic Ocean during WWII. *SS Caribsea* was sunk by the U-boat U-158, off Cape Lookout, North Carolina, near Diamond Shoals (Gentile 1992:40-43). The vessel was 261 feet long and 43 in beam. The freighter was built in 1919 by McDougall and Duluth Shipbuilding Company, in Duluth, Minnesota. Before being christened *SS Caribsea* the vessel went by two other names:

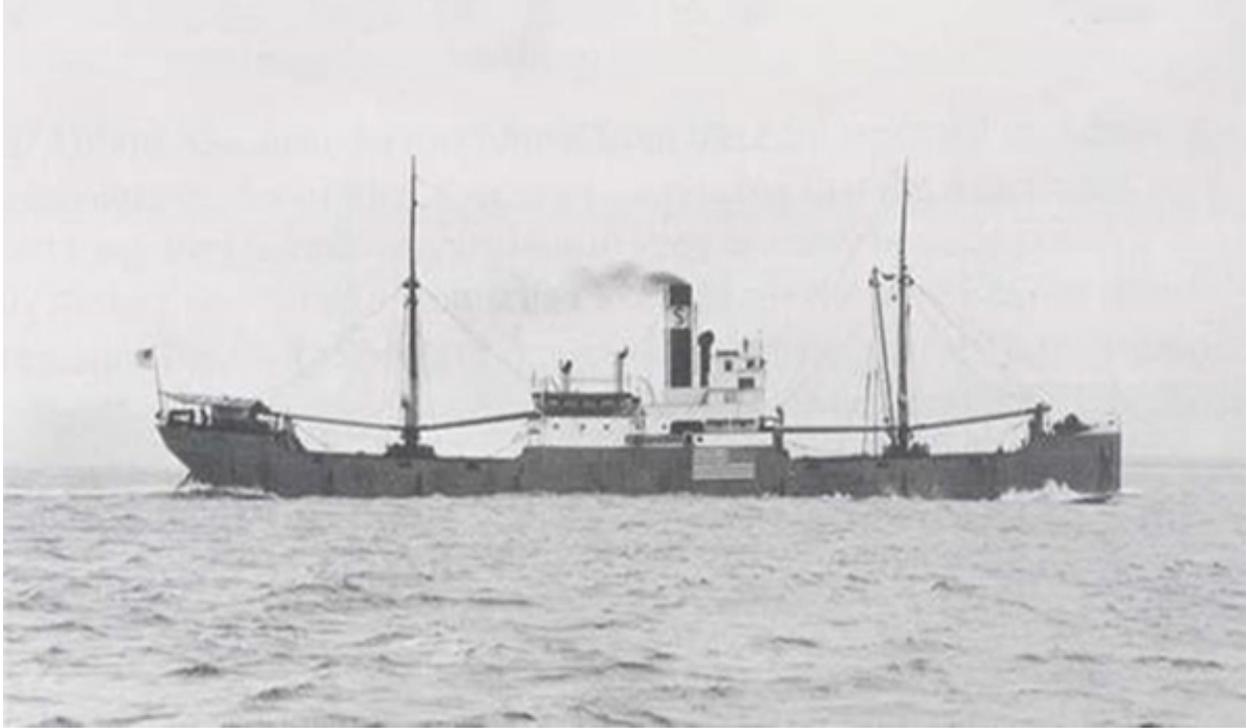


FIGURE 2.8. Image of SS *Caribsea* (Monitor National Marine Sanctuary 2016b).

Lake Flattery from 1919 to 1922 and then *Buenaventura* from 1922-1940 (Monitor National Marine Sanctuary 2016b). Construction of the vessel was finished at the end of World War I; *Lake Flattery* steamed under the US Shipping Board in 1919 (National Marine Engineers' Beneficial Association 1919:20). The vessel was then sold to the Panama Rail Road Company for commercial use in 1922, and until 1940 steamed under the name *Buenaventura*. In 1940 Stockard Steamship Company acquired *Buenaventura* and renamed the vessel *SS Caribsea*. (See image in Figure 2.8).

Fortunately, not all the lives aboard the SS *Caribsea* were lost when it was attacked. Seven members of the twenty-nine member crew survived the attack and spent a night hanging on to a raft while the U-158 circled nearby (Hickam 2014:65). The captain of the vessel recounted and published his accounts of the events. *SS Caribsea* was on its thirteenth voyage and headed south towards the Caribbean from New York. Since a fairly new crew boarded *Caribsea*,

the Captain Nicholas Manolis reviewed emergency plans, such as abandoning ship with the crew. The captain was aware of the dangers associated with the trade in the Atlantic in the winter of 1942. He recounted hearing distress calls during previous voyages and asking for a route change when his vessel was routed 100 miles off Bermuda, making rescue very difficult (Manolis 1949:56-61). *SS Caribsea* was carrying a cargo of manganese on the return trip north in March (Hickam 2014:65). Manganese is a crucial element for turning iron into steel, which was greatly needed by the US government during the onset of WWII (Cannon 2004:1-2). Off the coast of NC, the Captain heard two men on the bridge discuss whether or not a ship had surfaced around 0200 on 11 March 1942. Almost immediately after Captain Manolis spotted the U-Boat, *SS Caribsea* was struck by a torpedo and the crew was ordered to abandon ship (Manolis 1949:87).

Conclusion

The vessels and crews described in this chapter are all associated with historic and important events for the country. They are all examples of the courage needed when participating in inherently dangerous events and that led to the loss of lives. As not all the human remains were recovered from each wreck, these vessels are prime examples of how their various histories are still affecting each one today as historians, archaeologist, and conservators struggle with best practices when handling wrecks which may contain human remains. Given the histories associated with each case study, the management styles are very different

CHAPTER THREE: MANAGEMENT PRACTICES OF THE CASE STUDIES

Wreck site management is complex. Those creating the management plan must take into consideration many different factors that may directly or indirectly impact the sites. The first major factor for the manager is following legislative mandates at the federal and state levels. The second is adhering to the professional guidelines to which the management ascribes. After these are accounted for, the manager must then consider the environment in which the wreck is located. Is the wreck in a high traffic area or isolated? Will the wreck pose a risk to boaters? Will the wreck create environmental problems? Is the wreck isolated enough to allow it to remain protected in the homeostatic environment? Will the public likely come in contact the wreck? Is the wreck significant and if so, is the wreck significant enough to excavate, or should it be documented and left *in situ*? Should it be nominated to the NRHP? Adding the presence of human remains to the equations makes the management decisions important. The results of the decisions allow for many differing approaches for historically significant wrecks sites containing human remains.

USS *Monitor*

Sunk off the coast of North Carolina by a storm during the Civil War, USS *Monitor* is managed by NOAA Monitor National Marine Sanctuary (Broadwater 2013:63). John D. Broadwater is currently the Manager of the *Monitor* National Marine Sanctuary (National Oceanic and Atmospheric Administration 2010b). Broadwater wrote about his experiences assisting with the discovery of *Monitor* in the book, *USS Monitor: An Historic Ship Completes Its Final Voyage*. Robert E. Sheridan a former professor at Rutgers University and University of Delaware, also wrote about the discovery of *Monitor*. In *Iron from the Deep, the Discovery and*

Recovery of the USS Monitor Sheridan, who participated in the discovery and excavation of the wreck, discusses locating the vessel, approaching Congress for support and protection, and raising the turret (Sheridan 2004: book cover). These sources describe the discovery and the early management tactics for the site.

In the summer of 1973, researchers from various academic and professional institutions aboard the research vessel *Eastward* searched for *Monitor* using remote sensing equipment. They located two promising shipwreck targets in the general area in which the vessel reportedly sank. After further investigation, the first possible target did not appear to be the vessel for which they were searching. Luckily, the crew located a more likely target a few days later. On 27 August 1973, the crew located *Monitor* (Sheridan 2004:59). After the ship was verified as *Monitor*, managers created plans to protect the site because of the historical significance of the vessel. In 1998, US Navy divers removed the propeller from the vessel, alleviating some of the tension the weight of it was placing on the hull (Broadwater 2013:166). The turret of the vessel was removed from site in August 2002 with the help of commercial salvors, US Navy divers, and NOAA. The turret was then moved to the Mariner's Museum in Newport News, VA, where it is presently located (Broadwater:193).

Knowing the detailed history of this historic vessel, the researchers were prepared to deal with human remains that might be in the vessel, if any were encountered during the excavation (Monitor National Marine Sanctuary 2013:89). If discovered, the forensic archaeologists at the US Army Central Identification Laboratory in Hawaii would oversee recovery efforts of the human remains (Broadwater 2013:170). When the excavation of the turret began, a few remains of *Monitor's* crew were discovered. Before the excavation of the turret, the remains from inside the turret were documented *in situ*, excavated, and stored in a safe location (Broadwater

2013:180). However, divers could not excavate all remains from the turret before bringing it ashore. Some of the excavation team wanted to attempt to remove the remaining human remains from the turret during the transportation on the barge from site to shore, because they felt that the celebration awaiting on shore for the return of the recovered turret would be inappropriate with the sailors' remains still aboard (Broadwater 2013:186). However, the researchers were unable to remove the remains before returning to shore. On shore, the turret was surrounded by a soaker hose to keep it damp. Out of respect, the human remains were covered with a damp towel and a POW/MIA, or Prisoner of War/Missing in Action, flag for transport. After transport, the artifacts and remains removed were prepared for conservation (Broadwater 2013:183). For months afterwards, the turret remained an ongoing excavation site until the team was certain all the artifacts had been recovered. This included the remains of two US Navy sailors, who were excavated successfully from USS *Monitor* turret (Broadwater 2013:193). After decades of research on the remains and attempts to locate living ancestors, NOAA set March 2013 as a final date for researchers to provide the sailors with a proper burial (Monitor National Marine Sanctuary 2013:89).

The sailors were buried in Arlington National Cemetery, Arlington, VA, with full military honors on 8 March 2013. Arlington National Cemetery is considered to be the United States' "premier military cemetery - A national shrine - A living history of freedom" (Arlington National Cemetery 2017c). It is located on 624 acres and is the final resting place for more than 14,000 men and women who served in the United States armed forces (Arlington National Cemetery 2017a). They were the only members of the sixteen-man crew to be buried on land, as the remainder of the crew is believed to be buried at sea (National Oceanic and Atmospheric Administration 2013). The crew's memorial plaque lists the names all the sailors and the

recovered remains are interred near their memorial. The graves of the sailors and the plaque for the crew are located near many other memorials for people who were important to the history of the United States. This includes memorials such as those for the crew of the Challenger Space Shuttle and the Tomb of the Unknown Soldier. The memorial for the crew of USS *Monitor* is difficult to locate, though, because it is not marked on the map. It is not listed as an official memorial, since two crew members are buried underneath, making it also an active grave and not marked on the map listing a majority of the memorials. The memorial was only found by the author after an employee suggested a few locations of where the plaque may be erected. Arlington National Cemetery also has created an application for cellular devices called the Arlington National Cemetery Explorer that will allow for an individual to select graves to visit from their phone, and the app will create a map to guide them to the specific grave site. This application aided the author in finding the site through the notation of other memorials that an employee suggests the site was likely to be near.

USS *Monitor* represents an example of a partially excavated site that is essentially inaccessible *in situ* to the public, however, the artifacts are accessible for the public to view in the museum. The turret is being conserved at Mariners' Museum in Newport News, Virginia, while the remainder of the wreck is located on the sea floor at 240 feet (Broadwater 2013:62, 183). Both the museum and the depth of the remaining structure permit limited public interaction. The museum protects the artifacts from the public's reach at the surface; while, the depth of the site protects the remainder of the hull of *Monitor*. The depth required decompression diving, requiring a technical certification to safely reach the wreckage site, thus greatly limiting those trained to safely dive the site. Additionally, NOAA requires a special permit for recreational divers to legally access the site (National Marine Sanctuaries 2016). In 1974, this

vessel was placed on the National Register of Historic Places (North Carolina State Historic Preservation Office 2016).

H.L. Hunley

On 3 May 1995, the *H.L. Hunley* was found east of USS *Housatonic* in the Charleston Harbor, outside of Charleston, SC, during a search funded by Clive Cussler, fiction author, avocational maritime archaeologist, and creator of National Underwater and Marine Agency (NUMA). While Clive Cussler was one of the men who attempted to find the vessel, it is his crew that is credited with the actual discovery of the vessel (Hicks and Kropf 2002:152H). *H.L. Hunley* was fully excavated in 2000 through a partnership between the State of South Carolina, US Navy, and National Park Service (NPS) (Mardikian et al. 2006, 13-15). In general, full-scale excavation is not the standard for most archaeological sites; however, depending on the circumstances, it is undertaken for important sites that may be in danger (Maarlevld et al. 2013). *H.L. Hunley* provided the researchers with a unique set of problems, making excavation the most appealing alternative. Since the vessel is relatively small, it was excavated with the hull structure completely intact. The conservation of the entire vessel is ongoing in the WLCC located in Charleston, South Carolina (Mardikian et al. 2006, 13-15).

As mentioned in the previous chapter, *H.L. Hunley* was manned by three different crews and sank each time. The first two crews are buried in Magnolia Cemetery in North Charleston. After the excavation of the vessel and the recovery of the third and final crew of *H.L. Hunley*, the Hunley Commission wanted the third crew to be buried with their predecessors. The remains aboard were carefully excavated, studied, and then given a proper burial. Through this research many attributes and characteristics about the crew members were discovered that were

previously unknown. This new forensic information increased the probability of identification. The discovery of the vessel lead to disproving a source written about *H.L. Hunley* a few years later after the third sinking of the vessel listing what was believed to be the crew aboard.

The United States Congressional Serial Set, Volume 1253 lists the crew on page 299 from a letter written by a Confederate Naval officer on 29 April 1864. The crew, listed in a letter from M.M. Grey, Captain in charge of Torpedo's, to Major General Dabney H. Maury, is "Arnold Becker, C. Simpkins, James A. Wicks, F. Collins, and ____ Ridgway... and Captain J. F. Carlson, of Wagner's Company artillery" (United States Congress 1866:299). This information is incorrect though. Without excavating the site, archaeologists and historians might never have questioned this information. After contacting WLCC, it was made clear that archaeology did not agree with the most contemporary sources at the time. The archaeology showed that the number of individuals was different from that listed in the Serial Set and since the whole project was top secret, it was not well documented. This has led to the archaeologists identifying the remains through other historical sources. The spellings of the names might vary because of a lack of standardization, but other sources such as letters written by W.A. Alexander, a sailor assigned to be a crew member, but who was removed from *H.L. Hunley* at the last moment, provided a different look at the crew many years later. The most likely members of the crew are First Lieutenant George E. Dixon, Seaman Arnold Becker, Quarter Gunner C. Lumpkin, Corporal J.F. Carlsen, Seaman Frank Collins, Miller, Quartermaster James A. Wicks, and Joseph F. Ridgaway (Emily A. Schwalbe 2017, elec. comm.). This third and final crew was laid to rest after excavation and research on 17 April 2014 next to their predecessors (Friends of the *Hunley* 2014b).

Data from the forensic analysis was revealed in the days leading up to the crew's burial. *H.L. Hunley* is a perfect example of the argument for why archaeologists might disturb human remains to gain information. *H.L. Hunley* was not well documented, due to the sensitivity of the mission. Until excavation, much about the crew was unknown, including their correct names. Archaeologists from the WLCC asked forensic experts to look at the bones and teeth found in the submarine to assist with identification. The forensic team learned that the men aboard *H.L. Hunley* learned a lot about the crew. First, the men were still in the seated position when they died. Secondly, many were not native to the Confederate States. Of the eight men, four of the men were likely immigrant workers from Europe, one from Maryland, and one from Ohio. The remaining two were from states that had seceded with the Confederacy. The Europeans were identified from information gained through analysis of their teeth. The discrepancies in their diet allowed for them to be identified as a unique trait during the forensic examinations. From the data gained, the researchers knew that one of the European men was about forty years old and likely in some intense physical confrontations, because of damage to his skull. Another crew member, potentially from Germany, likely performed a large amount of heavy manual labor and was about twenty years old in 1864. This information was gained through a structural spinal analysis. The archaeologists also had facial reconstructions completed with the remains to show the public the faces of the men who died in the historic vessel. It is still unclear why the vessel sank and why the men were still seated when they died, however more is known about the crew than before the excavation (Drye 2004a).

Two unique artifacts were critical for identifying the crew aboard the vessel. First was a set of dog tags for an Ezra Chamberlain, a Union soldier. Initially, the dog tags were thought to be an identification of the remains near which they were found. After historical research, it

appears that Chamberlain's tags were taken after he perished on the battle field by crew member James Ridgaway. The second unique artifact found that was directly associated with the crew was a gold coin. This coin was linked to Lieutenant George E. Dixon, the captain of the third *H.L. Hunley* crew, through anecdotes and an inscription. Inscribed on the coin was "Shiloh April 6, 1862 My life Preserver G.E.D." It is rumored to have been a coin given to Dixon by Queenie Bennett, a young woman from Mobile, Alabama as a keepsake for Dixon. According to the legend, Dixon was shot at the Battle of Shiloh and the \$20 gold piece stopped the slug from fatally hitting his leg. Dixon supposedly brought the coin on to the submarine the night that it sank. Archaeologist found the dented, inscribed gold coin near the remains of Dixon almost a century and a half later, appearing to substantiate much of the legend (Drye 2004a).

The *H.L. Hunley* crew's funeral was considered the final funeral of the Civil War. On 17 April 2004, over ten thousand people including Clive Cussler, foreign dignitaries, and some of the decedents of the crew, attended the memorial and procession for the eight crew men (Drye 2004b). About six thousand reenactors were dressed in Civil War uniforms and around four thousand people were dressed in mid-1800s civilian garb (Drye 2004b). The women wore hoop skirts and veils. The men were dressed in clothing of the period, including the reenactors dressed in both Confederate grey and Union blue (New Service Combined 2004). Color guards in modern uniforms from all five branches of military were present (Drye 2004b). The funeral began at the Charleston Battery with the coffins placed in a semi-circle, each draped with a Confederate flag. This was not intended as a political stance, but a way for the funeral committee to honor the military traditions at the time of the wreck. The goal was to have the funeral be similar as possible to how a funeral would have been conducted if they had been buried in 1864 when the crew died. The funeral then continued and the crew was paraded through historic

downtown Charleston for four and a half miles. The remains of the eight members of the crew were transported in horse drawn caisson and interred in Magnolia Cemetery (Drye 2004b).



FIGURE 3.1. The final *H.L. Hunley* crew's burial site (Photo by author 2017).

Magnolia Cemetery is a located next to the Cooper River about halfway between downtown Charleston and the WLCC. The cemetery was founded in the 19th century, and filled with graves predating the Civil War through WWII. Although once the graves are located it is obvious, however, the location of the three crews is not apparent initially. The signage in the cemetery is lacking, leading visitors to wonder through all the narrow, winding paths to find the grave site. The graves for crew members have Confederate battle flags and CSA, Confederate States of America, iron cross foot markers (See Figure 3.1, Appendix G).

This vessel represents an example of a fully excavated site actively undergoing conservation, research, and documentation. Located at the WLCC, the public's interaction with the vessel and associated artifacts is limited and has allowed for the vessel to be conserved,

preserving the history (Mardikian et al. 2006, 13-15). The US Naval Historical Center is the federal division responsible for the vessel; however, the management is left to the Hunley Commission (Friends of the Hunley 2014a). *H.L. Hunley* was listed on the National Register of Historic Places as of 1978 (Department of the Interior 1978).

USS *Arizona*



FIGURE. 3.2. USS *Arizona* wreckage days after the attack (United States Navy 1941c)

The sinking of the battleship USS *Arizona* was one of the most catastrophic losses for the US Navy during WWII (Russell et al. 2004:54). The damage from which can be seen in Figure 3.2. The National Historic Landmark USS *Arizona* and its associated memorial is located at Pearl Harbor, a port located on the Hawaiian island of Oahu (Daniel 2006:3). In a single year, it is roughly estimated that one and a half million people from around the world visit the memorial

while on vacation in Hawaii. USS *Arizona* is the final resting place for over a thousand sailors and Marines who lost their lives aboard the vessel (Russell et al. 2004:54). Today, the site stands as a memorial for individuals to mourn the loss of life aboard the battleship; as well as celebrating the United States' eventual triumph of the Allied powers over the Axis (Russell et al. 2004:54).

Above the vessel floats the USS Arizona Memorial's structure, referred to as USAR, from which the visitors can gaze at the wreckage and pay their respects to the fallen men aboard. NPS is responsible for managing one of America's more imposing and somber cultural resources (National Parks Service Submerged Resources Center 2008:2). The management of the site includes balancing activities with emotions, respecting the past while looking forward and protecting the future. The NPS must also allow visitors to mourn individually and independently while still maintaining the integrity of the site for the millions of people who visit and for those who will forever remain entombed aboard the vessel (National Parks Service 1996:4).

The process of establishing USAR began in 1958 with the creation of the park (Daniel 2006:8). In 1980, NPS gained control of the management of the vessel and memorial from the US Navy. This acquisition is unique because the areas NPS manages are normally decided by US Congress or through an executive order issued by the President of the United States. This site is one of the few exceptions to that standard. The US Navy officially owns the property on which the USAR stands and the surrounding water; however, NPS controls the management of the USAR, which includes the vessel USS *Arizona*, the memorial located above the vessel, and the Welcome Center through which the visitors enter the memorial. NPS also owns a maintenance vessel to work on the site, however, all the ferries for the memorial are exclusively owned, run, and managed by the US Navy. The NPS oversees the conservation of the battleship. Although

this is not blatantly stated by either party, a precedent has been set. The US Navy is still technically the owner, though the NPS has become the unofficial manager of the sites along with being the official manager of the Memorial (National Parks Service 1996:1).

A unique circumstance for this case study in comparison with others is that the remains aboard the vessel will not be removed. Remains were previously removed from the vessel soon after the sinking of the ship but this was stopped after salvage aiding the war effort ended. Additionally, ashes of the remains of survivors have been and will continue to be added to the vessel. A sizable portion of the of the original remains were incinerated during the explosion that caused the vessel to sink on 7 December 1941. The explosion and ensuing fires, which burned for over two days, cremated a large portion of the remains aboard the vessel. Of the 1,177 sailors and marines killed on USS *Arizona*, only 107 were positively identified. Identification and recovery was not possible for many service members (see Figure 3.3). Some remains were recovered but could not be identified because of the tissue destruction, and remains were left unrecovered on the aft portion of the vessel because of the unlikelihood of being identified. The remains that were removed from the vessel were initially moved into a mass grave. After WWII, the unidentifiable remains were reinterred in National Memorial Cemetery of the Pacific in 1949 (National Parks Service 2018a). This, however, was not the case for all the remains. There are the remains of a few victims of USS *Arizona*'s sinking at Arlington National Cemetery. The remains of Francis Jerome Morse and Norman Roi Morse, two brothers from Colorado serving aboard USS *Arizona*, were buried at Arlington. The application for Arlington National Cemetery Explorer did not have detailed information on either brother, and there is no interment date listed (Arlington National Cemetery 2017b).

Presently, the internment of the survivors of the attack on Pearl Harbor, specifically those



FIGURE 3.3. Man returning from USS *Arizona* turret post-wrecking event in 1942 (United States Navy 1942)

aboard USS *Arizona*, is becoming more common. Frequently, veterans of Pearl Harbor wish to be cremated and placed aboard the vessel to rest with the crew who were not fortunate enough to make it off the vessel alive. The option to have an urn with the veteran's remains placed inside the vessel is only available to those who were assigned to USS *Arizona* before the time of the attack and who are willing to be cremated. The USS *Arizona* Reunion and Survivor Association regulates who is eligible to be placed on the vessel. Pearl Harbor survivors who were assigned to other vessels are not eligible to be placed on USS *Arizona* but are able to have their remains

scattered in the location of where their assigned vessel was in the harbor during the attack. The cremated remains are placed near the gun turret four by NPS divers after the funeral ceremony. The urn of the survivor is carried from the USAR to the dock area where the NPS divers are located. The divers are then presented with the urn; after which, they descend and place it into a slot underwater where the urn slides into the ship (National Parks Service 2018a).

Navy Chief Petty Officer Stanley M. Teslow was the first of the crew to return to the vessel for burial in 1982. As of February 2016, thirty-nine members of the crew have followed in his steps and were interred in the battleship. The funeral service held for those interred is a two-bell ceremony by the Fleet Reserve Association. This ceremony includes a rifle salute from the US Navy or Marine Corps, a two-bell ceremony from the Fleet Reserve Association, a rifle salute from the US Navy or Marine Corps, and a benediction with the echo of Taps being played across the harbor. The services are conducted inside the memorial and consist of an invocation, funeral ceremony, and flag presentation to the family. The ceremonies are hosted jointly by both the NPS and the US Navy (National Parks Service 2018a).

The USS *Arizona* was selected for this study because it is relatively isolated from direct public interaction and is impenetrable by humans because of the sanctity of the wreckage. It is managed and maintained by NPS, though it is still owned by the US Navy. Only NPS or U.S. Navy personnel may dive on the USS *Arizona* vessel itself to monitor the deterioration of the hull structure (Russell and Murphy 2003:1-3). Diving on the wreck is strictly regulated for the safety of the divers and the preservation of the site as a war grave. The only objects allowed to enter the wreck, other than the urns mentioned above, are Remotely Operated Vehicles, or ROVs. The ROVs are used to monitor and document the vessel. This regulation was created out of respect for the naval personnel who perished aboard the vessel during its catastrophic sinking

(Russell and Murphy 2003:8). Recreational diving or swimming is prohibited in the water surrounding the wreckage. The public may only interact with vessel through the USAR, which was created and maintained by the NPS and located on the water above the vessel itself (National Parks Service 1996:3).

This USS *Arizona* is a case study of a vessel that contains human remains and is actively monitored by cultural heritage professionals, but not actively undergoing conservation. Protocols have been established to protect the memory of the site as a memorial for those who perished aboard. Excavation and conservation would interfere with the memory by disturbing the remains in the vessel, which was deemed more important than forensic investigation (Murphy and Russell 2008:12-13). This vessel was listed on the NRHP on 5 May 1989 (Richert 2010:9).

HMT *Bedfordshire*

HMT *Bedfordshire*, a former fishing trawler, was turned into a Royal Naval vessel and sunk in 1942 off the coast of North Carolina outside of state jurisdictional waters, leaving the management to the federal government. In most instances, a foreign war vessel would fall under the purview of their homeland's government; however, HMT *Bedfordshire* has become a unique example of a transfer of management authority but not ownership. On 7 January 2016, the power of management has been reassigned from the British to the United States (National Oceanic and Atmospheric Administration 2016). Through a memorandum of understanding between NOAA and the United Kingdom's Royal Navy, NOAA has become responsible for the management of the wreck site. The shift in management responsibility is recent, thus little is known regarding the actual management of the ship. Presently, NOAA has a webpage dedicated to the ship and wreck site. It includes basic information about the wreck, and a dive slate created by NOAA with

a map and informational guide that divers can use underwater. The wreck's location is close to Ocracoke Island and lies at 105 feet below the surface, allowing it to be accessible to Advanced Open Water divers (Monitor National Marine Sanctuary 2016a). The remains of the six men who washed ashore were buried: four in the British Cemetery on Ocracoke Island, one in a Hatteras cemetery, and one in Oak Grove Baptist Cemetery at Creeds, Virginia. The remainder of the crew is considered to be lost at sea (Hickam 2014:208).

The British Cemetery on Ocracoke Island is managed by the United States' Coast Guard stationed on Hatteras (Figure 3.4 and Figure 3.5). This cemetery is the primary cemetery associated with the wreck. This cemetery has interesting and specific management approaches. Although the US Coast Guard is responsible for replacing the plaques on the headstones located in the cemetery, it is not owned by the state or federal government. Rather, the cemetery is considered British property because it contains British war graves. Ocracoke Gardening Center, a local gardening center, maintains the plants surrounding the cemetery. Visitors can leave coins near the graves, which is a military tradition. These coins are then collected by the cemetery's manager, Crystal Canterbury, and volunteers, and are used to assist with paying for the annual reception honoring the sailors held in May (Crystal Canterbury 2017, elec. comm.). (See Appendix I).

The annual ceremony and reception is a relatively large event. The first ceremony was held in 1942 and occurs on the closest Saturday to the anniversary of the sinking of HMT *Bedfordshire* at the British Cemetery on the island. This year the ceremony was, held on 12 May 2017, was attended by over 100 people, marking approximately the 75th anniversary of the vessel's sinking. The ceremony demonstrates the agreement between the British and the United

States for the management of the graves and respect of the men that were aboard HMT *Bedfordshire* when the vessel sank.



FIGURE 3.4. Photo of memorial near cemetery, including British cross headstones (Photo by author 2017).



FIGURE 3.5. Photo of entire cemetery area (Photo by author 2017).



FIGURE 3.6. Photo of additional display wreaths located on the memorial (Photo by author 2017).

The 2017 ceremony had different wreaths: one with the flag of Great Britain, one with the Canadian flag, one with the United States' flag, and one from the Royal Naval Patrol Service. More wreaths were placed through the cemetery, see in Figure 3.6. In 2017, the son of one of the sailors, Commander Tom Cunningham, spoke about his father and family. The wreaths were sprinkled with blended water from the Hatteras Inlet and Bedfordshire, England to represent sea spray. At the end of the ceremony, there was a 21-gun salute and a benediction from a minister. After the ceremony, there was bagpipe music and anyone was welcome to lay wreaths, pay respects, and attend a reception held in town for those who attended the ceremony (personal communication, 2017).

Though presently there are no major management plans released to the public about the wreck site, it is clear that the crew is respected and the disassociated remains of the crew are well managed. HMT *Bedfordshire* adds a unique comparison because it is the only foreign vessel. The vessel is the property of the British government; however, because of the location of the wreck,

the British government transferred the management to the United States Federal Government. NOAA has created a dive slate (Figure 3.7 and Figure 3.8) for the vessel with a site plan and the vessel has been the topic of academic research, but if there are human remains on board the vessel they are at risk (Monitor National Marine Sanctuary 2017). When discussing the aspect of the human remains associated with the vessel, it allows this case study to add a different approach to management. The vessel's wreckage was listed on the NRHP in 2015 (North Carolina State Historic Preservation Office 2016).

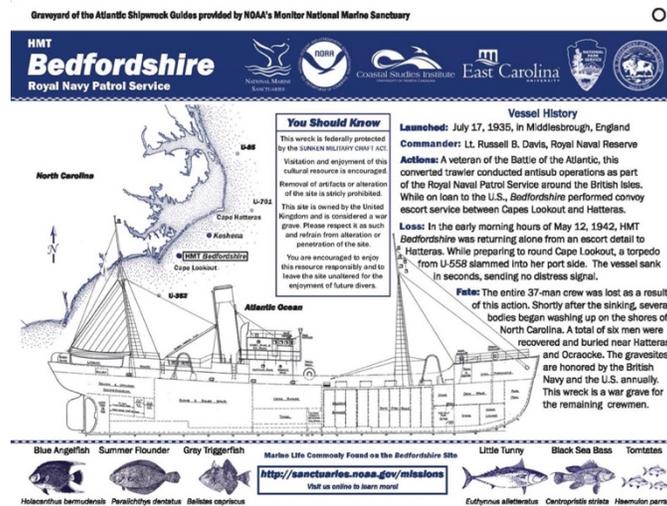


FIGURE 3.7. Example of a dive slate side 1 (Monitor National Marine Sanctuary 2017a)

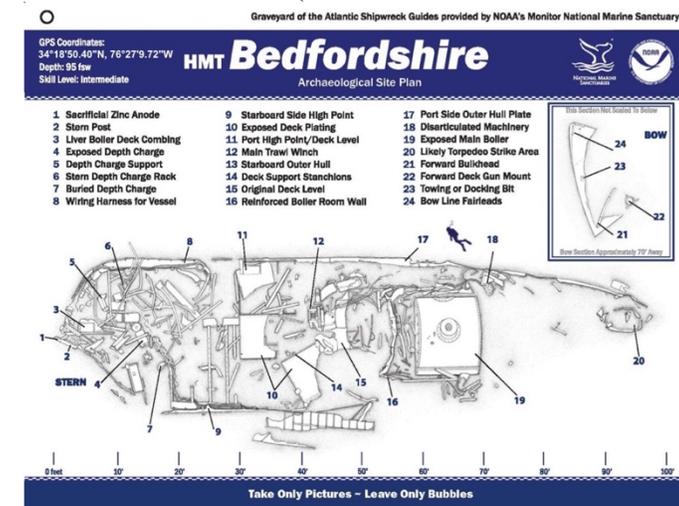


FIGURE 3.8. Example of a dive slate side 2 (Monitor National Marine Sanctuary 2017a)

SS Caribsea

SS Caribsea is a wreck site located roughly ten miles off the coast of North Carolina in federal waters. Even though the wreck is in federal waters, the site is relatively close to shore compared to the extent of water that the federal government controls. Since the wreck is in close proximity to shore, it is a common dive site among SCUBA divers visiting the Outer Banks of North Carolina.

Though the wreck is a casualty of war associated with WWII, it is not protected under the NRHP WWII Battle of the Atlantic nominations or fall under the jurisdiction of SMCA (William Sassorossi 2017, elec. comm.). SMCA specifically states a sunken military craft is “any sunken warship, naval auxiliary or other vessel that was owned or operated by a government on military noncommercial service when it sank” (United States Congress 2004). *SS Caribsea* sank while transporting manganese, a necessary component for steel production. Though the freight was a important to the war effort, the voyage was technically for profit and causing management issues for itself and other commercial, merchant marine vessels sunk during the Battle of the Atlantic (Cannon 2004).

Though not falling under the federal purview of wreck site management, some managerial activities have occurred. First, after the war, the US Navy may have performed wire dragging and depth charging on vessels around the United States including those in the Cape Lookout area (Gentile 1992:40-41). Though there is no direct evidence of *SS Caribsea* having been wire dragged or depth charged, it is evident that NOAA participated in a wire dragging survey operation. At the end of the report, there is a chart that proves that when compared to a modern map, the survey area and the wreck site are very close to overlapping. Although the report may not indicate the wire dragging of *SS Caribsea*, it confirms the wreck’s location as

being an area of interests for wire dragging surveys (National Oceanic and Atmospheric Administration 1955). According to a previous study performed by former Master's student at ECU, the wreckage indicated the use of explosives. The survey did not find any direct evidence in the historic record either, but may have found physical evidence of this event occurring, corroborating the popular belief that the vessel was subject to alterations for the ease of shipping. Though the vessel was sunk by a torpedo, a researcher hypothesized that was post depositional damage from a depth charge to decrease the height of the vessel in the water column, aiding clearing shipping lanes from wartime wreckage (Fox 2015:133). The second managerial action on SS *Caribsea* is the survey conducted in early summer 2014. During this survey, NOAA and the Battle of the Atlantic Research and Expedition Group (BAREG) performed an archaeological survey on the wreck site. The wreck site was used for BAREG diver's training the Nautical Archaeology Society (NAS) underwater archaeology course. The project was funded and

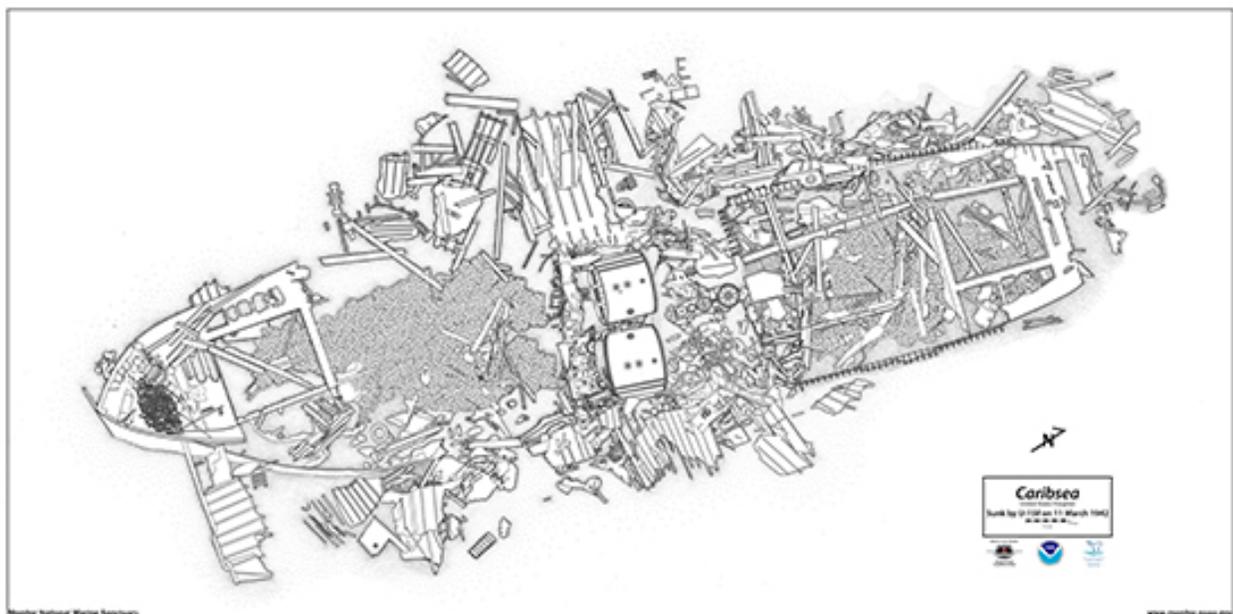


FIGURE 3.9. NOAA/BAREG site map of SS *Caribsea* wrecksite (Monitor National Marine Sanctuary 2016b)

coordinated by BAREG, but guided by NOAA and ECU (Fox 2015:83-84). Though it was privately funded and used to gain access to research for an ECU Master's thesis, surveys such as this are still managerial actions without the wreck clearly falling under a manager's influence. This research created a scientific baseline, the site map in Figure 3.9, from which a future site manager can compare external degradation.

A point of significance about this vessel is that the captain survived and wrote about the life of commercial trade off the East Coast during the Battle of the Atlantic (Manolis 1949:87). The lack of direct management has created the potential for issues, because it is one of two case studies in which the public can freely interact with the wreck site, but it is the only one not regularly monitored. It is archaeological practice to not recover items off wrecks without a reason and adequate documentation, however, this ethics practice is not required of recreational divers. The risk of salvaging divers is relatively small; many are educated through their certification courses and through courses such as the archaeological introductory course offered by NAS to "leave only bubbles" (Monitor National Marine Sanctuary 2017a; Fox 2015:83-84). The depth of the wreck site is eighty to ninety feet, generally limiting the public to those divers with Advanced Open Water certification or higher (Gentile 1992:40-43). This means without strict, enforceable rules and regulations the public can have a large and lasting effect on the site. This possesses an interesting management issue when compared to the other case studies, because the management is less structured.

Conclusion

Though each case study has met the criteria the author set for case studies of this study, it is clear that management is by no means uniform. Each site has provided a different perspective

on management and significance. Some sites are deemed necessary to move, while decisions about other are left to the public. Some sites are heavily managed, while others are left to the mercy of the public. Some sites are accessible to the public, while others are not. Some sites are known to be a grave site and respected accordingly, while others are less publicized making the grave site seemingly less important. These disparities are reflected through the study of management decisions.

CHAPTER FOUR: PROFESSIONAL PRACTICES

When assessing an archaeological project, adherence to professional standards is one of the most significant principles to legitimize an archaeological project. Most professional archaeological organizations, such as the Archaeological Institute of America (AIA), Register of Professional Archaeologists (RPA), and Society for Historical Archaeology (SHA), have distinct sets of standards that define professionalism. Individuals and the projects on which they are working must first meet the “professional” qualification criteria, or best practices, as outlined by archaeologists’ organizations. After having been deemed professional, the managing organizations then frequently take varying approaches to the management of the archeological site and any human remains located at the site. Whether remains should be studied is a widely-debated topic as is discussed in Chapter 1. The professional organizations’ standards summarized below represent the array of best practice guidelines to which an archaeologist might ascribe. The approaches vary from archaeologically-based to monument and museum-based. They vary from associated national and international approaches. Below is the summary of organization’s professional criteria that a project should ascribe to and stances on human remains management that should guide the management practices of these projects.

General Professional Standards

A basic understand of what is professional is necessary before delving into the specifics of professionalism regarding human remains. Below is a description of three professional archaeological organizations’ ethics and guide to professionalism. These standards of professionalism are the basis from which archaeologist assess if actions are professional.

Archaeological Institute of America (AIA)

According to the AIA, there are four major principles in the archaeological code of standards. The first, “Responsibility to the Archaeological Record,” means that the purpose for the research and the potential consequences it may cause must be considered; that minimal impact on the site should be a high priority; and that excavation should be the last option for research. Trained professionals must supervise the research and prearrange appropriate long-term storage for materials and records. Research should be made public in a timely fashion, or at least available to others if not published promptly. Before beginning the project, a professional will prearrange specific plans and funds for conservation, research, and publication (Archaeological Institute of American 2008:1-2).

The second principle for professionalism is the “Responsibilities to the Public.” Archaeological materials represent all humankind’s heritage, thus making it important to share that heritage with the public, especially in the local communities. Accessibility to the public may transpire through education and outreach opportunities: as the result of an environmental impact study on the local community and the research’s potential effects before the research begins, and maintaining transparency and partnership with the local community and associated authorities. Archaeologists should be respectful of the local communities and acknowledge the concerns of the local community and attempt to find a mutually beneficial solution to any issues that may arise (Archaeological Institute of American 2008 2).

The third principle is the “Responsibility to Colleagues.” Archaeologists should be considerate and respectful of their colleagues. This responsibility means a fair, amicable, and safe work environment and allowing for colleagues to publish on information they researched and using discretion in sensitive areas. This does not mean scholars must have access to

unpublished analytical information before researchers can publish on it themselves. A researcher must prepare reports on the information learned through the project in a timely fashion (Archaeological Institute of American 2008 2-3).

The fourth and final principle is a “Responsibility to the Discipline.” Research and publications should adhere to the AIA Code of Ethics; a researcher will not participate in projects with the sole goal of financial gain, and reports should not be plagiarized or contain falsified information (Archaeological Institute of American 2008:Pg 3).

Register of Professional Archaeologists (RPA)

RPA has three major principles from which they assess professionalism. The first is “the Archaeologist’s Responsibility to the Public.” This means research must be presented to the public in a reasonable fashion; should bolster conservation efforts; consider the priorities of the local communities; and support and participate in the 1970 UNESCO convention illicit trade of cultural material. The archaeologist will not intentionally participate in illegal activities, report on activities on which they are not well versed, be dishonest in their research, perform research for which he or she is unqualified, and knowingly be involved in an excavation for commercial gain (Register for Professional Archaeologists 2009:1).

The second principle is “the Archaeologist’s Responsibility to Colleagues, Employees, and Students.” This means that one should receive appropriate recognition for their work; that professionals should maintain current knowledge within the field that there should be a timely release of accurate information; that professionals communicate with colleagues, and report violations of ethics. Professionals will not plagiarize, undertake unprofessional research, and refuse to disseminate information (Register for Professional Archaeologists 2009:2-3).

The final RPA principle is “the Archaeologist’s Responsibility to Employers and Clients.” Professionals should not perform activities for clients that are unethical, accept projects beyond the scope of their capabilities, or release confidential information (Register for Professional Archaeologists 2009:3).

Society for Historical Archaeology (SHA)

SHA, a popular organization whose membership includes many underwater archaeologists, has seven foundational principles listed in the “Ethics and Principles” document for the society which echo those standards discussed of the AIA and RPA. This includes adhering to the ethical principles in speech, written form, and teaching; insistence on sustainable preservation; dispersion of information efficiently; compilation of scientifically sound information; the protection of individual’s rights; that one should not participate in archaeology for commercial exploitation; and that one should publicize their findings (Society for Historical Archaeology 2003).

Professional Organization’s Stance on Human Remains

When organizing an archaeological project, the principal investigator, or archaeologist organizing the project, must consider many different aspects. Objectives, academic research questions, legislation, and location are a few of the many factors to consider when planning a project. Other concerns include what the researcher may discover while surveying and excavating sites which includes everything from the conservation for excavated objects and the potential of discovering human remains. If any human remains are found, an archaeologist must follow legislation and professional guidelines. Below are summaries of the principles of highly

regarded international, American, and British professional organizations concerning the excavation, curation, research, and display of human remains. These are the principles that the managers of the case studies would be expected to follow because of the high risk of discovering human remains on site.

United Nations Educational, Scientific and Cultural Organization (UNESCO)

Countries must protect their underwater cultural heritage through appropriate measures, and human remains, even in submerged locations, must be properly treated. (United Nations Educational, Scientific and Cultural Organization 2001:1-2). “Underwater Cultural Heritage” is defined by UNESCO as “all traces of human existence having a cultural, historical, or archaeological character” submerged for over 100 years, including human remains (United Nations Educational, Scientific and Cultural Organization 2001:2). Rule 5, a foundational standard emerging from the Annex of the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage, states that everything should be done to avoid disrupting sites with human remains or venerated by a culture (United Nations Educational, Scientific and Cultural Organization 2001:16

Rule 5 simply means that one should be considerate of the feelings and emotions that sites might evoke in another individual. When planning a project that may encounter such feelings, one should be responsible and reasonable to the individual or individuals who might be emotionally linked to the area or objects discovered. (United Nations Educational, Scientific and Cultural Organization 2001:16). Though it does not specifically mention war graves, the implication is that they are included (United Nations Educational, Scientific and Cultural Organization 2017). If disturbing venerated sites or graves is unnecessary, then the project

should not disturb the remains. The current standard is that *in situ* preservation is the ideal for archaeologists (United Nations Educational, Scientific and Cultural Organization 2001:1). After the discovery of remains, archaeologists are likely “required by ethics, law, and cultural convention to refrain from making the discovery public” until such a time that it is appropriately researched and managed (Maarveld et al. 2013:317).

The United States is not officially one of the 58 countries to have ratified the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage presently (UNESCO 2018). This, however, does not mean it has not been taken into consideration. The United States had problems with specific aspects of the convention, which did not allow for ratification. NOAA has since followed the standards of the convention, without the necessity of ratification (Varmer et al 2010:140).

Society for Historical Archaeology’s Advisory Council on Underwater Archaeology

SHA has a council devoted to underwater archaeology, the Advisory Council on Underwater Archaeology. This council has created guidelines for professional archaeologists that address human remains. Archaeologists may come across sites containing human remains. The remains can be curated if the management is respectful. Since traditions vary widely, the remains and associated management should be handled on an individual basis following existing legislation and cultural traditions (Society for Historical Archaeology 1993).

United States’ Department of the Interior’s National Parks Service (NPS)

When developing parks, historic burial areas and graves might be discovered, “identified, evaluated, and protected” (National Parks Service 2006:5.3.4). It should be attempted to bypass

the grave sites when planning and managing parks. Identified graves sites should not be disturbed unless it is necessary to prevent future destruction. NPS will discuss the grave site with associated communities to ensure that there is proper identification together with responsible and ethical management strategies. Remains may be reinterred in the same park after documentation, but will not be placed on display, if the remains belong to an Indigenous community. The community must approve of the reinterment. If associated cultural community permits, non-indigenous human remain may be analyzed through various methods including: the display of photographs, destructive analysis, and publication on the remains. The study of the remains will only occur if there are no other methods for the information to be collected and the data is important to the public (National Parks Service 2006:5.3.4).

Society for American Archaeology

Another prominent professional organization, the Society for American Archaeology has specific guidelines regarding human remains. Human remains can provide researchers with valuable biological and cultural information about the community to which they belong. Many scientific fields greatly benefit from the information gained from researching human remains. Taking this into consideration, studying the remains must be respectful of the culture from which they originated which may conflict with the course of action preferred to be taken by many scientists. Regardless of cultural origination, all human skeletal remains must be treated with respect, conserved, and studied for justifiable reasons other than the required studies associated with conservation. Reinterment will not occur without direction from the community associated with the remains. Debated management practices must be applied to each issue on an individual basis while considering the scientific importance of the remains, and cultural or religious

characteristics associated with the community and assessing the legitimacy of the claims from the community to the remains. If the party managing the remains identifies a descendant, they must contact the descendant for the determination of reburial and other management practices. Academics should maintain an open dialogue between cultural communities and the managerial party. The management of human remains can be contentious and needs to be assessed, making the SAA opposed to a unified, national approach to the management of remains because it could not be exhaustive enough to be beneficial (Society for American Archaeology 2018).

International Council of Museums

When dealing with the management of human remains in a museum setting, there are guidelines to which museums should adhere. Research must avoid unnecessary contact with human remains. This follows the sentiment of many of the other professional organizations; however, it was not expanded upon much more than this (International Council of Museums 2013:2).

United Kingdom's Department for Culture, Media and Sport

Human remains contain great potential for expanding scientific knowledge and the understanding of humankind through academic research and display. When the claimant requests the remains, the British Museum must consider the present educational value and the value for future research, as a teaching aid, and display. This value must be assessed by a specialist. If considered valuable, the worth might supersede the requests of the descendants or communities. After a community claims the remains, ideally the community will compromise with the museum. "For example, it may be possible that remains would stay in the museum, but a

claimant group would gain a level of control over their future use” (Department for Culture, Media and Sport 2005:28). After the remains have been thoroughly researched, the museum will create a summary of the information and consider the options available for the remains. A transparent conversation should take place with the community claiming the remains using the data collected. Using ethical and legal aid, the museum will assess the different options but the data collected from the remains is the main determining factor (Department for Culture, Media and Sport 2005:28-29).

International Council on Monuments and Sites

Human remains and sensitive items should only enter a collection if they can be appropriately cared for and preserved, meeting both professional standards and those of the associated community and culture (International Council on Monuments and Sites 1996:3). Additionally, research on human remains and the display of such remains and sensitive objects should meet professional, ethical standards regarding the culture from which the remains originated (International Council on Monuments and Sites 1996:7-8). If a community asks for the removal of remains from a display, the request should be handled carefully, quickly, and respectfully (International Council on Monuments and Sites 1996:8).

Summary

The archaeological standard for handling human remains has become more uniform since the 2001 UNESCO Convention which set forth that everything should be done to avoid disrupting sites with human remains or venerated by a culture (United Nations Educational, Scientific and Cultural Organization 2001:16). According to Varmer the professional trend has

been moving towards the treatment of wrecks as a “public resource” that can be preserved *in situ* if there is no direct hazard for the vessel (Varmer 2014:17V). If any excavation should occur, it should follow the standards stated above. The locations of the wrecks chosen as case studies were known before that standardization; however, many managers have followed this professional trend.

Professionalism and Ethics applied to Each Case Studies

Professionalism, regardless of the general application, is a standard that most projects strive to meet. Professionalism regarding human remains varies between each organization and is thus highly dependent upon the management system to which the organization ascribes. Professionalism in this document was assessed using a set of characteristics based on the above professional guidelines. Each of the case studies was assessed on professionalism through scientific data collection, accessibility of information, and management styles that follow general professional ethics, including avoiding disturbing the site unless deemed necessary.

USS Monitor

The excavation of *USS Monitor* occurred because of the increased deterioration of the hull. A large portion of the hull is *in situ*; however, the *in situ* preservation in the area has not created a homeostatic environment, so degradation remains a large issue. Removing artifacts and significant features, such as the turret, allows for the site with a relatively rapid disintegration process to be preserved for the American public. This excavation meets the 2001 UNESCO professional standards of not disturbing a site unless necessary. A partial excavation was necessary to preserve some of the information before losing it to the rate of degradation;

however, full excavation is not necessary. The data collected during the excavation of artifacts was not for a financial profit but to protect an American treasure. Trained professionals collected the data and disseminated it efficiently. Additionally, the data is still being collected by archaeologists on site, in the museum, and by conservators in the laboratory, following the same professional standards through publications and accessibility. The site is well-documented and managers have accounted for future conservation plans (National Oceanic and Atmospheric Administration 1998:3-5 and Monitor National Marine Sanctuary 2013:35).

The USS *Monitor* Center, run by the Mariners' Museum in Newport News, VA, is highly accessible. The conservation lab has dedicated social media access, webcams on significant artifacts, and a well-maintained webpage that provides a significant amount of information to those interested in USS *Monitor* (The USS *Monitor* Center 2018b). The Mariners' Museum also allows for increased accessibility because it allows the public to tour the museum which houses USS *Monitor* artifacts. The reasonable admission price and extensive times of operation of the museum allow for many people to access it (The Mariners' Museum 2018). Significant portions of the archaeology are also accessible through the NOAA website. This webpage is up to date on the archaeological research and provides considerable amounts of information, especially about site management and publications (Monitor National Marine Sanctuary 2017b).

H.L. Hunley

H.L. Hunley's discovery was significant for the history of naval warfare. The vessel, an important technological development for the Civil War, was excavated because of the *in situ* location of the wreck site. The site, though reasonably protected from natural elements shown through the fair condition after a century and a half-submerged in the sediment off the coast of

Charleston, SC, was feared to be a potential looting site (Neyland and Brown 2016:1). The threat that information would be lost due to its accessibility was too high, thus meeting the UNESCO 2001 standard that disturbing the site was a necessity to actively preserve the information of a significant vessel in American history. The site was well-documented and the manager accounted for future conservation plans. The *H.L. Hunley* vessel itself is presently undergoing conservation at an established lab with trained conservators and archaeologists studying the vessel.

Like the USS *Monitor* Center, WLCC also has webcams for the public to access to witness the conservation of the vessel in real time whenever they want. Tours of the conservation lab are reasonably priced; however, the tours are only offered on the weekend (Friends of the Hunley 2018a). This makes the vessel accessible but not totally accessible. The main website for *H.L. Hunley* presented by the Friends of the Hunley contains good, basic information about the vessel, such as brief historical summaries of the vessel and all three crews. However, the website either needs an update, or the organization lacks transparency in its communication. The last press release listed on the webpage was in 2015, which was a regular posting until 2015 (Friends of the *Hunley* 2018b). Clemson University's campus in Charleston, SC runs the WLCC Lab, and the Clemson webpage dedicated to those at WLCC is where you may access the more academic information. The generic project page on the Clemson webpage has information, but most of the information comes from the pages associated with the individuals working at the lab. A researcher must know the employees associated with the project or search through each employee's description, to then locate any published information. Each employee has a list of articles or projects published (Clemson University 2018). Locating this, however, will not allow

researchers access to the articles, it simply provides the listings that can be used for bibliographic information and to let researchers know what is available.

For researching the management of the vessel, there is a lack of accessible, published information. Of the 12 articles about *H.L. Hunley* published since 2015 selected for my statistical survey (process described in Chapter 5) only three selected were directly associated with the project and three were associated with a Duke University doctoral candidate's dissertation based on *H.L. Hunley's* potential sinking scenarios. For this research, the lack of information posed an issue because, other than the recently released 2016 Recovery Operation manuals, most management documents regarding the site directly were inaccessible. Most the initial management information was gleaned through contacting the project, however, this had its limitations as well. Initially, none of the archaeologist responded; however, a conservator who had been a long-term participant in the project, Paul Mardikian, provided the author with information. The conservation reports could answer much of the management questions purposed. It took a lengthy amount of time to gain access to archaeological management documents because of an initial lack of response from archaeologists initially, however, once I was in contact with the archaeologists directly, Dr. Brent Fortenberry and Ms. Emily Schwalbe were very willing to help the author gain access to the needed materials and were invaluable resources.

USS Arizona

All surveys around *USS Arizona* must follow professional protocols set up by NPS. In the early 1980s, NPS staff had to set precedents for surveying the vessel, which had previously remained essentially un-surveyed. Many people believed all was known about the sinking of the

vessel, making a survey pointless and in poor taste because it was a grave site. It took time for NPS to develop a scientifically based research plan and can execute the survey that would confirm, challenge, or clarify stories heard about the sinking of the vessel (Lenihan et al. 2001:158-160). After the initial surveys, the site managers created a set of objectives for the short and long-term preservation of the wreck site (Lenihan et al. 2001:167). Between 1941 and 1943, some remains and objects were removed from site. This excavation is not subject to the professional standards because it predates the standards, the wreck was not an archaeological site at the time, and the salvage operation by the US Navy was done to further the war effort that this incident instigated (National Parks Service 1996:1). Today, following scientific protocols and not allowing an individual to enter the vessel, ROV's have become necessary to continue thorough research (Russell and Murphy 2003:8).

The USAR memorial is very accessible. Open daily from 0700 to 1700 except for pre-specified holidays, the memorial is also free. To visit the memorial one should obtain a ticket in advance. The ticket ordered is for a specified time, not as a proof of purchase. This allows for better crowd control. The location of memorial restricts accessibility because of the physical isolation of the Hawaiian Islands, however, is as accessible as physically possible while still allowing for crowd control and a serene environment. The memorial includes a visitor's center with the display of a movie before going to the site and the entire tour takes a little over an hour (National Parks Service 2018a).

The accessibility of the wreck of USS *Arizona* is a different matter. This wreck site is highly regulated. Diving on the wreck is limited and strictly regulated; this is for both the safety of divers because of the location in an active port and limited visibility and the safety of the vessel. Regulating the site increases the likelihood of longer preservation without additional

human contribution to the deterioration of environments. The preservation of the wreck is important because it is a war grave (Russell and Murphy 2003:8). Since this site is so well known, NPS has created a “Live Dive” (National Parks Service 2018b). Information regarding the management of the site is also accessible. Searching for in depth, detailed information does not require an association with an academic institution, allowing for transparency of management practices associated with the archaeology of USS *Arizona*. The site is well-documented and managers accounted for future preservation plans (Lenihan et al. 2001:75-89).

HMT Bedfordshire

As explained in Chapter 3, the management of HMT *Bedfordshire* is unique because it is a foreign vessel under the management of a US government agency. The transfer of management, but not ownership, is explained on the NOAA webpage dedicated to the vessel. It states that the agreement was created to follow the precedent of the 2001 UNESCO agreement on war graves (Monitor National Marine Sanctuary 2016a). The same website created and managed by NOAA links to the NRHP nomination form, where it is clear that professionals performed the scientific research. NOAA surveyed the site using minimally invasive practices (Marx and Hoyt 2015:15-17). Though not much management or archaeology has been performed on the site, all known actions meet the professional standards.

The NOAA webpage offers a great deal of information about the vessel and has released reports about the completed survey (National Marine Sanctuaries 2016, 2017). The wreck site is at an Advanced Open Water level of diving at 105 feet, thus making the wreck limited in accessibility. NOAA has combated the reduced accessibility of the wreck by creating a dive slate for those wishing to dive the wreck and for those who want to know what the wreck looks like

but are unable to access it (Monitor National Marine Sanctuary 2017a). The site is well documented, and managers are presently creating a comprehensive management plan (Monitor National Marine Sanctuary 2016a).

SS Caribsea

This wreck remains officially unmanaged by a known specific individual entity, company, or person. Though unmanaged, NOAA has taken an interest in the wreck itself because of the interesting and pertinent history to the Battle of the Atlantic research. NOAA has collected data scientifically and ethically by using the site as NAS training for Advanced Open Water divers and performing minimally invasive surveys that created a baseline for degradation studies (Fox 2015:83-84). The NOAA's webpage increased accessibility of the wreck because it provides researchers with substantial information, though researching the BAREG and NOAA 2014 assessment becomes more difficult (Monitor National Marine Sanctuary 2016b).

The diving community uses it for training dives as well, which is professional if the training is truly ethical and no unnecessary disturbance occurs. The issue arises when the site becomes negatively affected by the human factors, such as damage caused by inexperienced divers and looting. However, without a manager to enforce regulations or assess degradation, it is likely to continue until the site is in a dangerous condition. With similar accessibility issues to HMT *Bedfordshire*, *SS Caribsea* is at an Advanced Open Water diving depth. However, NOAA created a dive slate with the wreckage site plan as well, increasing the access to the wreck for recreational divers and the non-diving community. The site is well-documented by NOAA and BAREG but according to NOAA it is unmanaged, and no management plans are being created (Monitor National Marine Sanctuary 2016b).

Conclusion

Respect and transparency are two ways to assess a project's professionalism. If the project is direct with goals, clear and concise with motivations, aware of cultural implications that may be unearthed through the research, and respectful of cultural differences, a project can be considered professional. The respect of cultures and their wishes for the remains should supersede the wants and research of the archaeologists performing the research. The case studies in this project have all followed the UNESCO 2001 standard, which has become the professional archaeological standard since then. The remains have not been disturbed unless necessary because each site was or is a war grave. The sanctity of the war grave is more important than many research questions; however, the site may be justifiably disturbed if the managers predict through a study that the site is at risk, or no longer a viable location for the war grave to remain safe in the current state.

CHAPTER FIVE: RESULTS OF ANALYSES

To get a sense of the information about available site management plans, two assessments of the associated literature were developed. The first assessment (Assessment 1) was of the available management related documents. The second (Assessment 2) was an evaluation of the literature that was available to the public. From these two assessment styles a better idea of the management each case study undertook in the past, that is presently being undertaken, and future management goals, was gained while also assessing literature that the public might access.

Analysis One

The author performed a standardized literature assessment of the management documents to summarize the methodology performed in Analysis One. A total of 16 management documents were examined. Management documents were evaluated using a rubric designed specifically for this assessment. The analysis used professional standards for general site management and specifically for human remains as a significant characteristic. The documents were assessed, detailing different components such as noting specific legislation that influenced management, meeting professional archaeological standards, and motivations for management. This information was entered into a spreadsheet. The goal of this data collection is to assess the similarities between the case studies and see if the management decisions reflect similar or independent trends between case studies. A copy of the rubric is available in Appendix B and the spreadsheet with data is available in Appendix C.

Management plans are the cornerstone of protecting sites. The plans discuss the history, significance, previous management strategies, research, problematic areas, and preservation plans. This planning is done while also detailing present and future management strategies

including research, preservation, and general site management. Without a clear guide for management, unprofessional conduct and negligence may become an issue.

Since the plans are vital to proper site management, assessing the plans for commonalities was used to evaluate management strategies, to compare the sites' policies over the course of the management history, and to compare the management between different case studies. The management documents selected were readily available, located through research or provided by contacting the managers of the case studies.

To perform the assessment, a rubric was compiled (Appendix B). The rubric was designed from reading a comparable management plan associated with USS *Utah*. This site was chosen to create the rubric because it was managed differently from the five case studies selected while at the same time having many similar characteristics. USS *Utah* was a battleship located at Pearl Harbor on 7 December 1941 and was sunk during the attack on the base. It is the only other vessel that presently remains in the harbor after the attack. USS *Utah*, though located near USS *Arizona* and similarly significant, is not managed in the same way. USS *Utah* fits within the spectrum of case studies because it is associated with a significant event but is relatively inaccessible. Visitors must prearrange plans with the US Navy to access the memorial because, though only a mile away from the NPS managed USAR, the site is on a military base (Lenihan and Murphy 2001: 100-101). The significance mixed with inaccessibility and relative ambiguity of the vessel allowed for it to represent an aspect from almost each of the case studies, making it uniquely fitted to provide a template for the rubric. The rubric was designed to ascertain the main characteristics that would be used for comparison. It was then tested and modified slightly while using it on the USS *Utah* management document.

The 15 item rubric, Appendix B, began with the data collector recording the necessary bibliographic information and then addressed questions which includes: the topic of the article; whether management is addressed; the aspects of management; the motivations behind management decisions; the management strategies previously undertaken; the management issues, specifically human remains; the purposed solutions; the author; the audience; the specific legislations; the management mandates; the minor challenges discussed; the archaeological methods; the presences of photographic evidence; the provenience for remains; the site plan; whether or not the vessel had been surveyed; whether or not the article was persuasive; and the history of the site.

Information would only be recorded if stated. The author grouped specific legislation, management mandates, and previous management strategies because these characteristics dictate or set precedence for the decisions made. Data on secondary characteristics, such as site visibility and accessibility, influence management tactics also was collected. When discussing management plans, data on basic archaeological assessments, such as a survey, would be required to create plans. Through these categories, different management strategies could be isolated. The data was entered with specific page numbers for easy citation, but then the answers were summarized and put in a spreadsheet for ease of comparison. These data were then compared and outlined below.

Written by Manger

Of the 16 management documents assessed, four focused on *H.L. Hunley*, two on *HMT Bedfordshire*, one on *SS Caribsea*, four on *USS Arizona*, and five on *USS Monitor*. All were written by a type of site manager, including the managers of the wreck site, those associated with

the management of graves, or the managers and third-party organizations providing management recommendations. All but one had a definite management plan released between 1982 and 2017. *SS Caribsea* was unique because of the lack of management in comparison to other case studies. The only management document listed was an email discussion about the management of the site between the author and NOAA archaeologists responsible for shipwreck management. Many fall under SMCA through the Battle of the Atlantic, which, resulted in the sinking of a number of ships, such as *SS Caribsea*. According to the communication, *SS Caribsea* does not fall under any of the blanket SMCA protections because it was not a military vessel when it sank, even though it was transporting goods vital to the war effort (Tane Casserly 2017, elec. comm. and Will Sassorossi 2017, elec. comm.).

Site Management

The topics of the selected management documents discussed site management were by no means uniform. The reports range from a wide variety of topics, such as: a general management discussion, conditions reported on wrecks and the surrounding environment, a management plan associated with all wreck sites that fall within the South Carolina state waters, a pre-excavation plan, an owner's relinquishing management rights to a vessel to another organization, the management of a cemetery for those who died during the sinking event, managing the memorial directly associated with a case study, a museum collection's management of artifacts from the vessel, and future goals for sites and their associated management sanctuaries. The topics varied reflecting the significant amount of management attributed to each site. The site's managers must follow international standards, federal and state legislation, and the professional standards discussed in Chapter 4.

Human Remains

Of the 16 documents assessed, human remains factored into under half of the management plans in any way. All four of the *H.L. Hunley* documents addressed human remains and one report each for *USS Arizona*, *USS Monitor*, and *HMT Bedfordshire*. This information suggests that while human remains were a significant factor in archaeological excavation, they are not readily discussed in these management documents.

Motivation

Of the 16 documents, 13 noted motivations involved in management decisions. These motivations ranged from a variety of factors such as: site protection from looting; protection of the site and the human remains necessitating excavation; historical significance; a need to continue exploring the history that is well known to corroborate facts and clarify misconceptions; and a plan to strengthen resource protection and public awareness. Essentially, the motivation is condensed to a duty to protect a war grave and a nonrenewable resource for research, care, respect, and the public.

Legislation, Mandates, and Strategies

The legislation relating to the management of the site, a foundational aspect of archaeological and gravesite management was discussed in 10 management plans. These plans ranged from extensive international legislation to state legislation. UNESCO's 2001 Convention, an international agreement important to the implementation of wreck management, only factored into one discussion - the management of *HMT Bedfordshire*. The South Carolina Underwater

Antiquities Act of 1991 also was discussed in a single document addressing the management of the *H.L. Hunley* site and the future excavation. Other legislation, such as ASA, NAGPRA, and the Archaeological Resources Protection Act of 1979, were mentioned briefly in articles that discussed human remains. The major legislation discussed was about the foundation of the NOAA National Marine Sanctuaries, specifically the Monitor National Marine Sanctuary, the first one founded. A management plan from 2001 regarding the management of USS *Arizona* specifically notes that when management began, the lack of direction and legislation became problematic for the managers, a sentiment discussed throughout the various early management plans.

Minor Challenges

When discussing management for this research, human remains were a significant variable. The presence of human remains, however, was not the only factor that influenced the management of the site. Various other factors discussed include the location of the site, the perceived significance of the site, visibility of the site, the presence of human forces impacting the site (such as diving and fishermen, publicity and public interest) increased site degradation, and the site's effect on the surrounding environment, such as a slow leak of oil. Of the case studies selected, all have had archaeological research performed. This is reflected in 15 of the documents because one focused on the collection's management of the artifacts after excavation, rather than the actual process of removing artifacts from an archaeological or historic site and managing the site noting degradation.

Archaeological Methodology

The archaeological methodology varied between sites, along with intensity of archaeological research. All case studies had a survey performed on them. However, the intensity of the surveying varied dramatically. According to the available management documents, four out of the five case study sites had remote sensing survey performed around them. This does not mean that remote sensing was not undertaken on the outlier. HMT *Bedfordshire* was just not reflected in the specific documents analyzed. NOAA provides the information for the survey on the NOAA website specific to the wreck (National Marine Sanctuaries 2017). Of the sites selected, three were excavated; however, only two, USS *Monitor* and *H.L. Hunley* were archaeological. The third, USS *Arizona*, was salvaged after sinking occurred. This was done in order to supply the war effort for a brief time (National Parks Service 1996:1). Intentional excavation has since stopped.

Documents relating to both USS *Monitor* and *H.L. Hunley* discuss the on-site excavation, but both also discuss the internal excavation to occur after the object, the turret and the submarine, respectively, were removed from the site and systematically broken down. This is where, one would predict, most of the interaction with encased human remains would occur. The management plan for USS *Monitor*, discussed the issue before the excavation occurred, while the *H.L. Hunley* management document discussed the preparation for the excavation after the fact. USS *Monitor* management documents, ranging from initial to present management plans, illustrate the best example of the steps that should happen if a researcher might encounter human remains reflecting how this has been a factor for archaeological excavation from the onset of the project.

Goal Audience

The managers wrote all the documents for a professional audience or the author, specifically the electronic communication. All the documents met the goals of professionalism outlined in Chapter 4: scientific collection of data, accessibility of information, and management styles that follow general professional ethics, including avoiding disturbing the site unless deemed necessary. This was assessed after reading the documents and the outlining of professional standards. Most documents were transparent in management plans and goals for the future. Many were available online, however, the author was required to contact a manager for additional information. USS *Monitor* and USS *Arizona* were both transparent and forthright with the documents being available online and reasonably accessible to the public. *H.L. Hunley* required the author to communicate with the managers to access some of the documents. HMT *Bedfordshire* required the author to contact NOAA, the manager as of 2016; however, the managers at NOAA were very responsive and helpful with providing a copy of the Memorandum of Agreement between the US and the United Kingdom. This was to be expected because of the relatively recent agreement which came about only months before the author contacted NOAA.

HMT *Bedfordshire* and SS *Caribsea* both have management plan explanations, used as management documents because of a lack of associated documents, were received through email communication with NOAA and from a cemetery manager on Ocracoke Island, NC. These were all handled very quickly and thoroughly, still meeting the professional standard, even without a document to provide the author. The managers stated intent was to preserve the site through scientific data collection with detailed archaeological practices and plans for future site management. The future site management plans include the desire for the pursuit of more detailed information and research about almost all the wreck sites, however, notably not SS

Caribsea. Similarly, all the management documents expressed the need to follow management legislation on the international, federal, state, and local levels. Documents for each case study, except SS *Caribsea*, recommend non-disturbance of the human remains without proper motivation. When necessary, a document for each detailed the reason for the disturbance of the remains and why this action would provide the best result. All the documents meet professional standards: the timely release of most of the information, the plan for future research pursuit, and the well-researched documents.

Analysis Two

Quantifying data from the literature facilitated the assessment of multiple examples of writing focused on each case study. This allows the evaluation of the data on individual case studies, compare classifications of case studies, and assess the entire dataset. From this, the data was analyzed to make statistical assessments using IBM SPSS statistics software.

The literature was collected using a specific setting on OneSearch ECU Library System search engine. To standardize the data the settings were the same for the search of each case study. Only results from searched the vessels' names: USS *Monitor*, *H.L. Hunley*, USS *Arizona*, SS *Caribsea*, and HMT *Bedfordshire* were collected. The search identified resources available online to mimic the same access that researchers have through academic institutions. Physical items available on campus were excluded because each campus library has a different collection and the author could not guarantee the wide availability of the literature.

The literature was assessed using mostly dichotomous variables in different categories, simplifying the calculations and comparisons. The following were the coded categories used for

assessment: year of publication; type of media split into books, articles, videos, theses, management reports, and primary documents; management discussed; management as the primary focus; human remains discussed; human remains as the primary focus; history discussed; history as the primary focus; archaeology discussed; archaeology as the primary focus; aimed towards a professional audience; aimed towards a public audience; and if other case studies were mentioned, if so a list of the case studies. Other than the year of publication and the type of media, the assessments were performed based off on coded categories with a “yes or no” responses. If no data was available, the answer was left blank thus leaving the data missing, to prevent an entry that may skew the output of data. The goal of the categories was to isolate the subject of the literature or video by assessing if a topic was identified, how many areas of interest were discussed, the type of literature or video, if an audience was selected, and if other case studies were mentioned (See Appendix D for the Analysis Two Codebook and Appendix E for the numerical table).

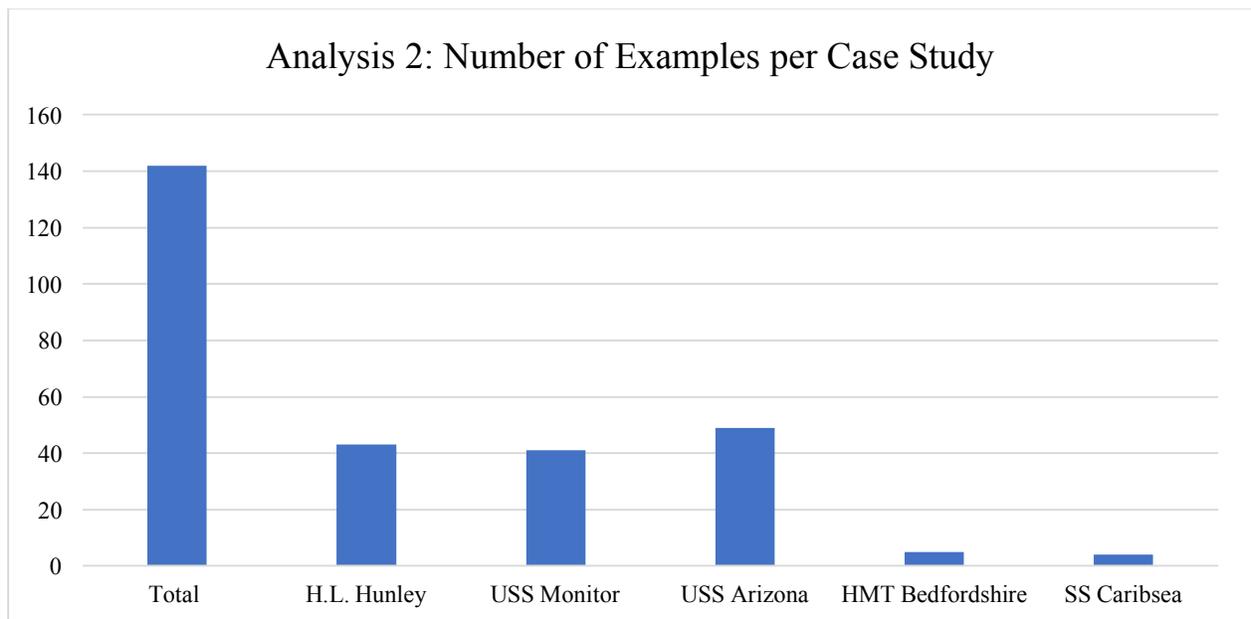


FIGURE 5.1. A break down of examples per case study (Chart by author 2017).

The second literature assessment included a total of 142 case studies. Entries were limited to roughly 40-50 assessments per case study ideally. The research excluded variables, or pieces of literature provided by the search, that were book reviews or not related to the case study. The author kept examples that mentioned a case study but not as the direct focus. *USS Monitor* has 41 examples, *H.L. Hunley* has 43 examples, *USS Arizona* has 49 examples, *SS Caribsea* has four examples, and *HMT Bedfordshire* has five examples. Information can be seen in Figure 5.1.

The percentages of examples discussing a topic and the percentage of examples focusing on a topic differ. The concept of “discussed” has a greater variation in definition than if the topic was “focused.” Focused was assessed as the sole purpose of the example and anything else was meant to contextualize and support the argument/focus. “Discussed” means the topic was mentioned but was not the focus. The discussion may have been a simple statement about the topic or a large section supporting the primary topic or argument of the example but was not the primary topic or argument.

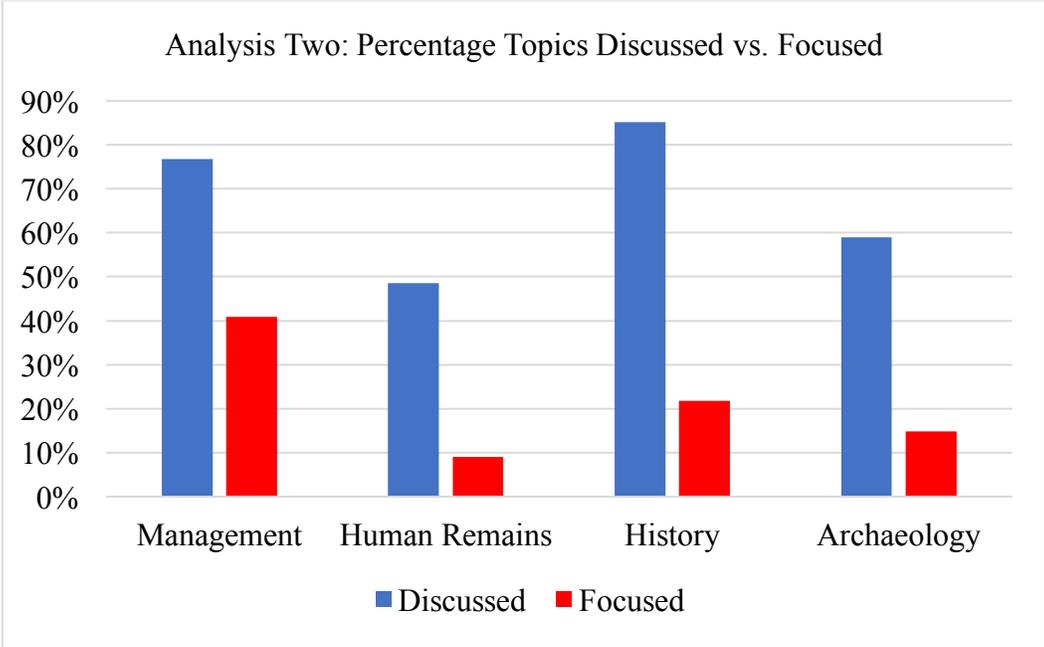


FIGURE 5.2. Percentages of Topics Discussed compared to Topics Focused on (Chart by author 2017).

The following is the percentages that were identified by the examples for second assessment: the discussion of management was 76.8%, the discussion of human remains was in 48.6%, the discussion of the history of a site was in 85.2%, and the discussion of the archaeology was in 58.9%. The primary focus or argument of the examples follows this trend: management was the focus of 40.8%, human remains were the focus of 9.1%, history was the focus of 21.8%, and archaeology was the focus of 14.8%. Information see in Figure 5.2.

The target audience was assessed. This was performed by determining the specificity and complexity of a topic and location of publication. Some examples appeared in scientific journals and discussed specific aspects of evaluations. Others appeared in periodicals and other formats that reached a wider audience. Of the 142 examples, only 27.5%, or 39 examples, were assessed determined to be written for a professional audience.

The final assessment identified whether the example mentioned another case study. Only 10.6%, or 15 examples mentioned another case study specifically. *USS Monitor* appears in 10 examples, or 66.7%, of the mentioned case studies *H.L. Hunley* appears in 7 examples, or 46.7%, of the mentioned case studies, *USS Arizona* appears in two examples or 6.7% of the mentioned case studies *SS Caribsea* and *HMT Bedfordshire* are each appear in one example, or 6.7%, of the mentioned case studies. The isolation of this information does not necessarily mean that other comparative vessels were absent in the example, but if they were, the information was not collected.

When comparing two variables, the cross-tabulation function was frequently used. This statistical technique allows the user to determine a relationship between the variables. Of the 58 examples that were management focused, the authors intended for 18 examples to be read by a professional audience. Of the 15 examples focused on human remains associated with the site,

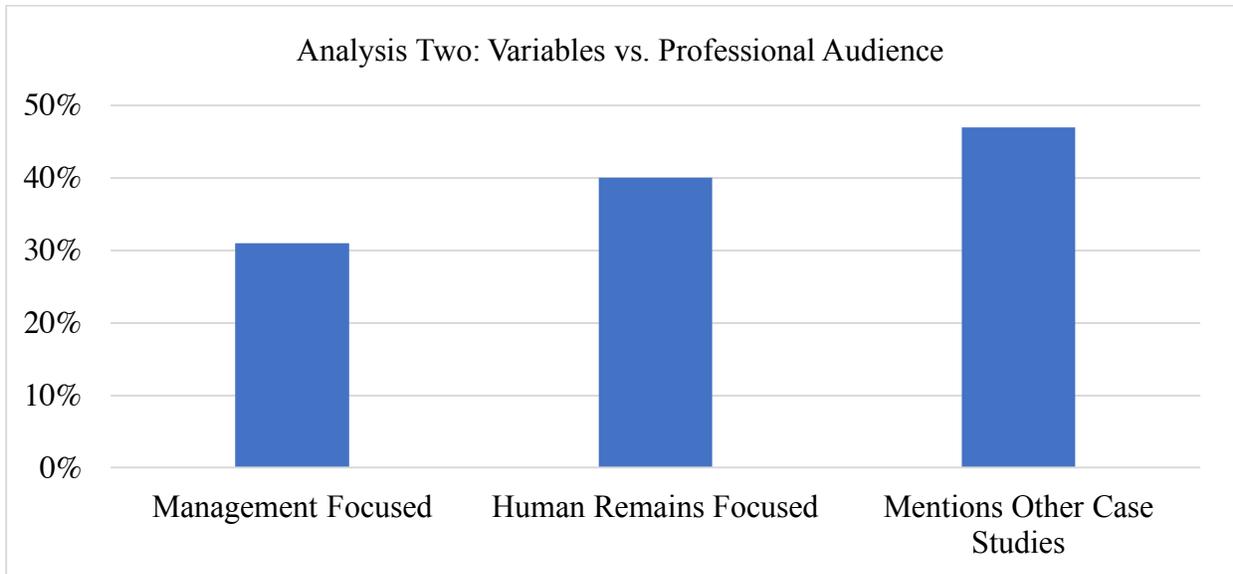


FIGURE 5.3: A comparison of variable assessed during Analysis Two that were also meant for a professional audience

six appeared to be intended to be read by a professional audience. Of the 15 examples that mentioned other case studies, only seven were intended for a professional audience (Figure 5.3).

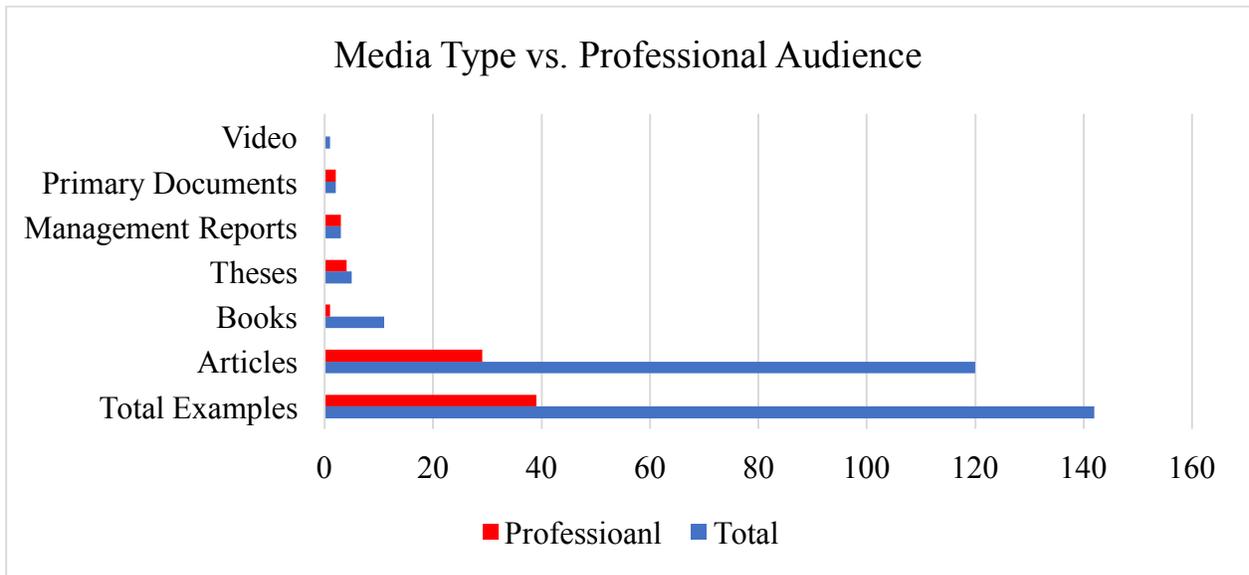


FIGURE 5.4: A comparison of media type to professional audience

When searching for the examples, the research came across a variety of media platforms that appeared in the search results. Unsurprisingly, the most common type of media was journal

and newspaper articles. Of the 142 examples, 120 examples were articles. However, of that 120 articles, only 29, or 24.2%, of the articles were written for a professional audience. The next most common media type was books written about or mentioning a case study. There were 11 examples of books selected, but only 1, or 9.1%, was professional. After books, theses were the next most common media type with a total of 5 examples. Of the 5 theses read, 4 or 80%, were professionally oriented. Three management reports were examples, and all three were professional. Two primary documents were read, with both falling under the professional category. Finally, one video was watched; however, this did not fall under the professional audience category (Figure 5.4).

One-way ANOVA comparisons assessed the relationship between events were significant or if they happened by chance. The relationship of publication year by the discussion of management was significant at .013. Meaning it is most likely that some years specifically mention management while others do not. Conversely, publication year assessed by an example being focused on management was not significant at .093. The discussion and focus of human remains is significant to the case studies at .028 and .000 respectively. This means that human remains are highly likely to be discussed and focused on when analyzing the selected case studies. However, not everything is significant. Surprisingly, the professional audience does not correlate to the publication year, history focused examples do not correlate to public audience, and archaeologically focused examples do not correlate with professional audiences. This means that some hypotheses from the research were supported by statistics while others were not.

Conclusion

It is clear between Analysis One and Analysis Two that trends for the management of archaeological shipwreck sites with human remains have emerged. Though not all the expected variables correlated to significant values, and the available management documents lacked desirable information, Analysis One and Analysis Two yielded useable data that could be amalgamated into future research. How the two studies support each other and yield new information will be discussed in the next chapter.

CHAPTER SIX: DISCUSSION OF RESULTS AND CONCLUSION

A great deal can be learned from the comparison of management plans between the Analysis One and Analysis Two results detailed in Chapter 5. Whether it is from the same site but from differing years; the comparison of two differing sites; or the comparison of the results from two different studies, the information gained illuminates details and trends that have previously been overlooked.

Discussion of Results from Analysis One and Analysis Two

Many factors influence all aspects of site management. The presence of human remains is one influential aspect; however, there may be many more that are equally if not more so important. Location, history, significance, degradation, visibility, and public engagement are all great consequence to site management and it is important for management documents to clearly state which factors are specifically influencing the site for reasons similar to stating the motivations behind site management decisions.

Over 75% of the examples, or literature and media provided through the search results, discussed the motivations for management decisions. The overarching theme was the duty and responsibility of managers to protect the archaeological site, especially ones that may come with extra responsibilities such as sites containing human remains. It is important to explain the motivation behind management decisions because the sites belong to the public and the explanations are part of meeting the professional responsibility of transparency and timely dissemination of information to the public.

Less than half of the “management focused” examples assessed for Analysis Two were written for a professional audience. This correlated with the importance of transparency to the

public and professionalism of the managers and archaeologists because the information is important to disseminate and the public will attract interest. The examples would not likely have been created, especially with the sheer quantity of 40 management focused examples, if there was not an audience with an interest.

Regarding the motivation underlying management decisions, legislative requirements are a major factor in the outcome of management decisions. Legislation is important to discuss in management documents because it is important to ensure the site is being properly managed according to the legal guidelines set up by international, federal, state, and local governments. It is also important to note for public transparency why, behind other stated motivations, sites are managed certain ways. Following legislation and clarifying it for the public is important for meeting professional responsibility. The 2001 “Submerged Cultural Resources Study” on USS *Arizona* specifically notes that an absence of precedents increased the difficulty in management because of a lack of direction on which managers may lay the foundation. According to Analysis Two there is a correlation of the publication year compared to the discussion of management within examples. However, this does not translate to a statistical significance in the focused on management when compared to the publication year. This means as the years have progressed, the likelihood that management is discussed has increased to an intentional level; however, it has yet to regularly become the focus of an example of literature or other media that was assessed for the analysis.

The discussion of previous archaeological surveys is important for many reasons. First, it provides the public with the knowledge that the site is being monitored scientifically with documentation for later references. Second, the surveys are used to plan future management strategies, such as excavating portions of the vessel to relieve hull pressure and potentially

preserve the vessel for a longer period of time *in situ*. When making these plans, it is important to know what surveys have been performed so that redundant information is not obtained, or to ensure appropriate information necessary for comparison is then recorded. Third, it is important to conduct archaeological surveys to ascertain information, not just for management practice but to understand the micro-environment of the wreck, including the history of the ship and the crew. Though not necessarily important to the wreck management directly, it is important for contextualization and public engagement to know where the ship had previously been and who were members of the crew. The knowledge of the crew humanizes aspects of events that the public might not relate to initially. The wrecks, although managed by the government, belong to the public, so it is important for archaeologists to collect the data to preserve the wreck while engaging the public in the historical narrative. Analysis One confirmed that archaeology was discussed in all the management reports reviewed. Analysis Two provided on 142 examples, It was determined that archaeology was discussed in just under 60% of examples and the primary focus of 15% of examples. This shows that through the professionally oriented management documents, recording processes are noted but are not always noted for all literature associated with a site.

When creating a management plan, precedents are important for assessing what management decisions had been made by predecessors of that and similar sites and how those decisions impacted the site. Of the examples assessed in Analysis Two, 15 examples mentioned at least one of the other case studies assessed in this research. Only seven of those were intended for a professional audience to read, meaning half of the examples were meant for managers to understand where the management decisions originated from, regardless of whether it was the same decision or a differing decision, and half of the examples were meant for the public to

understand the same motivations or contextualization of management by comparing it to other wreck sites. The author only noted the use of case study specific use of comparison in Analysis Two, not the use of comparison to vessels that were not included in this study. The above 15 mentioned other case studies that fell within the specific criteria set for analysis already, without the author assessing if the non-case study specific examples mentioned fell within the same criteria.

USS *Monitor* appeared the most frequently, which is to be expected from a fairly influential vessel in the history of shipwreck management that was also partially excavated, and thus more data more data was produced. *H.L. Hunley* followed with the second most number of appearances in documents not related to the case study. Again, like USS *Monitor*, *H.L. Hunley* was an important ship to the history of the United States, and was also excavated leading to more documents being written about the vessel and greater public interests likely because of this availability of information. Surprisingly, USS *Arizona* was not mentioned as frequently as either of the other two noted case studies. With the impact the sinking of the vessel had on the country, let alone the world, it was hypothesized that the management of the vessel would lead to more references in various literature. Of the 15, USS *Arizona* was mentioned in two examples. Not surprisingly, because of the relative historical significance compared to the case studies above, SS *Caribsea* and HMT *Bedfordshire* were both only mentioned in one other example.

For sites that have human remains, arguably one of the most significant management considerations, there was little discussion of the remains and the influence they had as a factor on the site. *H.L. Hunley*, whose remains have been fairly publicized, had the most documents discussing the remains of the submarine's crew and the conservation and interment plans made. Surprisingly, USS *Arizona* and USS *Monitor* only had one management plan respectively

assessed in Analysis One. Not surprisingly, HMT *Bedfordshire* did not have many documents that discussed the remains of the crew because of the limited management information that is available on the wreck. Since the focus of human remains on *H.L. Hunley* was so apparent, it is not surprising that the human remains discussion and focus analyzed by case studies in Analysis Two both yielded significant results with their respective ANOVA. The frequency with which *H.L. Hunley*'s management documents mention remains foreshadowed the potential significant correlation that appeared in Analysis Two.

Similar to *H.L. Hunley*, USS *Monitor* was a Civil War wreck known to likely contain remains. However, after the excavated items, including the remains, made it into the conservation lab, the remains were no longer a major factor in the management of the site. The remains did not receive a funeral on the scale of *H.L. Hunley*, which were buried almost ten years apart. The two vessels are very similar in importance. They both are the products and inspiration of technological revolution in naval warfare, involved with a major battle, and federally owned. The factors that separated the two crews are: historic allegiance (Union vs. Confederate), number of remains (two vs. eight), location of burial (Arlington National Cemetery vs. Charleston's Magnolia Cemetery), crew survival rate (a few survived vs. no one surviving), known history (survivors and rescuers could recount the sinking incident vs. a mystery with no reliable information), and managers (federal management vs. state and commission management).

In Analysis Two, almost half of the 142 examples mentioned the human remains solidifying the fact that human remains are significant to the management and the history of the site. However, remains are rarely the focus of literature associated with the case studies. Of the human remains focused examples, two thirds appeared to be meant for a professional audience.

The reason behind this was not made clear however it may be because of the lack of identification of some remains, the presence in active memory, or a number of other variables. The focus of the documents mentioning human remains leaning towards a more professional audience could be because of the unique management factor that the human remains create that does not exist in every archaeological site.

The discussion of human remains is mentioned in half of the case studies from this research. What is not consistent is the amount that examples focus on the human remains throughout the analysis. The examples concentrating on Civil War case studies clearly focus the human remains more frequently, 87% examples referenced the human remains focused examples within the historic era. There are a few reasons for this to occur. Primarily, the human remains were a part of the materials from excavation. The case studies from the Civil War were both excavated, partially or completely, and when excavation occurred, the archaeologists encountered human remains. The sheer necessity of documentation, research, and reinterment would likely cause an influx of literature pertaining to the respective remains. This, however, would be more publications likely for academic pursuits, and the percent of human remains focused examples aimed towards a professional audience is about 66%. That high of a percent, from such a limited number of total examples (15), could indicate excavation as a major factor.

Another factor could be the age of the shipwreck. The two vessels from the Civil War have been totally or partially excavated and the remains interred, with respect but after research. Conversely, vessels sunk during WWII, have not been excavated out of respect for the remains. If able to remain undisturbed and *in situ* the WWII vessels will not be excavated and the remains will not be disturbed for academic pursuits. The author theorizes that part of the motivation differences is rooted in the debate described in the first chapter.

Previously, the discussion of the ethical debate over the research and analysis of shipwrecks with human remains was discussed. Experts and advocates for both sides presented arguments for the absolute ban on studying wreck sites that are war graves, while other believed that approach was over management and the wrecks should be documented for future research. The application of this debate, specifically the approach by Blanchard, RMS *Titanic* survivor, is that the event was too recent and not much information would be gained by disturbing the grave (Nicholson 1997:140). This is a similar argument that was discussed in the USS *Arizona* management report, where the US Navy did not believe a survey was necessary because the history was known (Lenihan et al. 2001:158-160).

Fifty years from the event is required for an object to be considered historic and 100 years is the amount of time that must pass from the current date for an object to be considered archaeological (National Parks Service 2018c; National Parks Service 2016). It appears that the vessels from WWII, falling into the historic category but shy of the archaeological standard, are still in the society's active collective memory, which is why the management strategies shift from excavation to *in situ* preservation. Collective memory is type of memory analysis, where memory is accumulated through societal interactions and causes it to create a large influence on the memory throughout a society (Lebow 2006:8). Societal collective memory may have similar qualms to research, especially excavation, that Blanchard had to surveying RMS *Titanic*. This hesitation can clearly be seen through the "Submerged Cultural Resources Study" management survey and the Memorandum of Agreement between the United States and the United Kingdom on HMT *Bedfordshire* (Lenihan et al. 2001:158-160; National Oceanic and Atmospheric Administration 2016:3). The aspect that WWII is still in the active memory, while the Civil War is now considered past memory, has created a potential shift in management decisions.

The appearance of public significance may also affect management. All the wrecks are historically significant, however only three case studies; (USS *Monitor*, *H.L. Hunley* and USS *Arizona*) had major public interaction as a historic site and are managed much more thoroughly than the other two (SS *Caribsea* and HMT *Bedfordshire*). This perceived significance by the public, represented by the overwhelming amount of literature published on the first three, shows the popularity and interest in these vessels. This popularity is the reason why *H.L. Hunley* was excavated and USS *Arizona* is restricted as a dive site. SS *Caribsea*, a victim of the same war as USS *Arizona* and HMT *Bedfordshire*, is unmanaged and the public regularly interacts with the dive site without knowing its historical significance and its status as war grave. HMT *Bedfordshire* also falls into the dive site category; however, the vessel is managed by NOAA, allowing for the effects of the public and environment to be monitored and recorded.

Limitation of Study

This study is by no means comprehensive of all the information that could be collected about the field of archaeological wreck site containing human remains management, let alone the information that could be collected about each wreck sites. The study's parameter and time availability limited what the author could adequately perform. To fully cover this topic, one must collect all the management data on vessels that meet the ferrous hulled or armored vessel that sunk during the Civil War or World War II, that are in federal waters or federally managed. The list would be extensive, which is why this case study was limited for a Master's thesis. To get the best data, all the wrecks meeting these criteria would be analyzed, along with any wreck between the two dates to get a view of the gradual shift in change in management.

The actual approach to the research was limiting as well. Initially, the author had difficulties accessing the information about a few wrecks sites, even after contacting the managers. Some of the information was assessed through communication with experts because documents were not available. After finally accessing the information, the author spent a great deal of time perform Analysis One and Analysis Two adequately.

Future Research

This topic should be pursued on a larger scale, allowing for more information to be accessed. From this, a guide for shipwreck management or standardized protocol could be created for managing wreck sites discovered. A guide with precedents clearly stated would allow for a future manager to see how different sites were managed, under what legislation and unique characteristics they were assessed, and the successfulness of the management practices. This would allow the new wreck site manager a pre-prepared and up to date guide of different approaches that may best fit the site.

The federal government should also create a database of known wreck sites that fall within the federal waters or federal jurisdiction. This database should contain all the wreck sites, the locations, a description of each history, the depth of each vessel, and the manager or responsible party.

Finally, though many clearly do not fall into SMCA, legislation must be enacted to create a blanket protection for vessels, such as SS *Caribsea* that were aiding a war effort, even if there was a profit, and sunk because of its association to a war. This would allow for non-military vessels that were very important to the war effort, to get some of the same management benefits as falling under SMCA.

Conclusion

Analysis One and Analysis Two found that there are two clear trends that have been consistent throughout management research. The potential for historical significance or the era during which the vessel wrecked appeared to be the major management factor supported by the research. These trends could be further supported through an expanded investigation of trends in managing human remains this could include: a larger survey of wrecks that meet the following criteria: an association with a historically significant wrecking event, limited to war time wrecking events, having had ferrous based structure for increased potential of hull preservation, and the site significance and presence of human remains.

There are common or reoccurring decisions made about the management of case studies that are based on precedent of previous cases. This was made clear through the management documents and the literature in Analysis Two. Many case studies cite other examples as inspirations behind management decisions. The reader should note that the USS *Arizona* management plan cited a lack of precedence as detrimental in the initial management plan (Lenihan et al. 2001:158-160). The site had to create its own management standards which have since has become the models for other management plans.

However, there are also many distinct differences in the decisions which were made about the management of the case studies that were based on precedents of previous wrecks. The most apparent are the differences in wreck management. Seemingly similar characteristics between case studies yielded very different management strategies. For examples, USS *Arizona* and HMT *Bedfordshire* are both naval vessels, however from different countries and different natural wreck sites, have been managed completely differently. HMT *Bedfordshire* and SS

Caribsea, whose wrecks resulted from similar wrecking events and rest in similar natural environments, have also been managed differently because of the association with the British Navy and the Merchant Marine.

The policies, treaties, and motivations associated with the management of sunken vessels that contain human remains do typically follow the ethical guidelines associated with major archaeological professional societies according to the Analysis One and Analysis Two. The different case studies illustrate the different professional standards at different levels. While SS *Caribsea* did not meet all the professional standards, it should not be expected to without a clear and extensive management plan from a designated manager. HMT *Bedfordshire*, for example, met the professional standards with the new amalgamation of management under the supervision of NOAA. USS *Arizona* and its associated memorial, USAR, on the other hand met all the professional standards under the management of NPS and US Navy. *H.L. Hunley* met all the professional standards under the management of the US Navy, the Hunley Commission, and the Warren Lasch Conservation Lab operated by Clemson University in cooperation with the State of South Carolina. Finally, USS *Monitor* met all the professional standards from management by NOAA and the Monitor Center at the Newport News Mariner's Museum.

These professional standards allow for a clear motivation behind management to be ascertained. The necessary transparency to meet professional requirements allow for motivations to be assessed, tabulated, and compared. From this, researchers can establish trends that will guide future wreck management to become more efficient, transparent, and respectful of the environment and history of the vessel. The existence of human remains at a wreck site adds an extra challenge to the management of shipwrecks. However, with a clear path, a goal to maintain professional standards, and ethical motivations, a wreck can be managed appropriately.

WORKS CITED

Archaeological Institute of America

2008 Code of Professional Standards. Archaeological Institute of America, Boston, MA.

Arlington National Cemetery

2017a About. <<http://www.arlingtoncemetery.mil/about>>. Accessed 29 July 2017.

2017b ANC Explorer App. <<http://ancexplorer.army.mil/publicwmv/>>. Accessed 20 June 2017.

2017c Mission and Vision. <<https://www.arlingtoncemetery.mil/About/Mission-Vision>>. Accessed 29 July 2017.

Broadwater, John D.

2013 *USS Monitor: A Historic Ship Completes Its Final Voyage*. Texas A&M University Press, College Station, TX.

Cannon, William F.

2014 Manganese-It Turns Iron into Steel (and Does So Much More). *USGS Mineral Resources Program*. Department of the Interior: United States Geological Survey, Reston, VA.

Christianson, Sven-Ake, and Elisabeth Engelberg

1999 Memory and Emotional Consistency: The MS Estonia Ferry Disaster. *Memory* 7 (4): 471-82.

Clemson University

2018 Warren Lasch Conservation Center: WLCC Team. <<https://www.clemson.edu/centers-institutes/conservation/people/>>. Accessed 2 February 2018.

Daniel, Raychelle.

2006 Appendix A: USS Arizona Memorial Resource Overview. Natural Resource Report, *National Park Service*, Fort Collins, Colorado.

Delgado, James P.

1985 National Register Bulletin 20: Technical Information on Comprehensive Planning, Survey of Cultural Resources, and Registration in the National Register of Historic Places. US Department of the Interior: National Park Service Interagency Resource Division.

Department for Culture, Media and Sport

2005 Guidance for the Care of Human Remains in Museums.

Department of the Interior

1978 National Register of Historic Places Inventory - Nomination Form: *H.L. Hunley*. National Parks Service.

2006 Management Policies 2006: The Guide to Managing the National Parks System. U.S. Department of the Interior. <https://www.nps.gov/policy/mp/policies.html#_Toc157232774>.

Drye, Willie

- 2004a Hunley Findings Put Faces on Civil War Submarine. *National Geographic*. 12 April. <http://news.nationalgeographic.com/news/2004/04/0409_040411_hunleycrew.html>. Accessed 04 December 2016.
- 2004b 'Last Funeral of the Civil War' to Put *Hunley* Crew to Rest. *National Geographic*. 16 April 2004. <http://news.nationalgeographic.com/news/2004/04/0416_040416_hunleyfuneral.html>. Accessed 04 December 2016.

Friends of the *Hunley*

- 2014a About Us. <http://hunley.org/main_index.asp?CONTENT=ABOUTUS>. Accessed 27 May 2016.
- 2014b Crew Burial. <http://hunley.org/main_index.asp?CONTENT=CREWB>. Accessed 27 May 2016.
- 2014c First Crew. <http://hunley.org/main_index.asp?CONTENT=FIRSTCREW>. Accessed 04 December 2016.
- 2014d Second Crew. <http://hunley.org/main_index.asp?CONTENT=SECONDCREW>. Accessed 04 December 2016.
- 2014e Third Crew. <http://hunley.org/main_index.asp?CONTENT=THIRDCREW>. Accessed 04 December 2016.
- 2018a Buy Tickets. <<https://hunley.org/buy-tickets/>>. Accessed 1 February 2018.
- 2018b Press Release. <<https://hunley.org/press-releases/>>. Accessed 1 February 2018.

Fox, Kara Davis

- 2015 Matters of Steel: Illustration and Assessing the Deterioration of the World War II Merchant Freighter *Caribsea*. Master's thesis, Department of History, East Carolina University, Greenville, N.C.

Gentile, Gary.

- 1992 *Shipwrecks of North Carolina from Hatteras Inlet south*. G. Gentile Productions, Philadelphia, PA.

Gibson, James F

- 1862 James River, Va. Deck and turret of U.S.S. Monitor. LOT 4182. Library of Congress Prints and Photographs Division Washington, D.C <<https://www.loc.gov/resource/ppmsca.31295/>>. Accessed 1 March 2018.

Greene, Harry Noyes, William M. McKinney, David S. Garland, and Eugene G. Krelde

- 1906 *The American and English annotated cases: containing the important cases selected from the current American, Canadian, and English reports ... thoroughly annotated*. Northport, N.Y.: Edward Thompson Co. <<http://books.google.com/books?id=ZPVCAQAAMAAJ>>. Accessed 5 February 2018.

Hickam Jr., Homer.

- 2014 *Torpedo Junction: U-Boat War Off America's East Coast, 1942*. Naval Institute Press, New York.

Hicks, Brian and Schuyler Kropf

2002 *Raising the Hunley: The Remarkable History and Recovery of the Lost Confederate Submarine*. Ballentine Publishing Group, New York.

International Council of Museums

2013 ICOM Code of Ethics for Museums. ICOM, Paris.

International Counsel on Monuments and Sites

1996 Charter on the Protection and Management of Underwater Cultural Heritage. *11th ICOMOS General Assembly*. Sofia, Bulgaria.

Jenkins, Tiffany

2011 *Contesting Human Remains in Museum Collections: The Crisis of Cultural Authority*. Routledge, New York.

Lebow, Richard Ned.

2006 The Memory of Politics in Postwar Europe. *The Politics of Memory in Postwar Europe*. Edited by Richard Ned Lebow, Wulf Kansteiner and Claudio Fogu. Durham: Duke University Press.

Lenihan, Daniel, James P. Delgado, Bill Dickins, Gary Cummins, Scott Henderson, Daniel A. Martinez, and Larry Murphy

2001 *Submerged Cultural Resources Study: USS Arizona Memorial and Pearl Harbor National Historic Landmark*. Submerged Cultural Resources Unit, National Park Service, Santa Fe, NM.

Llyod's Register

1939 "Bedfordshire" Navires A Vapeur et a Moteurs de Moins de 300 tx., Chalutiers, &c.: Bebel. Llyod's Register of Shipping Trust Corp, London.

Maarlevld, Thijs J., Ulrike Guerin, and Barbara Egger

2013 Manual for Activities directed at Underwater Cultural Heritage: Guidelines to the Annex of the UNESCO 2001 Convention. United Nations Education, Scientific, and Culture Organization, Paris.

MacLeod, Ian D.

2008 Shipwreck Graves and Their Conservation Management 1. *AICCM Bulletin* 31, no. 1 (2008): 5-14.

Manolis, Captain Nicholas

1949 *We at Sea: The Epic of the American Mariner*. Anatolia Press Inc., New York.

Mardikian, Paul, Mike Drews, Nestor Gonzalez and Philippe de Vivies

2006 *H.L. Hunley* Conservation Plan. Friends of the Hunley and Clemson University.

The Mariners' Museum

2018 Hours and Admission. <<http://www.marinersmuseum.org/hours-and-admission/>>. Accessed 19 January 2018.

Marx, Deborah and Joseph Hoyt

2015 National Register of Historic Places Registration Form: HMT Bedfordshire. National Oceanic and Atmospheric Administration, Silver Springs, MD.

Monitor National Marine Sanctuary

2013 Monitor National Marine Sanctuary Final Management Plan and Environmental Assessment. National Oceanic and Atmospheric Administration.

2016a HMT *Bedfordshire*. National Oceanic and Atmospheric Administration. <<http://monitor.noaa.gov/shipwrecks/bedfordshire.html>>. Accessed 29 May 2016.

2016b SS *Caribsea*. National Oceanic and Atmospheric Administration. <<http://monitor.noaa.gov/shipwrecks/caribsea.html>>. Accessed 29 December 2016.

2017a Dive Slates. National Oceanic and Atmospheric Administration. <https://monitor.noaa.gov/shipwrecks/dive_slates.html>. Accessed 3 November 2017.

2017b USS *Monitor*. National Oceanic and Atmospheric Administration. <https://monitor.noaa.gov/shipwrecks/uss_monitor.html>. Accessed 3 November 2017.

Murphy, Larry E. and Matthew A. Russell (Editors)

2008 Long-Term Management Strategies for USS *Arizona*, A Submerged Cultural Resource in Pearl Harbor. *Department of Defense*.

Murray, Williamson and Allan Reed Millett

2001 *A War to Be Won: Fighting the Second World War*. Harvard University Press, Cambridge, MA. Accessed 12 March 2017. ProQuest ebrary.

National Archives and Records Administration

1917 USS *Arizona*, Broadside View, Navy Yard, New York. Photographs and other Graphic Materials. National Archives Identifier: 6003993, Local Identifier: 19-LC-19-A-16 National Archives, College Park, MD. <<https://catalog.archives.gov/id/6003993>>. Accessed 1 March 2018.

National Marine Engineers' Beneficial Association (U.S.)

1919 The American marine engineer. National Marine Engineers' Beneficial Association (14).

National Marine Sanctuaries

2016 National Marine Sanctuaries Permits. National Oceanic and Atmospheric Administration. <<http://sanctuaries.noaa.gov/management/permits/welcome.html>> Accessed 27 May 2016.

2017 Exploring the Graveyard of the Atlantic: HMT *Bedfordshire*. Battle of the Atlantic Expedition. National Oceanic and Atmospheric Administration. <<https://sanctuaries.noaa.gov/missions/battleoftheatlantic2/bedfordshire.html>>. Accessed 25 August 2017.

National Oceanic and Atmospheric Administration (NOAA)

- 1955 Descriptive Reports (Hydrographic). Department of Commerce. US Government Printing Office.
- 1998 Charting a New Course for the *Monitor*: A Comprehensive Long Range Preservation Plan with Options for Management, Stabilization, Preservation Plan, with Options for Management, Stabilization, Preservation, Recovery, Conservation, and Exhibition of Materials and Artifacts from *Monitor* National Marine Sanctuary. U.S. Department of Commerce.
- 2010a Exploring WWII in the Graveyard of the Atlantic: *HMT Bedfordshire*. National Marine Sanctuaries <<http://sanctuaries.noaa.gov/missions/battleoftheatlantic2/>>. Accessed 5 May 2016.
- 2010b Explorers on Monitor Expedition: NOAA Office of National Marine Sanctuaries. <<http://oceanexplorer.noaa.gov/explorations/02monitor/background/bios/bios.html#broadwater>>. Accessed 9 May 2017.
- 2013 "We need your help!" Remains of USS Monitor sailors interred at Arlington National Cemetery. 8 March. <http://www.noaanews.noaa.gov/stories2013/20130308_monitorsailors.html> Accessed 13 March 2017.
- 2016 Memorandum of Understanding between the National Oceanic and Atmospheric Administration in the Department of Commerce of the Government of the United States of America and the Royal Navy as part of the Minister of Defense of the United Kingdom of Great Britain and Northern Ireland Regarding the Wreck of HMT *Bedfordshire*. Department of Commerce, Washington, DC.

National Parks Service

- 1996 Resource Management Plan: *USS Arizona* Memorial. Department of the Interior.
- 2006 Management Policies 2006: The Guide to Managing the National Parks System. Department of the Interior, Washington, DC.
- 2013a National Register Digital Assets: H.L. Hunley. Department of the Interior. <<http://focus.nps.gov/AssetDetail?assetID=dfc7daae-16cc-40dd-9e36-ba5e2a797e8e>>. Accessed 26 May 2016.
- 2016 Archaeology Law and Ethics. Department of the Interior. <<https://www.nps.gov/archeology/public/publicLaw.htm>>. Accessed 20 January 2018.
- 2018a Frequently Asked Questions. *World War II Valor in the Pacific*. Department of the Interior. <<https://www.nps.gov/valr/faqs.htm>>. Accessed 25 July 2017.
- 2018b Live Dive Program. *World War II Valor in the Pacific*. Department of the Interior. <<https://www.nps.gov/valr/learn/education/learning/live-dive.htm>>. Accessed 25 July 2017.
- 2018c National Register of Historic Places Program: Frequently Asked Questions. Department of the Interior. <<https://www.nps.gov/nr/faq.htm#howold>>. Accessed 20 January 2018.

National Parks Service Submerged Resources Center

- 2008 Long-Term Management Strategies for *USS Arizona*, A Submerged Cultural Resource in Pearl Harbor. *Legacy Resources Management Program*. Department of Defense, Santa Fe, Mexico.

New York Times

- 1863 "THE LOSS OF THE MONITOR.; Thrilling Particulars of the Disaster." *New York Times*, January 6. Accessed 10 December 2017. <http://www.nytimes.com/1863/01/06/news/the-loss-of-the-monitor-thrilling-particulars-of-the-disaster.html>.
- 1864a "The Sinking of the Housatonic.; ORDER BY ADMIRAL DAHLGREN. Admiral DAHLGREN issued the following order immediately after the sinking of the Housatonic: FLAG-STRAMES PHILADELPHIA." *New York Times*, February 10. Accessed 10 October 2016.
- 1864b "The Torpedo Boat also Destroyed." *New York Times*, 3 March. Accessed 22 November 2017. <http://www.nytimes.com/1864/03/03/news/the-torpedo-boat-also-destroyed.html>

Neyland, Robert S. and Heather G. Brown (editors)

- 2016 *H. L. Hunley Recovery Operations: A Collaborative Project of: Naval History and Heritage Command, South Carolina Hunley Commission, and Friends of the Hunley.* Naval History and Heritage Command, Washington, DC.

Nicholson, Sean R.

- 1997 Mutiny as to the Bounty: International Law's Failing Preservation Efforts Regarding Shipwrecks and their Artifacts Located in International Waters. *University of Missouri – Kansas City Law Review.* 135-167.

North Carolina State Historic Preservation Office

- 2016 North Carolina Listings in the National Register of Historic Places as of 3/10/2016. North Carolina State Historic Preservation Office. <<http://www.hpo.ncdcr.gov/nr-pdfs.pdf>>. Accessed 29 May 2016.

O'Donnabhain, Barra, and María Cecilia Lozada

- 2014 *Archaeological Human Remains: Global Perspectives.* Springer International Publishing. Heidelberg, Germany.

Register for Professional Archaeologists

- 2009 Code of Conduct. Register for Professional Archaeologists, Baltimore, MD

Richert, Samantha

- 2010 World War II: Valor in the Pacific National Monument Pearl Harbor Unit Museum Scope of Collection Statement. Department of the Interior: National Park Service Pacific West Region.

Roosevelt, Franklin D.

- 1941 Transcript of Message to Congress Requesting Declaration of War Against Japan. 8 December. < <https://catalog.archives.gov/id/197365>>. Accessed 4 July 2017.

Russell, Matthew A. and Larry E Murphy

- 2003 Long-Term Management Strategies for the USS *Arizona*: A Submerged Cultural Resource in Pearl Harbor, Hawaii National Park Service Submerged Resources Center

and USS *Arizona* Memorial Legacy Resources Management Fund Project No. 02-170
2002 Annual Report. National Park Service, Submerged Resources Center.

Russell, Matthew A., Larry E. Murphy, Donald L. Johnson, Timothy J. Foecke, Pamela J. Morris, and Ralph Mitchell

2004 Science for Stewardship: Multidisciplinary Research on USS *Arizona*. *Marine Technology Society Journal* (38) 3: 54-63.

Seeberg, Marie Louise, Irene Levin, and Claudia Lenz

2016 *The Holocaust as Active Memory: the Past in the Present*. London: Routledge.

Sheridan, Robert E.

2004 *Iron from the Deep: The Discovery and Recovery of the USS Monitor*. Naval Institute Press, Annapolis, MD.

Silverstone, Paul H.

2006 *Civil War Navies, 1855-1883*. New York: Routledge, 2006. *eBook Collection (EBSCOhost)*, EBSCOhost. Accessed 20 March 2017.

Skerrett, R.G.

1902 Confederate Submarine H.L. Hunley (1863-1864). Catalog Number NH 999. US Naval History and Heritage Command. < <https://www.history.navy.mil/our-collections/photography/numerical-list-of-images/nhhc-series/nh-series/NH-00001/NH-999.html>>. Accessed 1 March 2018

Society for American Archaeology

2018 SAA Repatriation Policy. < <http://www.saa.org/Default.aspx?TabId=242>>. Accessed 9 January 2018.

Society for Historical Archaeology

1993 SHA Curation Standards and Guidelines: The Society for Historical Archaeology Standards and Guidelines for the Curation of Archaeological Collections. *The Society for Historical Archaeology Newsletter* (26) 4, Society for Historical Archaeology. < <https://sha.org/resources/curation-standards-guidelines/>>. Accessed 11 November 2017.

2003 Ethics and Principles of the Society for Historical Archaeology.

2018 SHA Curation Standards and Guidelines. < <https://sha.org/resources/curation-standards-guidelines/>>. Accessed 2 February 2018.

Sullivan, Sharon, and Richard Mackay

2012 *Archaeological Sites: Conservation and Management*. Getty Conservation Institute, LA.

Torpy, Renee Elizabeth

2015 Grave Robbers or Archaeologists? Salvaging Shipwrecks. *Journal of Maritime Law and Commerce* (46) 1: 83-102.

United Nations Education, Scientific, and Cultural Organization

- 2001 Convention on the Protection of the Underwater Cultural Heritage. UNESCO, Paris.
- 2017 Manual for activities directed at UCH: Human remains / venerated sites (Rule 5). <<http://www.unesco.org/new/en/culture/themes/underwater-cultural-heritage/unesco-manual-for-activities-directed-at-underwater-cultural-heritage/unesco-manual/general-principles/human-remains-and-venerated-sites/>>. Accessed February 24, 2018.
- 2018 Convention on the Protection of the Underwater Cultural Heritage. Paris, 2 November 2001. UNESCO. <<http://www.unesco.org/eri/la/convention.asp?order=alpha&language=E&KO=13520&toprint=yes>>. Accessed March 1, 2018.

United States Congress

- 1866 Executive Documents Printed by the Order of the House of Representatives, during the First Session of the Thirty-Ninth Congress, 1865-66 Printed in Sixteen Volumes. Government Printing Office, Washington, DC.
- 1966 "National Historic Preservation Act." 54 U.S.C. § 302101
- 1990 "Native American Graves Protection Act." Public Law 101-601; 25 U.S.C. 3001-3013)
- 2004 "Sunken Military Craft Act." 32 CFR 767

US Naval History and Heritage Command

- 1862 USS Monitor (1862). Catalog Number NH 50954. <<https://www.history.navy.mil/our-collections/photography/numerical-list-of-images/nhhc-series/nh-series/NH-50000/NH-50954.html>>. Accessed 1 March 2018.

United States Navy

- 1941a The USS ARIZONA burning after the Japanese attack on Pearl Harbor. Photographs and other Graphic Materials. ARC Identifier: 520601, NAIL Control Number: NWDNS-80-G-32420. National Archives, College Park, MD. <<https://catalog.archives.gov/id/520601>>. Accessed 1 March 2018.
- 1941b "This is Not a Drill" Dispatch; 12/7/1941. Records of Naval Districts and Shore Establishments, Record Group 181 <<https://catalog.archives.gov/id/596244>>. Accessed 20 June 2017.
- 1941c USS Arizona (BB39) View from port bow looking aft. Photographs and other Graphic Materials. ARC Identifier: 296939 NAIL Control Number: NRHS-181-PHNSSALPHOFC-USSAZ(3)-7. National Archives, College Park, MD. <<https://catalog.archives.gov/id/296939>>. Accessed 1 March 2018.
- 1942 USS Arizona 4358-42; Man coming out of turret #3. Photographs and other Graphic Materials. ARC Identifier: 296935 NAIL Control Number: NRHS-181-PHNSSALPHOFC-USSAZ(2)-4. National Archives, San Bruno, CA. <<https://catalog.archives.gov/id/296935>>. Accessed 1 March 2018.

The USS Monitor Center

- 2018a "Later Ironclads." The Mariner's Museum and Park. <<http://www.monitorcenter.org/later-ironclads/>>. Accessed 10 January 2018.
- 2018b "The USS Monitor Center." The Mariner's Museum and Park. <<http://www.monitorcenter.org>>. Accessed 10 January 2018.

Varmer, Ole

1999 The Case Against the “Salvage” of the Cultural Heritage. *Journal of Maritime Law and Commerce* (30) 2: 27-302.

2014 Underwater Cultural Heritage Law Study. U.S. Dept. of the Interior, Bureau of Ocean Energy Management, Headquarters, Herndon, VA. OCS Study BOEM 2014-005.

Varmer, Ole, Jefferson Gray, and David Alberg

2010 United States: Responses to the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage. *Journal of Maritime Archaeology* (5) 2. Springer, New York.

APPENDIX A: A BASIC BREAKDOWN OF INFORMATION

	<i>USS Arizona</i>	<i>H.L. Hunley</i>	<i>SS Caribsea</i>	<i>USS Monitor</i>	<i>HMT Bedfordshire</i>
Built	1914	1863	1919	1861	1935
Sank	1940	1864	1942	1862	1942
Loss of Life	Yes	Yes	Yes	Yes	Yes
Human Remains <i>in situ</i>	Yes	Yes	Yes	Yes	Yes
Human Remains recovered	Yes	Yes	None Known	Yes	4 graves in Ocracoke Graveyard, not intentionally recovered
Associated artifacts or clothing	Yes	Yes	None Known	Yes	Yes, was used to identify remains
Remains interred	Yes	Yes	None Known	Yes	Yes
Commercial or Military	Military	Military	Commercial	Military	Military-UK
Location	Hawaii	SC	NC	NC	NC
Hull Material	Steel	Iron	Steel	Wood with Iron Armor	Steel
Discovered	1941	1970	Unknown	1973	Unknown
Excavated	Not archaeologically	Yes, fully	None Known occurrences	Yes, Partially	None Known occurrences
Dive Site	Protected, only authorized personnel allowed to dive on site	Raised, however vessel was in black water and submerged but shallow	Yes, roughly 90 feet, so limited to Advanced Divers.	Out of recreational limits. Only technical divers able to access.	Yes, roughly 90 feet, so limited to Advanced Divers.
Management Plan	National Parks Service manages with US Navy approval. No excavation permitted.	General Services Administration is "managers". The state of South Carolina has custody but US Navy	Located roughly 10 miles off shore, the wreck falls in federal waters but is unmanaged	NOAA management style, partially excavated with loss of life. Excavation	NOAA managed, UK owned. <i>In situ</i> preservation preferred.

		controls. Fully Excavated with loss of life aboard. H.L. Hunley Commission and Clemson University employees are managers.	at the moment because of its former commercial status not falling under SMCA or Battle of the Atlantic	was to relieve pressure and preserve portions of significance since the vessel is susceptible to deterioration	
NRHP	1966/1989 (wreck)	1978	No	1974	2015

APPENDIX B: ANALYSIS ONE: RUBRIC FOR ASSESSMENT MANAGEMENT

LITERATURE

Vessel Addressed:

Citation Information:

Title of Article:

Title of Newspaper or Book:

Author(s):

Date Published: _____ / _____ / _____

Publisher:

Page Number(s):

Image: YES or NO

Database:

Library:

What is the topic of the article?

Does it address Management? If so what aspects of management?

Does it address the motivations behind management decisions? If so list.

Does it address previous management strategies undertaken? If so, what were they?

Does it address Management Issues (specifically HUMAN REMAINS or other major management issues)? If so what issues are discussed, what are the purposed solutions?

Was the article written by the Manager or a by a third party?

Is the article meant for a wide audience or professionals?

Does the article list specific legislation, management mandates, or previous management strategies?

Does it discuss MINOR challenges (visibility, location, etc.), not just the major direct “issues”?

Archaeological Methods

Any photographs, provenience for remains, site plans etc.

Has the vessel been archaeological surveyed?

Answer the following YES/NO Questions:		
Is the article meant to persuade the reader?	YES	NO
Does the article discuss the history surrounding the site?	YES	NO

Summary of article:

APPENDIX C: ANALYSIS ONE RESULTS SPREADSHEET

Doc #	Wreck	Management Document
1	<i>H.L. Hunley</i>	A Management Plan For Known and Potential United States Navy Shipwrecks
2	<i>H.L. Hunley</i>	H.L. Hunley Site Assessment
3	<i>H.L. Hunley</i>	<i>H. L. Hunley</i> Recovery Operations
4	<i>H.L. Hunley</i>	H.L. Hunley Project: 2004 Archaeological Finding and Progress Report
5	HMT <i>Bedfordshire</i>	Memorandum of Understand between the National Oceanic and Atmospheric Administration in the Department of Commerce of the Government of the United States of America and the Royal Navy as part of the Ministry of Defense of the United Kingdom of Great Britain and Northern Ireland regarding the Wreck of HMT <i>Bedfordshire</i>
6	HMT <i>Bedfordshire</i>	Personal Communication with Crystal Canterbury
7	<i>SS Caribsea</i>	Correspondence with NOAA regarding CARIBSEA
8	USS <i>Arizona</i>	World War II: Valor in the Pacific National Monument Pearl Harbor Unit
9	USS <i>Arizona</i>	Submerged Cultural Resources Study: USS Arizona Memorial and Pearl Harbor National Historic Landmark
10	USS <i>Arizona</i>	Resources Management Plan: USS Arizona Memorial
11	USS <i>Arizona</i>	Long-Term Management Strategies for USS ARIZONA, A Submerged Cultural Resource in Pearl Harbor
12	USS <i>Monitor</i>	U.S.S. Monitor National Marine Sanctuary: Management Plan 1983
13	USS <i>Monitor</i>	Charting a New Course for the <i>Monitor</i> : a Comprehensive, Long Range Preservation Plan with options for Management, Stabilization, Preservation, Recovery, Conservation, and Exhibition of Materials and Artifacts from the <i>Monitor</i> National Marine Sanctuary.
14	USS <i>Monitor</i>	U.S.S. Monitor National Marine Sanctuary: Management Plan January 1982
15	USS <i>Monitor</i>	Monitor National Marine Sanctuary Condition Report 2008
16	USS <i>Monitor</i>	Final Management Plan and Environment Survey of Monitor National Marine Sanctuary

Doc #	Author	Manager or Third Party
1	Joseph Beatty 111, Lynn B. Harris, Carleton Naylor, James D. Spirek, and Mark K. Ragan	Manager
2	Lary F. Murphy, , Daniel J. Lenihan, Christopher F. Amer, Matthew A. Russell, Robert S. Neyland, Richard Wills, Scott Harris, Adriane Askins, Timothy G. Smith, and Steven M Shope	Manager (working together), NPS (not manager but advisor)
3	Robert S. Neyland, Claire Peachey, Shea McLean, Harry Pecorelli III, Heather G. Brown, M. Scott Harris, Maria Jacobsen, Paul Mardikian, Michael Scafuri, and David L. Conlin	Manager
4	Maria Jacobsen	Manager
5	John Armor, Richard Allen	Managers and Owners
6	Crystal Canterbury	Manager of the cemetery, not the site
7	Tane Casserley, William Sassorossi	Manager
8	Samantha Richert	
9	Daniel J. Lenihan (editor) James P. Delgado, Bill Dickinson, Gary Cummins, Scott Henderson, Daniel A. Martinez, Larry E. Murphy,	Manager
10	NPS	Manager
11	Larry E. Murphy and Matthew A. Russell (Editors)	Managers and Owners
12	US Department of Commerce, National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resources Management Washington, DC and North Carolina Department of Cultural Resources, Raleigh, NC	Manager
13	US Department of Commerce, National Oceanic and Atmospheric Administration, National Ocean Service, Office of Ocean and Coastal Resources Management, Sanctuaries and Reserves Division.	Manager
14	US Department of Commerce, National Oceanic and Atmospheric Administration, Office of Coastal Zone Management Washington DC and North Carolina Department of Cultural Resources, Raleigh NC	Manager
15	National Marine Sanctuary Program.	Manager
16	U.S. Department of Commerce. National Oceanic and Atmospheric Administration. Office of National Marine Sanctuaries	Manager

Doc #	Year	Topic	Management Y/N
1	2004	SC known wreck management	Yes
2	1998	Hunley Site Assessment Pre excavation	Yes
3	2016	Full discussion of recovery of Hunley	Yes
4	2005	Discuss 2004 excavation	Yes
5	2016	Discusses the management vs owner of site	Yes
6	2017	Discussing management of the British Cemetery in Ocracoke	Yes
7	2017	The management of the wreck SS CARIBSEA	Yes
8	2010	Museum collection management	Yes
9	2001	History, artifact record, corrosion, the site as a war grave, and "the management experience"	Yes
10	1996	The management plan for the Memorial USAR	Yes
11	2008	Long term management goals and strategies for USS ARIZONA	Yes
12	1983	Set long term goals and discuss excavation of site, want annual updates	Yes
13	1998	Updating management plan to account for hull degradation	Yes
14	1982	Sanctuary Goals and site designation background, environment and description of the wreck	Yes
15	2008	Condition report of MONITOR	Yes
16	2013	Topic Specific Action Plans to follow, outlines the program activities for MNMS over the next five years and beyond, along with staffing and budget needs, and performance measures."	Yes

Doc #	Note Specifics	Motivations Y/N	Note Specifics
1	Artifact reburial, guide future management of wrecks, set the HL Hunley authority for management,	No	Said this would be discussed in a different management doc
2	History of the site and pre-excavation management suggestions by NPS	Yes	To protect heritage from looting
3	Pre-excavation management, excavation strategies, ownership, conservation, exhibit plans. Human remains addressed in lab is set-up, containers, preservation, and potential excavation strategies not detrimental to human remains	Yes	All plans assume HR are aboard but necessity dictates excavation
4	Problems associated with the wreck that need to be managed, use NOAA standardized format	No	
5	Yielding management of a foreign vessel to the US	Yes	Significance
6	Human Remains in Brit Cem, Graves are maintained by USCG, plaques are British War Grave Commission	No	
7	The lack of management because it is not officially a military vessel and does not fall under SMCA or any official NOAA management	Yes	No legal right to manage in that capacity.
8	Collections Management	Yes	Era is significant to American history and managed by NPS/Navy
9	History of the site management, from going from strictly managed (no interaction) to being able to survey and monitor (including oil)	Yes	Want to continue exploring sites with "known" history to corroborate the "facts" or clarify
10	Of the USAR Memorial	Yes	Emotions and patriotism
11	Long term management goals and strategies for USS Arizona	Yes	Significance, debate of preservation or natural decay
12	Update on the previous years management plan. Largest update is the expressed desire to excavate.	Yes	
13	Updating management plan to account for increased degradation	Yes	update plan to ensure longevity of wreck
14	Goals for the sanctuary, limitations	Yes	protect, preserve etc
15	Problems associated with the wreck that need to be managed, use NOAA standardized format	Yes	preventing further deterioration of the wreck
16	Creates a specific plan for management issues	Yes	Strengthen resource protection and education and public awareness

Doc #	Management Issues Y/N	Note Specifics	Professional or Public Audience
1	Yes	Human Remains and Ownership	Professional
2	Yes	Human Remains, Looting, and excavation	Professional
3	Yes	All plans assume Human Remains are aboard but necessity dictates excavation	Professional
4	Yes	Human Remains– Excavation, ID, and Burial.	Professional
5	Yes	Human Remains - in situ if at all possible, if brought up they are not artifacts, and the property of UK, NOAA must notify UK immediately.	Professional
6	No		Public
7	No		Public
8	Yes	Human Remains are protected by ARPA.	Professional
9	Yes	Oil, no living person in hull,	Professional
10	Yes	Main issues such as oil, looting and burials	Professional
11	No	Not a lot of human remains discussed, mostly taken from other sources, not primary to doc itself	professional
12	Yes	No human remains discussed, mostly excavation and conservation	Professional
13	Yes	No human remains discussed, mostly hull degradation	Professional
14	Yes	No human remains discussed, but archaeological collection and isolation of site from public	Professional
15	Yes	No human remains discussed, just deterioration	Professional
16	Yes	Human remains discussed	Professional and Public

Doc #	Legislation Mentioned	Minor Challenges Y/N	Specifics
1	1991) cannot excavate without permission if remains are present	Yes	A lot
2	Not specifically about management	Yes	Planning to excavate
3	Associated to ownership	Yes	
4	NO	NO	
5	UNESCO 2001 Convention - human remains	Yes	Publicity
6	No	NO	
7	SMCA-and why it doesn't apply, NOAA, State vs Federal Waters	NO	
8	Discusses NAGPRA and ARPA	Yes, a little	
9	Notes a lack of legislation when attempting to plan management	Yes	Oil's impact on environment
10		Yes	
11		Yes	A lot
12	Monitor National Marine Sanctuary establish	Yes	Visibility
13		Yes	Location causes problems for access and fishermen.
14	Monitor National Marine Sanctuary and agencies full of legislative action	No	
15	Founding Monitor National Marine Sanctuary	yes	Increased corrosion
16	Appendices	Yes	

Doc #	Archaeological Method Notes	Surveyed Y/N
1	Excavation and surveys (remote sensing)	Yes
2	Remote sensing and survey.	Yes
3	Site excavation and interior excavation	Yes
4	Excavation, documentation, osteology, and facial reconstruction and then compare to historical knowledge.	Yes
5	Recording and monitoring	Yes
6	N/A	Yes
7	Surveyed by NOAA and BAREG	Yes
8	Discusses how it should be conducted but not previous archaeological research on site.	N/A
9	survey	yes
10	cites Leinihan 1989 as the base line conducted by SRC in 1989	Yes
11	Discussed the surveys conducted	Yes
12	Should be implemented	Not in detail
13	Survey and excavation	Yes
14	Survey with remote sensing	yes
15	Not heavily relied on to write this	Yes
16	Created an archaeological action plan	Yes

APPENDIX D: ANAYLYSIS TWO CODEBOOK

Number of articles when vessel name (Case Study) is searched (Using vessel name and OneSearch and available online)

1. USS Monitor: 50,049, read
2. H.L. Hunley: 2,876, read
3. USS Arizona: 47,867, read
4. SS Caribsea: 74, read
5. HMT Bedfordshire: 356, read

Codes:

CSNAME (Case Study Name)

1 - USS Monitor, 2 - H.L. Hunley, 3 - USS Arizona 4 - SS Caribsea, 5 - HMT Bedfordshire

YRLOST (Year Case Study Sank) – Only if listed in the article, Blank – Not mentioned

DWNLDNUM (Down Load Number recorded) Corresponding to file assigned

TITLE (Title of Work)

AUTHOR (Name of Author)

PUBDATE (Full Publication Date) (00/00/0000) (00 assigned if not specific date designated)

PUBYEAR (Publication Year) (0000)

PAGENUMBERS (Page numbers of articles, removing cover pages)

TYPEOFMEDIA (Book, Article, video)

1 – Book, 2 –Article, 3 – Video, 4 – Thesis, 5 – Management Report, 6 – Primary Letters

MANAGDISC (Management Discussion)

0 – No, 1–Yes

MANAGEFOCUS (Management Document or Tangentially related)

0 – No, 1–Yes

HRDISC (Human Remains Discussed)

0 – No, 1–Yes

HRFOCUS (Human Remains Focused)

0 – No, 1–Yes

HISTDISC (History Discussion)

0 – No, 1–Yes

HISTFOCUS (History Focuses Discussion)

0 – No, 1–Yes

ARCHAEODISC (Archaeology Discussion)

0 – No, 1–Yes

ARCHAEOFOCUS (Archaeology Focused)

0 – No, 1–Yes

PROFAUDIENCE (Professional Audience)

0 – No, 1–Yes

PUBLICAUDIENCE (Public Audience)

0 – No, 1–Yes

MENTOTHCS (Does it mention other case studies?)

0 – No, 1–Yes

WHICHCSMEN CS1 (Which case studies are mentioned? USS Monitor)

0 – No, 1–Yes, Blank – No other case studies mention (corresponds with 0 from MENTOTHCS)

WHICHCSMEN CS2 (Which case studies are mentioned? H.L. Hunley)

0 – No, 1–Yes, Blank – No other case studies mention (corresponds with 0 from MENTOTHCS)

WHICHCSMEN CS3 (Which case studies are mentioned? USS Arizona)

0 – No, 1–Yes, Blank – No other case studies mention (corresponds with 0 from MENTOTHCS)

WHICHCSMEN CS4 (Which case studies are mentioned? SS Caribsea)

0 – No, 1–Yes, Blank – No other case studies mention (corresponds with 0 from MENTOTHCS)

WHICHCSMEN CS5 (Which case studies are mentioned? HMT Bedfordshire)

0 – No, 1–Yes, Blank – No other case studies mention (corresponds with 0 from MENTOTHCS)

CW (Sunk during Civil War)

0 – No, 1–Yes

WWII (Sunk during WWII)

0 – No, 1–Yes

APPENDIX E: ANALYSIS TWO RESULTS SPREADSHEET

CS NAME	DWN LD NUM	YR LOST	TITLE 30 Characters	AUTHOR 20 Characters	PUB DATE	PUB YEAR
1	1	1862	USS Monitor: a Hist	John D. Broadwater	02/01/2012	2012
1	2	1862	Wrought Iron from th	J. S. Boesenberg	07/06/2006	2006
1	3	1862	The Excavation and S	Susanne Grieve	00/00/2008	2008
1	4	1862	Virginia Museum Craw	Linda Wheeler	09/14/15	2015
1	5	1862	Ironclad Revolution:	Anna Gibson Holloway	01/00/2012	2012
1	6	1862	Monitor Builders: a	William N. Still	00/00/1988	1988
1	7		Naval Architectural	Michael Rugnetta	07/00/2006	2006
1	8	1862	The USS Monitor: a P	David Krop and Anna	00/00/2012	2012
1	9		Spectroscopic Identi	Desmond C. Cook	06/24/2005	2005
1	10	1862	NOAA and Partners to	NewsRX Health and Sc	08/30/2009	2009
1	11		USS Monitor	Diana Swain	08/05/2002	2002
1	12		USS Monitor: Results	J. Barto Arnold, III	00/00/1992	1992
1	13	1862	"the Clangor of that	David A. Mindell	04/00/1995	1995
1	14		Remains of USS Monit	Ocean News and Techn	12/00/2013	2013
1	15		Two Civil War Sailor	Cimmerce Depart Docu	03/08/2013	2013
1	16	1862	Ships of the World:+	Houghton Mifflin	00/00/1997	1997
1	17		Scanner Maps USS Min	techfront	02/00/2006	2006
1	18	1862	Power Tool USS Monit	Jon Guttman	05/00/2007	2007
1	19		Cereminal Christeni	Ocean News and Techn	08/00/2006	2006
1	20		Museum and NOAA to B	Ocean News and Techn	12/00/2004	2004
1	21	1862	Profile: Efforts to	NPR	07/27/2002	2002
1	22	1862	Conserving USS Monit	DAVID Krop	07/00/2005	2005
1	23		USS Monitor Center C	Naval History	06/00/2006	2006
1	24	1862	USS Monitor turret r	Brad Brett	12/00/2002	2002
1	25	1862	Interview: John Broa	NPR	08/30/2002	2002
1	26	1862	Faces of two USS Mon	Steve Szotak	06/00/2012	2012
1	27		Profile: Recovery Si	NPR	07/22/2001	2001
1	28	1862	Corrsion Mitigation	CS Brossia nad M Yun	10/00/2007	2007
1	29		Museum News: USS Mon	Leonard Panaggio	07/00/2006	2006
1	30	1862	The USS Monitor and	Mary H Manhein	10/00/2013	2013
1	31	1862	The Union USS Monito	Kit Bonner	04/00/213	2013
1	32	1862	USS Monitor wreck pr	SC Cederquist	08/00/2000	2000
1	33	1862	Monitor rescuer reme	Civil war times	10/00/2013	2013
1	34		USS Monitor Center t	Mid Atlantic Constru	12/01/2006	2006
1	35		Museum News: Mariner	Leonard Panaggio	10/00/2003	2003
1	36		Restored Silverwarer	Susan Suprey	04/00/2003	2003
1	37		Seagoing Marine in t	Suzanne Pool-Camp, D	05/00/2012	2012
1	38		Naval Sea Systems Co	Christopher Murray	08/00/2001	2001
1	39		John Ericsson to the	John Ericsson	01/08/1862	1862
1	40		John Cunningham to a	John Cunningham	10/03/1862	1862
1	41		USS Housatonice	NPS	00/00/2005	2005
2	1	1864	H.L. Hunley Recovery	Robert S. Neyland Cl	00/00/2016	2016
2	2	1864	Did a "Lucky Shot	Rachel M. Lance, Hen	0/00/2017	2017
2	3	1864	Did the Crew of the	Rachel M Lance, Rich	00/00/2016	2016

CS NAME	DWN LD NUM	YR LOST	TITLE 30 Characters	AUTHOR 20 Characters	PUB DATE	PUB YEAR
2	4	1864	Air Blast Injuries K	Rachel M. Lance, Luc	07/23/2017	2017
2	5	1864	Scientists Solve Mys	Ben Upton	08/31/2017	2017
2	6	1864	Confederate Saboteur	Mark K Ragan	00/00/2015	2015
2	7	1864	Marine Pumps Help to	WORLD PUMPS	12/00/2002	2002
2	8	1864	THE "H.L. HUNLEY"	150 Cong Rec H 757	03/04/2004	2004
2	9	1864	Analysis: Ceremony h	Weekend Edition Sund	04/08/2004	2004
2	10	1864	H.L. Hunley Finally	Rowland, TIm, Rowlan	05/00/2015	2015
2	11	1864	INTERVIEW: JOHN BRUM	All Things Considere	08/08/2000	2000
2	12	1864	SCIENTISTS DISCOVER	Duprey, Susan	10/00/2005	2005
2	13	1864	Raise the Hunley	Wilson, Jim	01/00/2002	2002
2	14	1864	The H.L. Hunley: Sec	Oeland, Glenn	07/00/2002	2002
2	15	1864	H. L. Hunley Reveale	Michael P. Scafuri	00/00/2017	2017
2	16	1864	Hunting Free and Bou	Nestor G Gonzales, P	00/00/2004	2004
2	17	1864	Raising the Hunley:	Maureen Byko	03/00/2001	2001
2	18	1864	Finite Element Analy	Aditya Sai Nag Chora	05/00/2011	2011
2	19	1864	The Day the Johnboat	Carl Naylor, John Na	02/15/2010	2010
2	20	1864	Archaeology in the P	King Adam	08/30/2016	2016
2	21	1864	The David Meets the	Campbell, R Thomas	03/00/2002	2002
2	22	1864	The Applicabilty of	Liisa M.E. Naesaenen	00/00/2013	2013
2	23	1864	Conservation and Man	Paul Mardikian	00/00/2004	2004
2	24		Hunley Update	Lenihan, Daniel	08/00/1997	1997
2	25		Skeletal Remains fro	William D. Stevens a	00/00/2006	2006
2	26	1864	Science may have Sol	kaplan, sarah	08/24/2017	2017
2	27		Visiting the Hunley	Robert Naeye	02/00/2013	2013
2	28	1864	Crucial Factors for	Melissa M. Ashmore	03/00/2012	2012
2	29		Mail Call	Christopher Rucker	00/00/2017	2017
2	30	1864	The Sub that Disappe	Holden, Constance	04/16/2004	2004
2	31	1864	Artist Brings Hunley	Bleever, Bill	04/00/2004	2004
2	32		In the Final Analysi	James J Robinson	03/00/2001	2001
2	33	1864	Raising the Hunley	Civil War Times	05/00/2002	2002
2	34	1864	The Hunley Resurface	Ethier, Eric	12/00/2000	2000
2	35	1864	Hunley Crewmen Found	Schuyler Kropf	12/00/1999	1999
2	36	1864	Hunley Emerges from	Militart History	05/01/2012	2012
2	37	1864	Secret of the Hunley	Fred L. Schultz	04/00/2001	2001
2	38	1864	What Really Sank the	Linda Wheeler and Sa	06/00/2013	2013
2	39	1864	Hunley's Next Milest	Brian Hicks	08/00/2014	2014
2	40	1864	The Hunley Whispers	Gary Fird	03/00/2004	2004
2	41		Unraveling the puzzl	America's Civil War	03/01/2009	2009
2	42		Celebrations	Andrew Moore	09/00/2016	2016
2	43	1864	The Civil War on the	Susannah J Ural	04/00/2014	2014
3	1	1941	The Weeping Monument	Valerie Rissel	04/00/2012	2012
3	2		Analysis of bacteria	McNamara, Chris, Kri	00/00/2009	2009
3	3	1941	Investigating archae	Mim Foecke, Li Ma, M	00/00/2010	2010
3	4	1941	Inside the Sunken Ar	Woods Hole Oceanogra	00/00/2017	2017

CS NAME	DWN LD NUM	YR LOST	TITLE 30 Characters	AUTHOR 20 Characters	PUB DATE	PUB YEAR
3	5	1941	Corrosion studies on	Brent Wilson, Donald	10/00/2007	2007
3	6	1941	Science for Stewards	Russel Murphy Johnso	00/00/2004	2004
3	7		ARIZONA DRAWS THE CO	James Vivian	00/00/2007	2007
3	8	1941	Exhibiting Patriotis	Teresa Bergman	00/00/2013	2013
3	9		Blending History wit	Gebelein, Jennifer	00/00/2009	2009
3	10	1941	Preserving the USS A	Ronccone Kelly	09/00/2006	2006
3	11	1941	One of the Last Surv	Wootson, Cleve R JR	10/09/2016	2016
3	12	1941	Steel Hull Corrosion	Johnson Medlin Russe	00/00/2009	2009
3	13		AutoblogGreen: Ship	Newstex Trade & Indu	05/28/2015	2015
3	14	1941	The USS Arizona wasn	The Washington Post	12/06/2016	2016
3	15		Witness to History P	OAH Magazine of Hist	01/01/2004	2004
3	16		AN ARIZONA OBLIGATIO	James Vivian	00/00/2002	2002
3	17		Long-Term Corrosion	James D. Moore III	11/17/2015	2015
3	18		SCR USAR	Lenihan, Delgado, Di	00/00/2001	2001
3	19	1941	The USS Arizona's la	Izadi, Elahe	02/10/2015	2015
3	20	1941	A Minimum-Impact Met	Russell, Conlin, Mur	00/00/2006	2006
3	21		USS Arizona Survivor	Bosworth, Brandon	12/03/2014	2014
3	22	1941	Ships of the World :	Paine, Lincoln P.	00/00/1997	1997
3	23	1941	US Navy (retired) U	Lt. Cmdr. Louis Cont	02/00/2017	2017
3	24	1941	USS America's Flag M	Fulgham, Tiarra	10/04/2014	2014
3	25	1941	WWII, USS Arizona Me	Verbis, Drew	12/09/2013	2013
3	26	1941	USS Arizona survivor	Ramirez, Isis M	12/27/2011	2011
3	27	1941	Enshrining History:	Marjorie Kelly	00/00/1997	1997
3	28	1941	USS Arizona Memorial	Logico, Mark	07/20/2011	2011
3	29	1941	Pacific Fleet Band H	Robert Stirrup	12/09/2010	2010
3	30		Underwater Construct	Sisco, Dustin W	09/12/2012	2012
3	31		7th Dive Detachment	Looper, Lauren	07/09/2012	2012
3	32	1941	Recovering the Past	James P. Delgado	00/00/1992	1992
3	33	1941	USS Arizona Survivor	Michael A. Lantron	12/03/2008	2008
3	34		Recon dives USS Ariz	U.S. Department of D	05/07/2013	2013
3	35	1941	USS Arizona Gun Barr	Joyce, John	04/11/2012	2012
3	36	1941	USS Arizona Survivor	Blair Martin	12/09/2009	2009
3	37	1941	Boat Dock at USS Ari	Congressional Docume	01/18/2012	2012
3	38	1941	Arizona Survivor Vis	Chang, Rosalie	9/19/2014	2014
3	39	1941	Chaplain of the Mari	U.S. Department of D	11/27/2013	2013
3	40	1941	Strickland Commemora	Interior Department	12/7/2010	2010
3	41	1941	And the Band Played	camp, Dick	12/00/2009	2009
3	42	1941	Survivors Honored at	Johnny Michael	12/8/2006	2006
3	43	1941	Preservation at Pear	Larry Murphy	1987	1987
3	44	1941	Ronald Reagan Sailor	Marc Rockwell-Pate	7/3/2003	2003
3	45	1941	A Place of Honor: Fi	Mark Fayloga	5/19/2008	2008
3	46	1941	USS Arizona Memorial	Michael O'Day	2/28/2008	2008
3	47	1941	USS ARIZONA PRESERVA	Lesjak, David	12/00/2005	2005
3	48	1941	Diving USS Arizona	Poff, William	12/00/2006	2006

CS NAME	DWN LD NUM	YR LOST	TITLE 30 Characters	AUTHOR 20 Characters	PUB DATE	PUB YEAR
3	49		Memorial To USS Ariz	Booher, Glen Clay	12/00/1995	1995
4	1	1942	We at Sea	Ctn Nicholas Manolis	00/00/1949	1949
4	2	1942	GHOSTS of OPERATION	Hoppe, Jonathan L.	00/00/2016	2016
4	3	1942	Graveyard of the Atl	Stick, David	00/00/1952	1952
4	4		SHIPPING AND MAILS	New York Times	08/24/1941	1941
4	5		Other 28 -- No Title	New York Herald Trib	06/03/1941	1941
5	1		National Register of	Interior Department	07/01/2015	2015
5	2	1942	Waves of Carge:	John Michael Wagner	04/00/2010	2010
5	3		Notice of Intent To	Commerce Department	01/06/2016	2016
5	4	1942	NOAA locates US Navy	NewsRx Science	10/04/2009	2009

CS NAME	DWN LD NUM	PAGE NUMBERS	TYPE OF MEDIA	MAN AGE DISC	MAN AGE FOCUS	HR DISC	HR FOCUS	HIST DISC	HIST FOCUS	ARCH AEO DISC	ARCH AEO FOCUS	PROF AUD IENCE
1	1	241	1	1	1	1	0	1	0	1	0	0
1	2	19	2	1	1	0	0	1	0	1	0	1
1	3	10	2	1	1	1	0	1	0	1	0	1
1	4	1	2	1	0	0	0	1	0	0	0	0
1	5	234	4	1	0	1	0	1	1	1	0	1
1	6	51	5	1	0	0	0	1	1	0	0	1
1	7	1	2	0	0	0	0	1	1	1	0	0
1	8	5	2	1	1	0	0	1	0	1	0	1
1	9	1	2	1	1	0	0	0	0	0	0	1
1	10	1	2	1	1	0	0	1	0	0	0	0
1	11	1	2	0	0	0	0	1	0	1	1	0
1	12	11	2	1	0	0	0	0	0	1	1	1
1	13	29	2	0	0	1	0	1	1	0	0	1
1	14	1	2	1	0	1	1	1	0	1	0	0
1	15	1	2	1	1	1	1	1	0	0	0	0
1	16	3	1	0	0	1	0	1	1	1	0	0
1	17	2	2	1	0	0	0	0	0	1	0	0
1	18	2	2	1	0	0	0	1	0	1	0	0
1	19	1	2	1	1	0	0	1	0	0	0	0
1	20	1	2	1	1	0	0	0	0	0	0	0
1	21	2	2	1	0	1	1	1	0	1	1	0
1	22	1	2	1	1	1	0	1	0	1	0	0
1	23	2	2	1	1	0	0	1	0	0	0	0
1	24	2	2	1	0	1	0	1	0	1	1	0
1	25	2	2	1	0	1	0	1	0	1	1	0
1	26	2	2	1	0	1	1	1	0	1	0	0
1	27	2	2	1	0	1	0	1	0	1	1	0
1	28	5	2	1	1	0	0	1	0	1	0	1
1	29	1	2	1	1	0	0	0	0	0	0	0
1	30	1	2	1	0	1	1	1	0	1	0	1
1	31	7	2	1	0	0	0	1	1	1	0	0
1	32	1	2	1	1	0	0	1	0	1	0	1
1	33	1	2	1	0	0	0	1	1	1	0	0
1	34	1	2	1	1	0	0	0	0	0	0	0
1	35	1	2	1	1	0	0	0	0	1	0	0
1	36	2	2	1	1	0	0	1	0	1	0	0
1	37	5	2	0	0	0	0	0	1	1	0	0
1	38	1	2	1	0	0	0	0	0	1	1	1
1	39	2	6	0	0	0	0	0	1	1	0	1
1	40	18	6	0	0	0	0	0	1	1	0	1
1	41	312	5	0	0	0	0	0	1	1	0	1
2	1	348	1	1	1	1	0	1	0	1	0	1
2	2	9	2	1	0	1	1	1	0	1	0	1
2	3	7	2	1	0	1	1	1	0	1	0	1

CS NAME	DWN LD NUM	PAGE NUMBERS	TYPE OF MEDIA	MAN AGE DISC	MAN AGE FOCUS	HR DISC	HR FOCUS	HIST DISC	HIST FOCUS	ARCH AEO DISC	ARCH AEO FOCUS	PROF AUD IENCE
2	4	20	2	1	0	1	1	1	0	1	0	1
2	5	1	2	1	0	1	1	1	0	1	0	1
2	6	251	1	0	0	0	0	1	1	0	0	0
2	7	2	2	1	1	0	0	1	0	1	0	0
2	8	1	2	1	1	1	0	1	0	1	0	0
2	9	1	2	1	1	1	0	1	0	1	0	0
2	10	1	2	1	1	0	0	1	0	1	0	0
2	11	2	2	1	0	1	0	1	0	1	1	0
2	12	2	2	1	0	0	0	1	1	1	0	0
2	13	2	2	1	0	1	0	1	0	1	1	0
2	14	6	2	1	0	1	0	1	0	1	1	0
2	15	14	2	1	0	0	0	1	0	1	1	1
2	16	14	2	1	1	0	0	1	0	1	0	1
2	17	3	2	1	1	1	0	1	0	1	0	0
2	18	78	4	1	1	1	0	1	0	0	0	0
2	19	259	1	0	0	1	0	1	0	1	1	0
2	20	249	1	1	0	1	0	1	0	1	1	0
2	21	8	2	0	0	1	0	1	1	0	0	0
2	22	10	2	1	1	0	0	1	0	0	0	1
2	23	12	2	1	1	1	1	0	0	0	1	1
2	24	1	2	0	0	0	0	1	0	1	1	0
2	25	15	2	1	0	1	1	0	0	1	0	0
2	26	2	2	1	0	1	1	1	0	1	1	0
2	27	1	2	1	0	1	0	1	0	1	0	0
2	28	161	4	1	1	0	0	1	0	1	0	1
2	29	1	2	0	0	0	0	1	1	1	0	0
2	30	1	2	1	1	1	0	1	0	1	0	0
2	31	3	1	1	0	1	0	1	0	1	1	0
2	32	1	2	1	0	0	0	1	0	1	0	0
2	33	1	2	1	1	1	0	1	0	1	0	0
2	34	3	2	1	0	1	0	1	1	1	0	0
2	35	1	2	1	0	1	1	1	0	1	0	0
2	36	1	2	1	1	1	0	1	0	0	0	0
2	37	1	2	1	1	1	0	1	0	1	0	0
2	38	1	2	1	0	1	0	1	1	0	0	0
2	39	1	2	1	1	0	0	1	0	0	0	0
2	40	2	2	1	1	1	0	1	0	0	0	0
2	41	1	2	1	1	0	0	1	0	1	0	0
2	42	1	2	1	0	0	0	0	0	0	0	0
2	43	1	2	1	0	0	0	1	1	1	0	0
3	1	135	4	1	1	1	0	1	0	1	0	1
3	2	5	2	0	0	1	0	1	0	1	0	1
3	3	12	2	1	1	0	0	1	0	1	0	1
3	4	1	2	0	0	0	0	1	1	1	1	0

CS NAME	DWN LD NUM	PAGE NUMBERS	TYPE OF MEDIA	MAN AGE DISC	MAN AGE FOCUS	HR DISC	HR FOCUS	HIST DISC	HIST FOCUS	ARCH AEO DISC	ARCH AEO FOCUS	PROF AUD IENCE
3	5	5	2	1	0	0	0	1	0	1	0	1
3	6	10	2	1	0	0	0	1	0	1	1	1
3	7	11	2	0	0	0	0	1	1	0	0	0
3	8	253	1	1	1	1	0	1	0	0	0	0
3	9	14	2	0	0	0	0	0	0	1	0	1
3	10	1	2	1	0	0	0	1	0	1	0	0
3	11	1	2	1	0	1	0	1	1	0	0	0
3	12	2	2	1	0	1	0	1	0	1	0	1
3	13	1	2	1	1	1	0	1	0	0	0	0
3	14	0	3	0	0	1	0	1	1	0	0	0
3	15	1	2	0	0	0	0	1	0	0	0	0
3	16	26	2	0	0	0	0	1	1	0	0	0
3	17	14	2	1	1	0	0	0	0	1	0	1
3	18	218	5	1	1	1	0	1	0	1	0	1
3	19	3	2	1	0	1	1	1	0	0	0	0
3	20	9	2	1	1	1	0	1	0	1	0	1
3	21	1	2	1	1	1	0	1	0	0	0	0
3	22	680	1	1	0	1	0	1	1	0	0	0
3	23	3	2	0	0	0	0	1	1	0	0	0
3	24	2	2	0	0	0	0	1	0	0	0	0
3	25	2	2	1	0	1	0	1	0	0	0	0
3	26	2	2	1	0	1	1	1	0	0	0	0
3	27	13	2	1	1	1	0	1	0	1	0	0
3	28	2	2	0	1	0	0	1	0	0	0	0
3	29	1	2	0	0	0	0	1	0	0	0	0
3	30	1	2	1	1	0	0	0	0	0	0	0
3	31	2	2	1	1	0	0	0	0	0	0	0
3	32	12	2	1	0	1	0	1	0	1	1	1
3	33	1	2	1	0	1	0	1	0	0	0	0
3	34	1	2	0	0	0	0	0	0	0	0	0
3	35	2	2	1	1	0	0	1	0	0	0	0
3	36	2	2	1	0	1	0	1	0	0	0	0
3	37	1	2	1	1	1	0	1	0	0	0	0
3	38	1	2	0	0	0	0	1	0	0	0	0
3	39	1	2	0	0	0	0	1	0	0	0	0
3	40	1	2	1	1	0	0	1	0	0	0	0
3	41	7	2	1	0	1	0	1	1	0	0	0
3	42	1	2	1	0	0	0	1	0	0	0	0
3	43	6	2	1	1	1	0	1	0	1	0	1
3	44	1	2	1	0	0	0	1	0	0	0	0
3	45	3	2	1	1	1	0	1	0	0	0	0
3	46	2	2	1	1	0	0	0	0	0	0	0
3	47	1	2	1	1	1	0	1	0	1	0	0
3	48	3	2	1	1	1	0	1	0	1	0	0

CS NAME	DWN LD NUM	PAGE NUMBERS	TYPE OF MEDIA	MAN AGE DISC	MAN AGE FOCUS	HR DISC	HR FOCUS	HIST DISC	HIST FOCUS	ARCH AEO DISC	ARCH AEO FOCUS	PROF AUD IENCE
3	49	1	2	0	0	1	0	1	0	0	0	0
4	1	192	1	0	0	0	0	1	1	0	0	0
4	2	5	2	1	1	1	0	1	0	1	0	0
4	3	276	1	0	0	0	0	1	1	0	0	0
4	4	1	2	0	0	0	0	1	1	0	0	0
4	5	1	2	0	0	0	0	1	1	0	0	0
5	1	3	2	1	1	1	0	1	0	0	0	1
5	2	195	4	1	0	0	0	1	1	1	1	1
5	3	4	2	1	1	0	0	1	0	1	0	0
5	4	1	2	1	0	0	0	1	0	0	0	0

CS NAME	DWN LD NUM	PUBLIC AUD IENCE	MENT OTHCS	WHICH CS MENT CS1	WHICH CS MENT CS2	WHICH CS MENT CS3	WHICH CS MENT CS4	WHICH CS MENT CS5	CW	WWII
1	1	1	1	0	1	0	0	0	1	0
1	2	0	0						1	0
1	3	0	0						1	0
1	4	1	0						1	0
1	5	0	0						1	0
1	6	0	0						1	0
1	7	1	0						1	0
1	8	0	0						1	0
1	9	0	1	0	1	0	0	0	1	0
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1	17	1	0						1	0
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1	19	1	0						1	0
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1	21	1	0						1	0
1	22	1	0						1	0
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1	25	1	0						1	0
1	26	1	0						1	0
1	27	1	0						1	0
1	28	0	0						1	0
1	29	1	0						1	0
1	30	0	0						1	0
1	31	1	0						1	0
1	32	0	0						1	0
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1	40	0	0						1	0
1	41	0	1	0	1	0	0	0	1	0
2	1	0	1	1	0	1	0	0	1	0
2	2	0	0						1	0
2	3	0	0						1	0

CS NAME	DWN LD NUM	PUBLIC AUD IENCE	MENT OTHCS	WHICH CS MENT CS1	WHICH CS MENT CS2	WHICH CS MENT CS3	WHICH CS MENT CS4	WHICH CS MENT CS5	CW	WWII
2	4	0	0						1	0
2	5	0	0						1	0
2	6	1	0						1	0
2	7	1	0						1	0
2	8	1	0						1	0
2	9	1	0						1	0
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2	12	1	0						1	0
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2	14	1	0						1	0
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2	16	0	0						1	0
2	17	1	0						1	0
2	18	1	1	0	0	1	0	0	1	0
2	19	1	1	1	0	0	0	0	1	0
2	20	1	0						1	0
2	21	1	0						1	0
2	22	0	0						1	0
2	23	0	0						1	0
2	24	1	1	1	0	0	0	0	1	0
2	25	1	0						1	0
2	26	1	0						1	0
2	27	1	0						1	0
2	28	0	0						1	0
2	29	1	0						1	0
2	30	1	0						1	0
2	31	1	0						1	0
2	32	1	0						1	0
2	33	1	0						1	0
2	34	1	0						1	0
2	35	1	0						1	0
2	36	1	0						1	0
2	37	1	0						1	0
2	38	1	0						1	0
2	39	1	0						1	0
2	40	1	0						1	0
2	41	1	0						1	0
2	42	1	0						1	0
2	43	1	0						1	0
3	1	0	0						0	1
3	2	0	0						0	1
3	3	0	1	0	1	0	0	0	0	1
3	4	1	0						0	1

CS NAME	DWN LD NUM	PUBLIC AUD IENCE	MENT OTHCS	WHICH CS MENT CS1	WHICH CS MENT CS2	WHICH CS MENT CS3	WHICH CS MENT CS4	WHICH CS MENT CS5	CW	WWII
3	5	0	0						0	1
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3	11	1	0						0	1
3	12	0	0						0	1
3	13	1	0						0	1
3	14	1	0						0	1
3	15	1	0						0	1
3	16	1	0						0	1
3	17	0	1	1	1	0	0	0	0	1
3	18	0	0						0	1
3	19	1	0						0	1
3	20	0	0						0	1
3	21	1	0						0	1
3	22	1	1	1	1	0	0	0	0	1
3	23	1	0						0	1
3	24	1	0						0	1
3	25	1	0						0	1
3	26	1	0						0	1
3	27	1	0						0	1
3	28	1	0						0	1
3	29	1	0						0	1
3	30	1	0						0	1
3	31	1	0						0	1
3	32	0	1	1	0	0	0	0	0	1
3	33	1	0						0	1
3	34	1	0						0	1
3	35	1	0						0	1
3	36	1	0						0	1
3	37	1	0						0	1
3	38	1	0						0	1
3	39	1	0						0	1
3	40	1	0						0	1
3	41	1	0						0	1
3	42	1	0						0	1
3	43	0	0						0	1
3	44	1	0						0	1
3	45	1	0						0	1
3	46	1	0						0	1
3	47	1	0						0	1
3	48	1	0						0	1

CS NAME	DWN LD NUM	PUBLIC AUD IENCE	MENT OTHCS	WHICH CS MENT CS1	WHICH CS MENT CS2	WHICH CS MENT CS3	WHICH CS MENT CS4	WHICH CS MENT CS5	CW	WWII
3	49	1	0						0	1
4	1	1	0						0	1
4	2	1	1	1	0	0	0	1	0	1
4	3	1	1	1	0	0	0	0	0	1
4	4	1	0						0	1
4	5	1	0						0	1
5	1	1	0						0	1
5	2	0	1	1	1	0	1	0	0	1
5	3	1	1	1	0	0	0	0	0	1
5	4	1	0						0	1

APPENDIX F: IMAGE OF USS *MONITOR* MEMORIAL IN ARLINGTON NATIONAL CEMETERY



Image of the Memorial above the two interred remains of USS *Monitor*'s sailor listing the full crew who did not survive (Photo by author 2017).

APPENDIX G: IMAGE OF *H.L. HUNLEY* GRAVES IN MAGNOLIA CEMETERY



Magnolia Cemetery Plot for all three *H.L. Hunley* crews (Photo by author 2017).



An example of the dilapidated signage at Magnolia Cemetery (Photo by author 2017).

APPENDIX H: IMAGES OF USS *ARIZONA* GRAVE IN ARLINGTON NATIONAL CEMETERY



The headstone of Francis Jerome Morse, one of the sets of brothers who died on USS *Arizona* interred in Arlington National Cemetery (Photo by author 2017).



The headstone of Norman Roi Morse, one of the sets of brothers who died on USS *Arizona* interred in Arlington National Cemetery (Photo by author 2017).

APPENDIX I: IMAGE OF HMT *BEDFORDSHIRE* GRAVES IN THE BRITISH CEMETERY ON OCRACOKE ISLAND, NC.



The British Cemetery on Ocracoke Island, NC where the remains of the crew from HMT *Bedfordshire* who washed ashore after the sinking of the vessel (Photo by author 2017).

