

PUSHING PAST THE ROMANTIC: PRESERVATION AND INTERPRETATION AT  
HISTORIC LIGHTHOUSES IN NORTH CAROLINA

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A Thesis Submitted to the  
University of North Carolina Wilmington in Partial Fulfillment  
of the Requirements for the Degree of  
Master of Arts

Department of History  
University of North Carolina Wilmington

2008

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## ABSTRACT

This thesis examines four historical lighthouses in North Carolina that are operated as historic sites. These four lighthouses are Bald Head, Cape Hatteras, Ocracoke, and Bodie Island. Bald Head is owned by a non-profit organization, while Cape Hatteras, Ocracoke, and Bodie Island are all owned by the National Park Service as part of Cape Hatteras National Seashore. Each of these lighthouses has undergone some amount of preservation, is open to visitors in some context, and offers some form of educational interpretation. These historic lighthouses have made decent attempts at offering interpretation to their visitors but each of the sites could improve.

One of the main problems historic lighthouses face is that lighthouses have been heavily romanticized over time. Interpreters often get caught up in this romanticized history and neglect to acknowledge their complex history. By excluding these important components historic lighthouses today perpetuate the idea of these structures as romantic places. These four lighthouses need to be more inclusive in their interpretation. Part of the reason that these sites have insufficient interpretation is because they were all preserved for unclear reasons. The reasons why historic sites are preserved should be a starting point for the interpretation of the site. In order to understand what is currently going on at historic lighthouses today and what should be included in their interpretation it is necessary to know the administrative and technological history of lighthouses, the specific history of these four sites, the history of preservation and lighthouse preservation in the United States, and how each of these sites has been preserved.

## ACKNOWLEDGEMENT

The first thank yous must go to my parents, Eric and Debra Thomas, who have supported me in everything I've done throughout my life. They have allowed me to grow into the person I have become and they have encouraged me to do the best that I can at everything I try. I couldn't ask for better parents or better friends. My brother and sister-in-law, Justin and Nikki Thomas, have also supported me throughout this process. They have been there to listen to my rants and raves and to encourage me to forget about school for a little while and have fun.

To the girls of the public history posse, Katie Abbott and Michelle Cicero, you've both gone through this same process and understand better than anyone the frustrations. We've laughed, we've cried, and we've yelled together (and sometimes at each other). Grad school wouldn't have been nearly as much fun without the two of you.

My professors have been more than wonderful. Dr. Chris Fonvielle has been every understanding and supportive of me and also very easy to work with. Dr. Tammy Gordon has encouraged and inspired me from the first class I had with her. She has had more faith in my abilities at times than I have. I also must thank her for those tickets to the Wilmington Candlelight Tour, she had no idea what she was starting with those and neither did I. Dr. William Moore led me to this project and understood when the first part of it took on a life of its own and grew into this thesis. He has pushed me to do my best over the past few years and has never accepted anything less.

Last but certainly not least I have to thank my boyfriend, Jonathan Donovan. You have been my rock. You have let me cry and complain. You know when to let me rant or when to try and distract me. You stabilize me and remind me of what's really important in life. Your unending faith in me has also meant a great deal. I know that I haven't been easy to deal with at times over the past year and a half, and I promise that that will get better now.

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## INTRODUCTION

Many Americans view lighthouses as romantic places where keepers worked alone and were kept company only by the sound of waves crashing against the shore. Author Ray Jones best summarizes this fascination with lighthouses as sentimentalized sites when he says, “Unlike some public buildings-prisons for instance-light towers have never suffered from an image problem. They have long been looked upon as romantic structures, representative of the very best instincts of humankind, and that is how they appear to us today.”<sup>1</sup> Jones is correct in that lighthouses have never suffered an image problem; the general public is fascinated not only by the buildings but by the people who kept the lights. Today lighthouses in the United States are automated and no longer require keepers. The need for lighthouses to function as aids to navigation has also greatly decreased in the past few decades as technological innovations such as radar, global positioning units, and other navigational aids have become standard equipment on boats.<sup>2</sup> The results of this change can be seen in the number of lighthouses each year that are deactivated by the United States Coast Guard. The romanticized idea of lighthouses is sustained today by historic lighthouses that are open to the public but offer little interpretation concerning how lighthouses functioned, the purpose they served, and what life was actually for the individuals who kept the lights.

Many historic lighthouses in the U.S offer some form of educational interpretation. The National Park Service owns and operates approximately thirty lighthouses around the country as historic sites as do many non-profit groups.<sup>3</sup> The majority of interpretation that is offered at

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<sup>1</sup> Ray Jones, *The Lighthouse Encyclopedia: The Definitive Reference*, (Guilford, Connecticut: The Globe Pequot Press, 2004), 48.

<sup>2</sup> David Stick, *North Carolina Lighthouses*, (Raleigh: North Carolina Department of Cultural Resources, Division of Archives and History, 1980), 18.

<sup>3</sup> Candice Clifford, “Lighthouses Within the National Park System,” *Cultural Resource Management* 20, 8 (1997), 15-18.

lighthouses is either through guided or self-guided tours, pamphlets or brochures, or through museums that have been established at the location. Depending on the sponsoring organizations these attempts at interpretation run from excellent to poor and often include folklore and legends as the basis of their interpretations. Tales of haunted lighthouses are common in this mode. Often the interpretation offered at historic light stations focuses solely on the light tower and ignores the other buildings that make up the site. If any other interpretation is offered it frequently focuses on the life of the keepers.

The technological aspects of lighthouse history are almost completely ignored in the interpretation at historic lighthouses. Rarely do visitors learn how throughout their history the towers have been fueled and lighted. The technological history of lighthouses shaped the cultural history of lighthouses. What lighthouse keepers were required to do changed with every technological change and eventually technological changes led to the end of keepers. Dell Upton says in his book *Architecture in the United States*, that, “technology must be understood as a social, and not simply a technical, issue.”<sup>4</sup> This is true of lighthouse technology. Lighting technology was advanced to help guide mariners safely and to make the job easier for lighthouse keepers. Lighthouse technology was influenced by the need for safe entrances to harbors and rivers and to mark dangerous passages. In many ways these needs were social. They were social concerns because throughout most of the nineteenth century the United States was dependent on shipping for commerce. Reliance on shipping meant that mariners, both those carrying goods and those transporting people, had to be able to confidently navigate the coasts and rivers of the United States. At this time mariners only had their maps and lighthouses to rely on, they had no radar or sonar or global positioning units to aid them. In 1852 the United States Lighthouse Board made this point clear in a report when they said, “It is not necessary to dwell upon the

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<sup>4</sup> Dell Upton, *Architecture in the United States*, (New York: Oxford University Press, 1998), 149.

importance of a well-organized and well-conducted system of coast lights. It is a duty which every civilized nation owes to humanity to establish and maintain such a system as will furnish the mariner with the means by which, in the hour of darkness and peril, he may be directed to a secure and friendly harbor.”<sup>5</sup> These social fears influenced the technological needs of lighthouses. However, the technology of lighthouses is often ignored or greatly simplified in interpretation at historic lighthouses. Lighthouse preservation and interpretation would benefit from a new strategy that deals with light stations as complete sites. This means interpreting all of the buildings at a site and showing how technology changed over time and how it influenced the keepers lives. Lighthouses have been preserved because of their scenic value and for little other reason; this makes interpreting them a difficult task. The interpretation should be focused partially on why the lighthouses have been preserved. If there was no distinct reason for the preservation then the interpretation tend to be unfocused. For these lighthouses that have been preserved for unclear reasons the interpretation needs to retroactively discuss the reasons why the lighthouse should have been preserved, even if these reason were not the motivating factors in the preservation. These reasons should include the technological history of the lighthouse along with the cultural history of the site.

The preservation and interpretation of lighthouses purely for their beauty and romantic nature can be traced to the literature that exists on lighthouses. There is no good modern academic work on lighthouses in the United States. The literature that does exist about lighthouses is sentimental and in need of updating. This is not to say that books about lighthouses have not been published in the last few years, some have, but like the books preceding them, they are not academic works. Most of the literature on lighthouses is in the form

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<sup>5</sup> U.S. Department of Treasury, Light-House Board, *Compilation of Public Documents and Extracts from Reports and Papers Relating to Light-Houses, Light-Vessels, and Illuminating Apparatus, and to Beacons, Buoys, and Fog Signals: 1789 to 1871*, ( Washington, D.C.: Government, Printing Office, 1871), 1007.



of guide books or coffee table books. One of these books is *American Lighthouses: A Definitive Guide*, by Bruce Roberts and Ray Jones. This book includes a twenty three page introduction that covers the administrative and technological history of lighthouses along with a description of light keeper's life. This introduction includes thirteen photographs, seven of which are full page photographs. The rest of the book is divided into four sections splitting the country in geographical districts, the Northeast, the Southeast, the West, and the Great Lakes. Within each of these chapters the lighthouses discussed are divided by state. The normal length of an entry for a lighthouse is between half a page and a page long, some are longer than this while others are shorter. Each lighthouse has a brief overview of its history and then information on how to reach the lighthouse.

Another of these coffee table books that is similar to Jones and Roberts work is *American Lighthouses: A Pictorial History*, by Jill Caravan. Caravan's book is much smaller than Jones and Roberts', at only seventy eight pages. Caravan's book is what it claims to be a picture book about lighthouses. While the pictures are very nice, the information offered along with the pictures is at best, very basic. Caravan does not use footnotes or include a bibliography or list of references. In the same vain as Caravan's book is *Lighthouses of the South: Your Guide to the Lighthouses of Virginia, North Carolina, South Carolina, Georgia, and Florida* written by Elinor De Wire with photographs by Daniel E. Dempster. De Wire includes more information than Caravan does and she also incorporates a bibliography. However, the bibliography includes only eighteen books, three of which were also written by De Wire, and it does not cite any primary sources. All that De Wire's sources are other secondary works on lighthouses. These books, and numerous others like them, help to support the idea of lighthouses as simply romantic places. By not offering a complete history of lighthouses these books perpetuate the idea that

lighthouses simply existed with no conflict or problems. By glossing over the problems with the US lighthouse system these books are ignoring the real history of lighthouses and leading their readers to believe that lighthouses were idyllic sites where nothing bad happened. Besides these types of books there are a few works that attempt to be academic but they fall short. These books seem to be well researched but the authors do not use footnotes and only occasionally offer bibliographies to support their research.

These non-academic books are not the only way that lighthouses are romanticized in writing. In 1849 Henry Wadsworth Longfellow published his poem *The Lighthouse*. Longfellow describes the joy that mariners felt at seeing the beam from a lighthouse as, “The mariner remembers when a child, On his first voyage, he saw it fade and sink; And when, returning from adventures wild, He saw it rise again o’er ocean’s brink.”<sup>6</sup> The most evident place the Longfellow romanticizes the lighthouse in his poem is in the second to last stanza when he writes, “It does not hear the cry, nor heed the shock, But Hails the mariner with words of love.”<sup>7</sup> Magdalena Zapadowska examines Longfellow’s poem and she believes that, “Longfellow’s poem is an imaginative effort to transform the lighthouse into a symbol of permanence and national power.”<sup>8</sup> Longfellow’s desire to endow the lighthouse with symbolism indicates that even in the mid-nineteenth century Americans were fascinated with lighthouses.

Longfellow has not been the only poet to write about lighthouses. Published in the same year as Longfellow’s *The Lighthouse* Epes Sargent published his poem *The Light of the Lighthouse*. Sargent in his second stanza describes how a couple is walking along a beach at

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<sup>6</sup> Henry Wadsworth Longfellow, *The Complete Poetical Works of Longfellow*, (Boston: Houghton Mifflin Company, 1893), 106.

<sup>7</sup> Longfellow, *Complete Poetical Works*, 106.

<sup>8</sup> Magdalena Zapadowska, “Longfellow’s ‘The Lighthouse’,” *Explicator* 65, (Fall 2006), 28.

dusk when, “A light springs suddenly to view--- It is a beacon’s blaze!”<sup>9</sup> Throughout his poem Sargent refers to the lighthouse and its light with wonder and happiness. Sargent uses the lighthouse as a romantic background for couple on date. Like Longfellow, Sargent’s poem is showing how lighthouses were and are viewed as romantic places. Poets of the twentieth century have not abandoned the lighthouse either. Published in 1994 was a poem, *Lighthouse*, by Joseph Ceravolo. Much shorter than either Longfellow or Sargent’s poem, Ceravolo’s still instills the lighthouse with romance. Ceravolo writes, “No. There’s no man in the lighthouse. There’s no woman there, but there is a light there; it is a bulb. And I think how complete you are in its light.”<sup>10</sup> Even more romantic than Ceravolo’s poem is James Laughlin’s poem *The Lighthouse*. Laughlin evokes the image of the lighthouse as a strong and guiding light. “You are my lighthouse... You are my compass and light.”<sup>11</sup>

Poems are not the only way that lighthouses are romanticized and popularized in the modern world. Lighthouses are often used as symbols for companies, the Christian faith often uses a lighthouse as a metaphor for Jesus being the guiding light of Christians, and numerous companies throughout the United States sell lighthouse merchandise of all kinds. One of the leading non-profit organizations for helping the seeing impaired is called Lighthouse International. The symbol for Lighthouse International is a circle with a lighthouse rising from the bottom and rays of light extending from the lantern of the lighthouse. The popularity of lighthouses can be seen when one performs a simple Google search for the term ‘lighthouse’ and receives almost twenty-five million results. This is astounding considering a Google search for

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<sup>9</sup> Epes Sargent, *Songs of the Sea*, (Alexandria, Virginia: Chadwyck-Healey Inc., 1996), 12.

<sup>10</sup> Joseph Ceravolo, *The Green lake is Awake*, (Coffee House Press, 1994) accessed thru Twentieth-Century American Poetry, [http://0-gateway.proquest.com.uncclc.coast.uncwil.edu:80/openurl?ctx\\_ver=Z39.88-2003&xri:pqil:res\\_ver=0.2&res\\_id=xri:ilcs-us&rft\\_id=xri:ilcs:ft:20&mpo:Z200363813:2](http://0-gateway.proquest.com.uncclc.coast.uncwil.edu:80/openurl?ctx_ver=Z39.88-2003&xri:pqil:res_ver=0.2&res_id=xri:ilcs-us&rft_id=xri:ilcs:ft:20&mpo:Z200363813:2). accessed on 3 March 2008.

<sup>11</sup> James Laughlin, *The Love Poems of James Laughlin*, (New Directions, 1997), accessed thru Twentieth-Century American Poetry, [http://0-gateway.proquest.com.uncclc.coast.uncwil.edu:80/openurl?ctx\\_ver=Z39.88-2003&xri:pqil:res\\_ver=0.2&res\\_id=xri:ilcs-us&rft\\_id=xri:ilcs:ft:20&mpo:Z300359723:3](http://0-gateway.proquest.com.uncclc.coast.uncwil.edu:80/openurl?ctx_ver=Z39.88-2003&xri:pqil:res_ver=0.2&res_id=xri:ilcs-us&rft_id=xri:ilcs:ft:20&mpo:Z300359723:3). accessed on 3 March 2008.

'Abraham Lincoln' only receives roughly ten and a half million results.<sup>12</sup> Although lighthouse merchandise can be purchased at almost any lighthouse that is open to the public and has store of some sorts, they are broadly distributed in other contexts as well. Numerous companies make replicas of lighthouses as lawn decorations. Corningware offers dishes with a lighthouse design upon them. Christmas tree ornaments are made in the shape of lighthouses. Perhaps one of the best examples of the romanticism of lighthouses is the Lake Havasu Lighthouse Club in Arizona. The club has undertaken a project to erect replicas of twelve lighthouses on the shore of the reservoir, located in the middle of the desert. Arizona does not have, nor has ever had, a lighthouse because no navigable waterway within the state requires a lighthouse.<sup>13</sup>

Even though lighthouses are popularized and romanticized by the public there are a few books that treat lighthouses as scholarly subjects, or attempt to be scholarly. One of the best known books on lighthouses that is somewhat academic is Francis Ross Holland, Jr.'s work, *America's Lighthouses: An Illustrated History*.<sup>14</sup> Holland worked for the National Park Service for many years as a historian and wrote numerous publications for NPS on different lighthouses. Holland's book is very well written and organized. He covers all of the United States and deals with hundreds of lighthouses individually and gives a very complete history of the administration of lighthouses, what keepers did and how they lived. He even includes a section on lightships. Holland divides his book into fourteen different sections with each dealing with either a different topic or a different section of the country. Holland's work was published in 1972 and now is becoming obsolete in some ways. When Holland wrote his book nearly all of the lighthouses in the country were still active aids to navigation and owned and operated by the Coast Guard.

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<sup>12</sup> Google searches performed by author on 5 March 2008.

<sup>13</sup> Kevin Blake, "Lighthouse Symbolism in the American Landscape," *FOCUS on Geography* 50, 1 (Summer 2007), 13.

<sup>14</sup> Francis Ross Holland Jr., *America's Lighthouses: An Illustrated History*, (New York: Dober Publications, Inc., 1972).

Today that has changed drastically somewhat limiting the usefulness of Holland's work.

However, Holland's book is still the most comprehensive book on lighthouses that deals with them as a serious subject and not just as beautiful buildings.

The precursor to Holland's book was George R. Putnam's book, *Lighthouse and Lightships of the United States* published in 1917. George Putnam served as the commissioner of lighthouses for twenty five years from 1910 until 1935. Putnam had first hand knowledge of the conditions of lighthouses in the United States and he used his experience to write his book.

Putnam made extensive use of the federal archives dealing with lighthouses while writing his work. This can be seen when he includes letters and notes from Thomas Jefferson and other high ranking government officials that deal with lighthouses.<sup>15</sup> Putnam did not use footnotes in his

work but he did include "A List of Principal Authorities Consulted."<sup>16</sup> This list includes many out of date and hard to find books and pamphlets along with government documents and laws. Unfortunately while Putnam uses government documents his list of authorities consulted does not give enough information so that other researchers could find or use these documents.

Putnam's book is a valuable source in that it was written by someone with first hand knowledge of American Lighthouses but his lack of footnotes and clearly cited sources, limits the usefulness of his work.

The best book addressing North Carolina lighthouses is David Stick's aptly titled work, *North Carolina Lighthouses* published in 1980 by the North Carolina Division of Archives and History. Even though Stick's book was published by the Division of Archives and History he like Putnam and Holland did not use footnotes. Stick does not even provide a bibliography on his sources. Instead he presents a brief note on his research sources. In this note Stick specifically

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<sup>15</sup> George Putnam, *Lighthouses and Lightships of the United States*, (Boston: Houghton Mifflin Company, 1917), 34-37.

<sup>16</sup> Putnam, *Lighthouses and Lightships of the United States*, 295.

mentions only four different sources by name along with Record Group 26 of the National Archives that contains the government archives of lighthouses.<sup>17</sup> Stick's work is well written and probably well researched but without footnotes there is no proof of the latter. Stick's book, like Holland's, needs to be updated to reflect the changes that have occurred in the decades since its publication. In his notes on research sources Stick mentions that one should work with the Coast Guard historian when doing research on North Carolina lighthouses because, "the Coast Guard currently has custody of lighthouses."<sup>18</sup> This is not true anymore of the majority of lighthouses in North Carolina, and the Coast Guard has largely given their lighthouse materials to either the National Park Service or the National Archives restricting the amount of help the Coast Guard historian can offer. Overall Stick's book gives a good overview of North Carolina lighthouses up until its publication date of 1980. Although imperfect, Stick's work is more useful than many of the other books that exist on lighthouses.

Many books have been written about specific lighthouses throughout the United States. The lighthouses in North Carolina are no different, and both Ocracoke and Cape Hatteras lighthouses have books written specifically about them. Ellen Fulcher Cloud published *Ocracoke Lighthouse*, in 1993. Cloud's book is fairly well researched and she provides end notes to support her research. Cloud's book however appears to lack objectivity, since Cloud was involved in some of the early stages of the preservation of the lighthouse. Cloud went so far as to steal the original windows from the lighthouse after they had been removed in order to insure that the windows would not be destroyed.<sup>19</sup> Because of Cloud's involvement in this effort it is hard to trust her writing on the preservation of the lighthouses as she was an active participant.

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<sup>17</sup> Stick, *North Carolina Lighthouses*, 77-78.

<sup>18</sup> Stick, *North Carolina Lighthouses*, 77.

<sup>19</sup> Ellen Fulcher Cloud, *Ocracoke Lighthouse*, (Spartanburg, South Carolina: The Reprint Company, Publishers, 1993), 45-54.

Cloud's book may be well researched, but it is not presented as an academic work. Rather, it resembles a popular book aimed at tourists. This approach limits the ability to use Cloud's book as a reliable source for an academic work. The best part of Cloud's work is that she did include endnotes so other researchers can examine her sources on their own.

The Cape Hatteras Lighthouse has been examined in many different books. The best and most up-to-date of these books is Dowson Carr's work, *The Cape Hatteras Lighthouse: Sentinel of the Shoals*, published in 1991 by the University of North Carolina Press and revised and updated in 2000. Fortunately, Carr revised this work in 2000 after the lighthouse had been moved to reflect the changes that had occurred in the nine years since the book was originally published. The draw back to Carr's book is the same as that of Holland's, Stick's, and Putnam's. Carr neglects to use footnotes or endnotes and relies solely on a bibliography to support his research. Carr's bibliography contains an impressive number of newspaper articles, but it lacks archival sources.<sup>20</sup>

While the literature on lighthouses needs to be updated and made more academic the brief amount of literature that exists on lighthouse preservation is well written and researched. The primary and unique book that exists on lighthouse preservation is the National Park Service publication, *The Historic Lighthouse Preservation Handbook*, published in 1997. Written by numerous people the *Handbook* was a collaboration between the National Park Service, The Coast Guard, and the Department of Defense. Four of the main contributors to the work were Candace Clifford, Ralph Eshelman, Michael Seibert, and Thomas A. Vitanza. Clifford works for the National Maritime Initiative, which is part of the Park Service, Eshelman is employed by the U.S. Lighthouse Society as a historian. Seibert and Vitanza both work for the Historic

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<sup>20</sup> Dawson Carr, *The Cape Hatteras Lighthouse: Sentinel of the Shoals*, (Chapel Hill: University of North Carolina Press, 2000), 145-149.

Preservation Training Center. Along with these four authors numerous others contributed to the writing and editing of the handbook. The *Handbook* came out of a cooperative agreement between the National Maritime Initiative, the Park Service's Historic Preservation Training Center, the Coast Guard, DoD legacy Management Program, and the U.S. Lighthouse Society. This partnership was started to discuss the issues relating to lighthouse preservation among the most prominent national organizations involved in the preservation of lighthouses.<sup>21</sup>

This book deals with all aspects of lighthouse preservation from why lighthouses should be preserved to the technical matters of preserving lighthouses, to interpretation at historic lighthouses. The *Handbook* is daunting in its length, but its admirable organization makes the book easy to use. The work is divided into an introduction and then six different sections. The sections include rationales preserving lighthouses, a history of lighthouses, standards and guidelines for preservation, the technical matters of preserving lighthouses, advanced concepts in preservation, and a section on resources. The table of contents of the *Handbook* is seven pages long, which seems excessive but actually makes the *Handbook* manageable. It is easy to look through the table of contents and find where the information one will need is.<sup>22</sup>

The main part of the *Handbook* and its longest section by far is the fourth section that deals with lighthouse preservation. This is the technical part of the handbook and this section is divided into nine subsections each dealing with a specific aspect of lighthouses. These subsections include dealing with the preservation of wood, iron, masonry, concrete, doors, windows, lighthouse lanterns, the interior of lighthouses, and the grounds. Each of these subsections includes information on the different types of preservation treatments and repairs

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<sup>21</sup> National Park Service, *The Historic Lighthouse Preservation Handbook*, (Washington, D.C.: National Park Service, 1997), 1-2; Candice Clifford, "New Priorities for Lighthouse Keepers," *Cultural Resource Management* 20, (1997), 3-4.

<sup>22</sup> NPS, *Lighthouse Preservation Handbook*, 1-7.



that can be done in accordance with the secretary of interior's standards for preservation. These sections also address issues that are unique to the preservation of lighthouses. Lighthouses are built in places that generally experience extreme weather conditions. With the exception of the lighthouses that are on inland rivers and lakes most lighthouses are subject to saltwater spray. The majority of lighthouses, like Cape Hatteras, have to deal with the issue of shore erosion, and other harsh conditions that relate to their locations. The *Handbook* examines these issues and suggests strategies for preserving buildings under these conditions.<sup>23</sup>

Along with addressing the technical aspects, the *Handbook* discusses other issues of preservation such as why lighthouses should be preserved. According to the *Handbook* the reason for preserving lighthouses is, "by preserving light stations, we preserve for everyone a symbol of that chapter in American history when maritime traffic was the lifeblood of the nation, tying isolated coastal towns and headlands through trade to distant ports of the world. Historic and cultural resources represent our nation's patrimony."<sup>24</sup> The *Handbook* goes on to say that, "each lighthouse is unique in the context of its geographic location, architectural style, and history."<sup>25</sup> Although these are appropriate reasons for preserving lighthouses, they are also vague; the handbook makes no mention of preserving lighthouses because of their technological history, their reflection of the federal government's involvement in everyday life, or to preserve the history of the keeper's lives. The rest of this section mainly deals with the National Register of Historic Places and how to get a lighthouse placed on the Register.<sup>26</sup>

Another important section of the *Historic Lighthouse Preservation Handbook* suggests what to do with historic lighthouses besides preserve them. This section includes text related to

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<sup>23</sup> NPS, *Lighthouse Preservation Handbook*, 2-6.

<sup>24</sup> NPS, *Lighthouse Preservation Handbook*, Part I, 3.

<sup>25</sup> NPS, *Lighthouse Preservation Handbook*, Part I, 3.

<sup>26</sup> NPS, *Lighthouse Preservation Handbook*, Part I, 4-7.

rehabilitation, restoration, adaptive re-use, and interpretation. The interpretation section also deals briefly with ways to fundraise and different resources for obtaining funds for efforts besides strict preservation. This piece of the *Handbook* also talks about the use of volunteers and the community involvement. There is a case study in this section that discusses the interpretation program for the Split Rock Lighthouse, currently managed by the Minnesota Historical Society. The Society has developed a plan for interpretation at the park that includes self-guided tours with brochures and guided tours. Along with the tours interpreters are located throughout the site to answer questions for the visitors. There are also a few living history interpreters at the site that dress and act as the keeper and his wife. Along with these interpretive elements there is a twenty-two minute film shown in the visitor's center every half an hour and a few exhibits that explain the history of the site. The staff also strives to stock their store with items that relate to the interpretation that they offer. Lee Radzak, the author of this case study and the site manager of Split Rock Lighthouse emphasizes in the study that what works for them at Split Rock might not be what works best at other sites. Radzak argues that any good interpretation must be based on careful research and that it also needs to take into consideration the goals of the site and what is appropriate for the site.<sup>27</sup>

Overall the *Historic Lighthouse Preservation Handbook* is an excellent source for any person or group undertaking work on a historic lighthouse. While the book is quite lengthy it is well organized and the table of contents makes finding the right topic very easy. Another great thing about the book is that while it is available for purchase from the National Park Service it is also available on the National Park Service's website so that people can simply look at the sections they need without having to buy the whole book or they can download the book and

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<sup>27</sup> NPS, *Lighthouse Preservation Handbook*, Part V. C, 6-9.

print it off for their own use. The primary shortcomings of the book are that it glosses over the reasons for preserving lighthouses and how to interpret them once they are preserved.

These problems with the *Handbook* are also the problems that one sees at lighthouses in North Carolina that are now historic sites. The reasons that lighthouses should be preserved and interpreted as historic sites are vast. The story of the administration of lighthouses in the United States and the technological history of lighthouses are two of the important reasons why lighthouses should be preserved. If these issues are not discussed at historic lighthouses there is no other place for them to be presented to the public. Before these issues can be interpreted at historic lighthouses, though, the information needs to be presented in a clear and scholarly way so that those working to interpret lighthouse have good, academic sources to go to for research purposes. The administrative history of the United States lighthouses is almost completely ignored at historic light stations in North Carolina. This administrative history is the main reason that the United States' lighthouses lagged behind those of European nations. By ignoring this administrative history and all of the problems that were involved in it, historic lighthouses are romanticizing their history by ignoring problems that affected their site.

The technological history of lighthouses is just as important if not more important than the administrative history of lighthouses. Lighthouses would not exist without the technology of how they are lit. This history should be discussed at each historic light and include as many details about that specific light's technological history as possible. Each lighthouse has its own history of technology that is unique to that site; however the majority of lighthouses share a timeline of technological development. From sperm oil in the early nineteenth century to kerosene in the late nineteenth century to electricity in the twentieth century lighting technology

evolved in the same way across the country. With advances in technology, the keeper's job became easier and eventually these changes led to the end of the need for keepers.

Along with the administrative and technological history of lighthouses historic lighthouses should include the history of that specific lighthouse and how it relates larger history of lighthouses. The four lighthouses examined here, Bald Head Island, Ocracoke, Cape Hatteras, and Bodie Island all show different aspects of the administrative and technological history of lighthouses in the United States. Bald Head lighthouse is an example of a lighthouse that was started by the state of North Carolina but was then taken over and finished by the federal government. Ocracoke lighthouse, the oldest functioning lighthouse in North Carolina, is an example of how the federal government had priorities for lighthouses that differed from the states. Cape Hatteras is an example of how issues with the administration of lighthouses are still being solved today. Bodie Island's history shows how the federal government began to be concerned with the poorly constructed lighthouses, this concern ultimately led to the creation of the Lighthouse Board. Each of these four lighthouses also provides the opportunity to discuss the technology of lighting.

In order to understand how this administrative and technological history of lighthouses can be discussed at these four lighthouses one must understand how each of these lighthouses was preserved. To fully understand lighthouse preservation one must understand the preservation movement and the history of preservation as a whole. If the federal government had not become involved in preservation in the mid-twentieth century it is doubtful if lighthouses would be able to be preserved. Lighthouse preservation heavily relies on the federal government if for no other reason than that lighthouses are federally owned buildings. Understanding the history of the

preservation movement in the United States provides a background for understanding the history of lighthouse preservation.

Lighthouse preservation is a complicated form of preservation for many reasons. The technical aspects of preserving lighthouses are complicated because of the harsh environments in which most lighthouses exist. Salt water, high winds, erosion, and other environmental issues degrade lighthouses. These issues mean that lighthouse preservation can quickly become very expensive. Most non-profit groups are not able to raise the money needed without the help of the federal or a state government. Luckily in the past two decades the federal government has helped to make lighthouse preservation easier for non-profit groups and government groups alike. With the Bicentennial Lighthouse Fund and the National Historic Lighthouse Preservation Act the federal government has taken an active role in the preservation of historic lighthouses. The four lighthouses examined here are all in different stages of preservation. Cape Hatteras and Bald Head Island have undergone extensive preservation work while Ocracoke and Bodie Island are still in need of large amounts of preservation work.

The final part, and possibly the most important, of historic sites is the interpretation that is offered to visitors. Interpretation at historic sites needs to include the administrative and technological history of lighthouses as they relate to the specific site along with the preservation of the lighthouse. Interpretation should be based upon careful historical research, rather than incorporating legend and local lore as it frequently does currently. One of the problems with interpretation at lighthouses is that often interpretation focuses solely on the light tower and ignores the other buildings that make up a complete light station. Interpretation at historic lighthouses needs to move past the romanticized version of history that they public expects and are currently telling and become more vigorous and academic.

## Chapter 1: Administrative History of Lighthouses in the United States

The administrative history of lighthouses in the United States is complicated and was the cause of the United States lighthouses lagging behind those of European nations. Lighthouses in the United States were first administered by the individual states and were then taken over by the federal government. Once the federal government had taken control of the lighthouses they were administered mainly by the fifth auditor of the treasury. The fifth auditor kept control of lighthouses for over thirty years before Congress took the lighthouses away from him and gave it to the newly created Lighthouse Board. The Lighthouse Board controlled the lighthouses until 1910 when the Board was dissolved and the administration was handed over to the Bureau of Lighthouses. In 1939 the Bureau was eliminated and lighthouses became the responsibility of the Coast Guard. Lighthouses have remained with the Coast Guard since then. Each change in lighthouse administration brought about other changes. These changes and problems in lighthouse administration are often ignored in the preservation and interpretation of historic lighthouses. By ignoring these issues, historic light stations romanticize their history.

Light has been used to guide mariners since humans began to sail, and since light has been used people have tried to find ways to improve the amount and strength of light, and control its direction. The Pharos of Alexandria, completed sometime around 280 B.C, was the first important lighthouse. The Pharos stood at the mouth of the harbor to the city of Alexandria, Egypt until the 14<sup>th</sup> century A.D. The Pharos was lit by a large wood fire at the pinnacle.<sup>28</sup> While wood was easy to obtain, open fires proved inadequate. Wind and rain could hamper the burning of the fire, and wood had to be consumed at a rapid pace to make the fires bright enough to be effective. As Europe entered the Dark Ages most of the lighthouses that had been established

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<sup>28</sup> Holland, *America's Lighthouses*, 1, 13; Putnam, *Lighthouses of the US*, 286-288; Stick, *Lighthouses*, 2; Dudley Whitney, *The Lighthouse*, (New York: Arch Cape Press, 1975), 13.

during the Roman Empire were destroyed or abandoned. With the onset of the Renaissance, nations again began to build lighthouses. From the Dark Ages until the formation of United States the number of lighthouses grew around the world, although little else about lighthouses changed. The best estimates for the number of lighthouses are that in sixteen hundred there were only thirty four major coastal lights in Europe, by eighteen hundred this number had grown to one hundred and seventy five.<sup>29</sup>

From 1776, when the United States declared their independence from Britain, until 1789, individual states were responsible for the building and management of lighthouses and other aids to navigation needed within their boundaries. In 1789 the federal government took control of lighthouses with an act legislating, “that all expenses which shall accrue... in the necessary support, maintenance, and repairs of all lighthouse... within any bay, inlet, harbor, or port of the United States, for rendering the navigation thereof easy and safe, shall be defrayed out of the Treasury of the United States.”<sup>30</sup> A stipulation for the federal government taking over any existing lighthouse was that the state had to transfer ownership of the lighthouse and the land it was on to the federal government. The administration of the lighthouses in the federal government was the responsibility of the treasury department and originally the secretary of the treasury and the President were both closely involved in the building and management of lighthouses. As time went on and their tasks became more numerous, these duties were passed on to subordinates.<sup>31</sup> In 1792 Alexander Hamilton, the secretary of treasury, passed the responsibilities for lighthouses onto the commissioner of revenue. In 1802 they were given back to the secretary of treasury, who transferred them back to the commissioner in 1813. The duties

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<sup>29</sup> Holland, *America's Lighthouses*, 1-3, 13; Putnam, *Lighthouses of the US*, 288-290; Stick, *Lighthouses*, 2.

<sup>30</sup> U.S. Department of Treasury. Light-House Board, *Laws relating to Light-House Service, Organization and Duties of Light-House Board: and Regulations, Instructions, Circulars, and General Orders of Light-House Establishment of U.S.* (Washington, D.C.: Government, Printing Office, 1871), 7.

<sup>31</sup> Holland, *America's Lighthouses*, 26; Putnam, *Lighthouses of the US*, 33-37.

stayed with the commissioner for the next seven years until they were passed on to the fifth auditor of the treasury, who at that time was Stephen Pleasonton.<sup>32</sup>

Pleasanton had no maritime experience and was more concerned with economy than with providing decent aids to navigation. Even lacking nautical qualifications, Pleasanton would be responsible for the management of US lighthouses for the next thirty two years. During this time Pleasanton increased the number of lighthouses by almost a factor of four. When Pleasanton gained control of the lighthouses fewer than seventy lighthouses existed, but by 1842 there were two hundred and fifty six, and by 1852 three hundred and thirty one. Even though Pleasanton greatly expanded the number of installations, he never hired more clerks assist in lighthouse administration.<sup>33</sup> Pleasanton's concern with keeping the lighthouse establishment economical led to many problems during his tenure. While Pleasanton oversaw the building of over two hundred lighthouses he did little to ensure that these lights were properly built or supplied. Complaints about US lighthouses were common during Pleasanton's tenure and eventually led to the responsibility being taken away from him.<sup>34</sup>

Enough complaints had been issued by 1845 that secretary of the treasury, R. J. Walker, decided that an examination of the lighthouses in England and France and their systems for managing lighthouses was needed to compare and evaluate the lighthouses and management in the United States. Walker asked the Navy for two officers to investigate the lighthouse establishments, efficiency, and management in England, France, and other nations they choose. The two officers, Lieutenants Thornton A. Jenkins and Richard Bache traveled to Europe and examined according to the report filed with Congress by Walker, "principal lights on the shores

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<sup>32</sup> Holland, *America's Lighthouses*, 26-27; Jones, *Lighthouse Encyclopedia*, 118, Putnam, *Lighthouses of the US*, 33.

<sup>33</sup> Holland, *America's Lighthouses*, 32-34; Whitney, *The Lighthouse*, 28.

<sup>34</sup> National Park Service, *Lighthouses: An Administrative History*, <http://www.nps.gov/history/maritime/light/admin.htm> (accessed 3 February 2008)



of the Baltic and North seas, the coast of England, Ireland, and Scotland, and the establishments for the construction of the new lighting apparatus in France.”<sup>35</sup> Once Jenkins and Bache finished in Europe they visited many of the lights in the northern part of the United States and compiled the report. In this document Jenkins and Bach said, “The examinations we have made in relation to the advantages and disadvantages arising from the use of different modes of illumination, have convinced us of the very great superiority of the Fresnel apparatus to all others.”<sup>36</sup> While Jenkins and Bach were convinced of this it was another seven years before Fresnel lenses were widely introduced to U.S. lighthouses.

Complaints continued to pour into the treasury department about lighthouse until 1851 when Congress finally took notice and on May 21 ordered the secretary of the treasury to compile a board composed of six men, two from the army and navy each, a civilian specialist, and a junior naval officer to examine all aspects of lighthouses in the United States. Once the board had inspected the lighthouses they were to compile a report for Congress of their findings and the actions that they felt were needed to bring the U.S. lighthouse system up-to-date.<sup>37</sup> Thornton Jenkins served as the junior naval officer on this board and undoubtedly his experiences in England and France six years earlier gave him insight into the improvements required.

The 1851 report echoed much of the 1846 report, but this time Congress listened and ordered the administration of aids to navigation be taken away from the fifth auditor and given to a specially created board. This board still reported to the Treasury Department and the Secretary of the Treasury, but was responsible solely for the building and upkeep of aids to navigation.<sup>38</sup>

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<sup>35</sup> Light-House Board, *Compilation*, 441.

<sup>36</sup> Light-House Board, *Compilation*, 453.

<sup>37</sup> Light-House Board, *Compilation*, 579.

<sup>38</sup> Holland, *America's Lighthouses*, 32-34; Whitney, *The Lighthouse*, 28.

Created on October 9, 1852 the Lighthouse Board consisted of nine members, including two officers from the navy, an officer from the topographical engineers, one from the army corps of engineers, two civilians of distinction, a junior naval officer to serve as secretary, and an engineering secretary. Jenkins was once again the junior officer from the navy. The ninth member of the Board was the Secretary of the Treasury who served as the ex-officio president. The Lighthouse Board immediately found it necessary to reorganize the administration of the lighthouses to increase management efficiency. They organized the lights into twelve districts by location. Each district was provided with an inspector along with the already established superintendent. This organization allowed the Lighthouse Board to have representatives in each part of the country that reported directly to them. The Lighthouse Board simultaneously began to install Fresnel lenses at all of the lighthouses in the United States. The report that led to the establishment of the Lighthouse Board stipulated, “that the Fresnel, or lens system...be adopted as the illuminating apparatus for the lights of the United States to embrace all new lights now or hereafter authorized.”<sup>39</sup> The Lighthouse Board exceeded this directive and by the outbreak of the Civil War all of the lighthouses in the United States were equipped with Fresnel lenses.<sup>40</sup>

During the Civil War, construction of lighthouses, like most nonessential military items, was greatly reduced, although those under construction when the war erupted were finished if they were in the North. The Confederacy disabled all of the lighthouses along its coast in an attempt to hurt the Union Navy. The Confederacy either damaged the lights so that they could not be used or removed the lenses from the towers. In some cases when Confederate troops were forced to abandon forts built around lighthouses they would destroy the structure completely to make sure that the Union could not reignite it. Bodie Island Lighthouse on the northern Outer

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<sup>39</sup> Light-House Board, *Compilation*, 590.

<sup>40</sup> Light-House Board, *Compilation* 559; Holland, *America's Lighthouses*, 21, 35-36; Stick, *Lighthouses*, 52; Putnam, *Lighthouses of the US*, 43-45.

Banks of North Carolina was blown up for this reason; it had been built only three years before the war started.<sup>41</sup>

After the Civil War, the Lighthouse Board repaired or rebuilt the majority of the lighthouses destroyed by the Confederates. A few, such as Old Baldy near Southport, North Carolina, were not immediately returned to service as new inlets had opened or the lighthouses originally had been built in poor locations. From the end of the Civil War until 1910 the Lighthouse Board continued to build lighthouses and improve those that already existed. In 1910 the Lighthouse Board was dissolved and was replaced with the Bureau of Lighthouses. The main difference between the Lighthouse Board and the Bureau was that the Bureau was headed by an individual rather than a nine member board. The Lighthouse Board had been dissolved largely because the nine member board had become too unwieldy and was no longer an effective mode of managing the lighthouses. Along with becoming more manageable the Bureau of Lighthouses was also missing the Lighthouse Board's distinctly military aspect. Seven of the nine members of the Lighthouse Board were officers from either the army or the navy. The creation of the Bureau of Lighthouses was a conscious move away from the military. The first commissioner of lighthouses was George Putnam who had extensive knowledge of the coasts from his experience with the Coast and Geodetic Survey. During his time with the Coast Survey, Putnam had spent extensive time in both Alaska and the Philippines working towards mapping the coasts of these territories.<sup>42</sup>

Along with simplifying the structure of the lighthouses' administration, the creation of the Bureau of Lighthouses also allowed for the reorganization of lighthouses from twelve districts to nineteen. Each of the nineteenth districts had a central office that had both a technical

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<sup>41</sup> Stick, *Lighthouses*, 52-57.

<sup>42</sup> Holland, *America's Lighthouses*, 37-38; Putnam, *Lighthouses of the US*, 46-47.

and a clerical work force that dealt only with that district. Every district also had at least one lighthouse tender to deliver supplies to lighthouses from the lighthouse depots located within each district. Districts were largely self sufficient. The administrative offices of the Bureau were located in Washington, D.C. and this office also contained both engineers and clerks. The Bureau of Lighthouses continued to expand the number of aides to navigation in the United States and by 1916 there were well over a thousand lighthouses in the country.<sup>43</sup>

The administration of lighthouses stayed with the Bureau of Lighthouses for twenty-nine years until 1939. In 1939 control of lighthouses was shifted to the United States Coast Guard. This move was primarily an attempt to economize and be more efficient. Lighthouses still remain in the control of the Coast Guard today, although many lighthouses are no longer active. Lighthouses in the United States and throughout the world are losing importance as aids to navigation as radar and global positioning units become standard on even the smallest of boats. Lighthouses today are used mainly as a backup system for mariners in case their other navigation aides fail.<sup>44</sup>

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<sup>43</sup> Putnam, *Lighthouses of the US*, 46-53.

<sup>44</sup> Holland, *America's Lighthouse*, 38; Stick, *Lighthouses*, 70-76.

## Chapter 2: Technological History of Lighthouses

Along with the history of the lighthouse administration historic lighthouses should be interpreting their technological history. This technological history relates to how lighthouses have been fueled and the different lighting apparatus used over time. These changes are central to the history of lighthouses. The United States lagged behind European countries in lighthouse technology because of bad administration during the first part of the nineteenth century. Once the administration of lighthouses was put in capable hands, the United States quickly caught up with the rest of the Western civilized world. Technological advancements eventually led to the end of lighthouse keepers. From sperm and whale oil to kerosene to electricity and automation each change in technology altered the keeper's job in some way. When lighthouses were automated and keepers eliminated, lighthouses fell into the disrepair which eventually led to the need for preservation efforts.

From the end of Dark Ages until 1781 different types of fuel were experimented with in lighthouses but no real advancements in lighting technology had been made. Wood, coal, and candles were all used and each had its benefits and drawbacks. In 1781 Ami Argand, a Frenchman, introduced a lamp with a hollow circular wick. This wick produced a much brighter flame than anything before because oxygen was able to move along the inside and the outside of the wick. This also allowed for a smokeless light. The creation of a smokeless light made lighthouse keepers jobs easier, because the smoke from lamps would create a film on the lantern of the lighthouse that would impair the ability of the light to pass through the glass. Basically the dirtier the glass was the less light that could pass through the glass and be of aid to mariners.<sup>45</sup>

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<sup>45</sup> Holland, *America's Lighthouses*, 14; Putnam, *Lighthouses of the US*, 186; Stick, *Lighthouses*, 49; Samuel Willard Crompton and Michael J. Rhein, *The Ultimate Book of Lighthouses: History, Legend, Lore, Design, Technology, Romance*, (San Diego, California: Thunder Bay Press, 2003), 14-15, 238.

The English lighthouse establishment adopted the Argand lamp and used it with a parabolic reflector. Reflecting surfaces had been experimented with for approximately two hundred years but only at the end of the eighteenth century were they refined and widely adapted. In 1852 the U.S. Light-House Board explained that reflectors were an improvement over lamps alone because, “the light which otherwise would be lost in passing to the land side is thrown towards the sea...”<sup>46</sup> While the Argand lamp with reflectors was quickly adapted in England and France it was not brought into use in the United States until 1810 when Winslow Lewis, an unemployed ship captain, demonstrated his version of Argand lamp to the federal government at the Boston Harbor Light. Before the implementation of Lewis’s lights the United States had been using spider lamps to light their lighthouses. Spider lamps consisted of an open pan of oil with four wicks. While the light was better than from a standard lamp, spider lamps produced a fume that limited the amount of time one could spend around them, making the keeper’s job infinitely more difficult.<sup>47</sup>

After Lewis had displayed his lamp and reflectors at the Boston light, the federal government bought his patent in 1812 and employed him to fit all lighthouses in the country with his lamps and to maintain them for seven years. This cost the federal government sixty thousand dollars. By 1815 Lewis had installed his lamps and reflectors in all of the 49 lighthouses in the United States. Lewis’s progress had been slowed by the War of 1812 or it is likely that he would have had all of the lights fitted much sooner.<sup>48</sup> While Lewis helped to bring the lighthouses in the United States up-to-date in the 1810s in the long run he ended up slowing down the progress of

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<sup>46</sup> Light-House Board, *Compilation*, 1008.

<sup>47</sup> Holland, *America’s Lighthouses*, 14, 21; Crompton and Rhein, *Ultimate Book of Lighthouses*, 16; Dudley Whitney, *The Lighthouse*, (New York: Arch Cape Press, 1989), 21-22.

<sup>48</sup> Holland, *America’s Lighthouses*, 14-15; Stick, *Lighthouses*, 49; Jones, *Lighthouse Encyclopedia*, 100.

technology in lighting apparatuses. The United States continued to lag behind England, France, Ireland, and Scotland in lighthouses effectiveness for many reasons.<sup>49</sup>

In 1822 Augustin-Jean Fresnel, another Frenchman, introduced his lighting system for lighthouses. Fresnel had been born France in the 1788 and began studying engineering at age 16.<sup>50</sup> The most basic description of a Fresnel lens is that they are shaped like large beehives. Fresnel's main goal with the lens was to concentrate the direction of the light, making it stronger, and therefore able to be seen from a greater distance. The frame of the lens was generally made of bronze and the top and bottom portions of the light were made of prisms that refracted the light so that it all exited the lens through the center in a narrow sheet. The center of the light was a large bulls eye shaped lens that acted as a magnifying glass for the light.<sup>51</sup> Fresnel designed his lenses in varying sizes or orders, ranging from the largest First-Order to the smallest Sixth-Order, there was also a Third-and-a-half-order. First-Order lenses were designed for major coastal lights and were massive in size; they were six feet in diameter and ten to twelve feet tall weighing in at more than 4 tons. Fresnel tested his lens in 1823 in the Cordouan lighthouse in France, after the tests proved successful his lens was quickly adopted not only by France but also by England, Scotland and Ireland.<sup>52</sup>

One of the main reasons that the Fresnel lens was not quickly adopted in the United States was the relationship between Winslow Lewis and Stephen Pleasonton. Lewis worked closely with Pleasonton and while there is no evidence of corruption, Lewis was definitely a favorite of Pleasonton's. Lewis was held in high regard by Pleasonton because Lewis always underbid his competitors. While Lewis was not always providing the finest possible equipment

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<sup>49</sup> Holland, *America's Lighthouses*, 26-27; Jones, *Lighthouse Encyclopedia*, 118.

<sup>50</sup> Crompton and Rhein, *Ultimate Book of Lighthouses*, 16, 238.

<sup>51</sup> Holland, *America's Lighthouses*, 18.

<sup>52</sup> Light-House Board, *Compilation*, 453; Jones, *Lighthouse Encyclopedia*, 88-89; Crompton and Rhein, *Ultimate Book of Lighthouses*, 238-239.

to the government, he was supplying the cheapest and this was Pleasonton's goal. Pleasonton's focus on economy and lack of knowledge or concern about lighthouses ended up making the lighthouses of the United States some of the worst in the world. Pleasonton repeatedly refused to implement new technologies that functioned much more effectively than Lewis's lights but cost considerably more.<sup>53</sup> Pleasonton and Lewis held the United States back in their refusal to replace Lewis's bastardized Argand lamps with the new Fresnel lens.

While these advancements were taking place in Europe, Pleasonton and Lewis continued on as they had before, by providing the United States lighthouses with the most cost effective lighting available regardless of its merits or failures. Pleasonton wrote to the French lighthouse establishment in the early 1830s to inquire about the Fresnel lenses. However, Pleasonton either never meant these inquiries to be serious or was put off by the expense. France answered Pleasonton's enquiries saying that a First-Order lens would cost five thousand dollars and a Third-Order two thousand dollars. Taking into consideration Pleasonton's nature as a man focused on economy and with no maritime experience he most likely did not realize how ineffective the United States lights were compared with those around the world or how much of an improvement the Fresnel lens really was and therefore, did not think spending that much money was worthwhile. In 1838, a full fifteen years after the Fresnel lens had proven to be effective, Pleasonton told Congress that he would be willing to further investigate Fresnel lens but only if Congress ordered him to do so. Instead of ordering Pleasonton to experiment with Fresnel lenses, Congress sent Commodore Matthew C. Perry to France to purchase two Fresnel lenses to be installed in U.S. lights. Perry purchased a First-Order fixed light and a Second-Order

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<sup>53</sup> Holland, *America's Lighthouses*, 16, 27-33; Jones, *Lighthouse Encyclopedia*, 100, 118; Crompton and Rhein, *Ultimate Book of Lighthouses*, 16.



revolving light.<sup>54</sup> Congress also paid for a French mechanic to install the lights. The lights were placed in the twin towers of the Navesink, New Jersey lighthouse. The lights were not fully functional until 1841 and Congress paid twenty-four thousand dollars for the two lenses plus installation. While Pleasonton gushed at first about the lights, he was still convinced that they were too expensive and that they were not actually any better than the lights already in use. Pleasonton also claimed that the lamps used with the lenses were too complicated for most keepers to operate and used this as another rationale for hampering the widespread use of Fresnel lenses in the United States.<sup>55</sup>

Pleasanton's refusal to switch the lighthouses in the United States from Argand lamps to Fresnel lenses was ultimately his undoing. Throughout the 1840s the Secretary of the Treasury and Congress received many complaints about the conditions of lighthouses in the US. Eventually, these complaints led to the control of lighthouses being taken away from the fifth auditor and given to the newly created Lighthouse Board. The Lighthouse Board quickly adopted the Fresnel lenses and in the time from 1852 when the Board took over lighthouses until the outbreak of the Civil War in 1861 the Board switched all of the lights in the United States to Fresnel lenses. This was remarkable considering by 1852 there were three hundred and fifty two lighthouses in the US. Not only were new lights installed, but all of the keepers were trained in how to care for the new lenses and the lamps that went with them. The Lighthouse Board also continued to build new lighthouses throughout this time.<sup>56</sup>

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<sup>54</sup> Holland, *America's Lighthouses*, 18, 32-33; Jones, *Lighthouse Encyclopedia*, 71-72. Lights are classified by their size but also by the characteristic of the light. Lights may be fixed or revolving. Fixed lights show a constant light in all directions. Flashing or revolving lights, which are more common, flash in different patterns so that mariners know which lighthouse they are approaching. Lights may also be different colors as another way to distinguish them; lights may be yellow, red, or green.

<sup>55</sup> Holland, *America's Lighthouse*, 18, 33; Putnam, *Lighthouses of the US*, 41-43.

<sup>56</sup> Putnam, *Lighthouses of the US*, 43-45; Holland, *America's Lighthouses*, 21, 35-36, 44-45; Crompton and Rhein, *Ultimate Book of Lighthouses*, 16.

After the Civil War the Lighthouse Board continued to improve the lights across the country and repair the damage to lights that had happened during the war. The next major issue for the Lighthouse Board was the rising cost of sperm oil. Oil from whales had been the fuel of choice for lighthouses since the early 1800s, but as the price of it rose during the middle of the nineteenth century the Lighthouse Board had to find a cheaper fuel. In 1840 sperm oil had cost fifty-five cents a gallon but by 1855 the price had jumped to \$2.55 a gallon. The Board had at this time attempted to introduce colza or rapeseed oil as an alternative to sperm oil. The French lighthouse system used rapeseed oil with great results. The U.S. Lighthouse Board took this as a good sign and tried to convince American farmers to grow the cabbages from which the oil was produced. However, the farmers were not able to produce enough cabbages to supply all of the lighthouses in the United States and the Board had to continue to seek another option. The Board turned to Joseph Henry, the head of the Smithsonian to find a new fuel. Henry had previously experimented with lard oil but had found it unsatisfactory. Henry continued his experiments with lard oil though and found that if the oil was heated before it was burned it worked well. The Lighthouse Board was glad to adopt lard oil as the fuel of choice because it was cheap and not very flammable.<sup>57</sup>

Lard oil was used in lighthouses for a relatively short period of time before mineral oil, or kerosene was introduced. While kerosene is not the most flammable of fuels made from petroleum, it is much more flammable than either lard oil or sperm oil had been. Because of this risk of explosion the Lighthouse Board had avoided using mineral oil for many years. In 1875 the Lighthouse Board was unwilling, according to George Putnam, “to endanger lives of employees and valuable property by placing mineral oil at...points from which keepers could not

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<sup>57</sup> Holland, *America's Lighthouses*, 23.

escape in case of accident.”<sup>58</sup> The Lighthouse Board changed its mind just three years later though, because in 1878 it started to introduce kerosene into lighthouses that used Fourth-Order or smaller lenses. The change from lard oil to mineral oil was slower than other changes in fuel because it required the lamps to be changed as well. Lamps that burned lard oil or rapeseed oil could not burn kerosene. The invention of the incandescent oil vapor lamp made kerosene even more favorable for lighthouses. In incandescent oil vapor lamps kerosene is vaporized in one chamber and then the vapor moves into the mantle of the lamp where it is burned. This process not only produces a brighter light but also uses fuel more efficiently. With the installation of kerosene burning incandescent lamps the technological advances of lighthouses were complete until electricity was introduced around 1900.<sup>59</sup>

The conversion from kerosene lights to electric incandescent light bulbs was a slow change for lighthouses around the country. This time the Lighthouse Board was not being cautious. There were simply lighthouses that were not near power lines. For those lighthouses distant from electric utility systems, generators were installed, but most lighthouses did not receive generators until the 1920s and 30s.

Electricity was the beginning of the end for the keepers. Once a lighthouse was using electricity there was little need for a keeper to be at the lighthouse around the clock. Light bulbs produce no gas or smoke to dirty the Fresnel lens, bulbs also did not have to be refilled with fuel multiple times a night. Lighthouses were eventually fitted with timers that turned the light on when it became dark and turned it off when it was light again, and also with multiple bulb holders that rotated a new bulb into place when the old one burnt out. These last two advances made keepers obsolete. Today the Coast Guard has one keeper to make sure the tradition of

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<sup>58</sup> Putnam, *Lighthouses of the US*, 186.

<sup>59</sup> Holland, *America's Lighthouses*, 23; Whitney, *The Lighthouse*, 26; Crompton and Rhein, *Ultimate Book of Lighthouses*, 16-17.

keepers lives on, but the post is mostly honorary. With the advent of electricity and automation the transformation of lighthouse technology was complete for the most part, throughout the twentieth and twenty-first centuries changes have been made, but these changes were minor such as the kind of light bulb used, or the switch to aero beacons instead of Fresnel lenses.<sup>60</sup>

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<sup>60</sup> Holland, *America's Lighthouses*, 23-25; Jones, *The Lighthouse Encyclopedia*, 43, 47-48.

## Chapter 3: Lighthouses in North Carolina

Lighthouses have been important to the North Carolina economy since before the American Revolution. Mariners considered North Carolina's coast to be one of the most dangerous in the world. The majority of the coast is very low lying without a lot of natural distinguishing marks. This lack of prominent natural markers made lighthouses even more important in North Carolina than they were in other parts of the country that had prominent natural features. The lighthouse on Bald Head Island is the oldest in North Carolina, although it is no longer a functioning aid to navigation. Old Baldy's history shows the difference in management by the states and by the federal government and it also illustrates how many of the nation's first lighthouses were not very effective. Ocracoke is the oldest continually functioning lighthouse in North Carolina, and one of the oldest in the country. Like Old Baldy, the history of Ocracoke shows some of the problems with the administration of lighthouses in the early nineteenth century. Cape Hatteras is perhaps one of the most famous lighthouses in the country, and it also has an interesting history. Bodie Island Lighthouse has a complicated past that needs to be more fully understood.

### **Bald Head Island Lighthouse**

The history of lighthouses in North Carolina offers examples of all of the major changes in United States lighthouse administration and technology. The lighthouses that stand at Bald Head Island, Ocracoke Island, Cape Hatteras, and Bodie Island were all built at different times and reflect the times in which they were erected. Following the American Revolution, North Carolina began to establish two lighthouses on their coast to help guide mariners into the two main ports, Wilmington on the Cape Fear River and New Bern through the Pamlico Sound. These two lighthouses were Bald Head Island (also known today as Old Baldy) and Ocracoke

Island. In 1784 the General Assembly of North Carolina passed an act requiring all ships entering the port of Wilmington to pay a duty of sixpence per ton to help fund the building of a lighthouse at the entrance to the Cape Fear River. This lighthouse would become Old Baldy. The land the lighthouse was to be built on had been given to the state by Benjamin Smith who owned all of what is today Bald Head Island and was then known as Smith Island.<sup>61</sup>

When the federal government took control of the lighthouses in 1789 only the lighthouse at Old Baldy had been started. According to a compiled history of the Lighthouse in the National Archives on April 2, 1792 money was appropriated to finish, “in such manner as shall appear advisable, the lighthouse heretofore begun under the authority of the State of North Carolina, on Bald Head.”<sup>62</sup> However, only four thousand dollars was designated for the project and that amount proved inadequate. Almost three years later on January 5, 1795 another four thousand dollars was appropriated to finish the structure. The light shone for the first time in late 1795 or early 1796. Over a year after the light had been completed the federal government once again appropriated money, apparently to finish paying for work that had already been completed. In total the federal government spent \$11,359.14 for the construction of the first Bald Head Light.<sup>63</sup>

The tower that stands today was built to replace the original Bald Head Lighthouse after it was destroyed in 1813. The original tower was most likely damaged because the land around the tower eroded making the tower unstable, although there are sources that say a waterspout in

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<sup>61</sup> Stick, *Lighthouses*, 8, 23; Walter Clark, ed., *The State Records of North Carolina* 24, (Goldsboro, North Carolina: Nash Brothers, Book and Job Printers, 1905), 590; Walter Clark, ed., *The State Records of North Carolina* 25, (Goldsboro, North Carolina: Nash Brothers, Book and Job Printers, 1906), 65; Stick, *Lighthouses*, 11-12.

<sup>62</sup> “History of Cape Fear Light,” National Archives, Record Group 26, Box 10, Washington, D.C., 1.

<sup>63</sup> “History of Cape Fear Light,” 1; Stick, *Lighthouses*, 14; Holland, *America’s Lighthouses*, 112; Putnam, *Lighthouses of the US*, 29-30; David Stevenson, *The World’s Lighthouses Before 1820*, (London: Oxford University Press, 1959), 181; *National Register of Historic Places Inventory – Nomination Form for Bald Head Island Lighthouse*, prepared by John Baxton Flowers III, Janet Seapker, and Mary Alice Hinson, 21 March 1975, 3. Reports differ on when the light first shone, the “History of Cape Fear Light” claims that it was in 1796 but David Stick and the National Register Nomination form both list 1795.

the river damaged the tower.<sup>64</sup> According to Bill Reaves' *Southport: a Chronology* the collector of the Wilmington Port announced on July 10, 1813 that the lighthouse was completely demolished.<sup>65</sup> Money was first allotted for the building of the second in 1813, but was never actually spent as the same appropriation was made three years later in 1816. After a second small appropriation in 1817 Old Baldy was completed in 1818 for a cost of \$15,915.45. The light was approximately one hundred and ten feet above sea level in an octagonal tower made of brick with stucco facing. Along with the Lighthouse a house for the keepers was built that was to be a one story building with dimensions of thirty-five feet by seventeen feet. This house was to be separated into two rooms of the same size with a set of double doors leading between the rooms. Two shed rooms were also to be built behind the dwelling.<sup>66</sup>

After the completion of the second lighthouse Old Baldy functioned with few changes until the 1850s. Old Baldy received a Fresnel lens before the Civil War as the Lighthouse Board installed Fresnel lenses at all of the lighthouses in the country. Old Baldy, like other Confederate lighthouses, was deactivated by the Confederate government in 1861. The Confederate government disabled lighthouses along their coast so that the Union Navy could not use the lighthouses to help with their blockade of Southern ports. Following the war the United States government did not immediately reinstate Old Baldy. Prior to the war a new inlet, aptly named New Inlet, opened approximately eight miles north of the mouth of the Cape Fear River by what became Fort Fisher. This inlet provided easier access to the Cape Fear than going through the mouth of the river near Bald Head, because of this and since mariners complained of Old Baldy

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<sup>64</sup> Stick, *Lighthouses*, 23; *National Register Nomination*, 4; Holland, 112; Putnam, 29-30. The *National Register Nomination* briefly mentions the waterspout theory, however since there are no footnotes it is impossible to tell where they are getting this information from.

<sup>65</sup> Bill Reaves, *Southport (Smithville): A Chronology Volume 1 (1520-1887)*, (Raleigh: North Carolina Department of Cultural Resources, Division of Archives and History, 1978), 18.

<sup>66</sup> Stick, *Lighthouses*, 23; "History of the Cape Fear Light," 1; *National Register Nomination Bald Head*, 2, 4, 8.

being ineffective the government chose to not re-establish the light. In 1879 the army corps of engineers closed New Inlet because it was causing silt to build up in the mouth of the Cape Fear River. A year later, in 1880, the government re-activated Old Baldy and mariners once again complained about the light.<sup>67</sup>

The main problem with the light was its location. Old Baldy is located on the northwest corner of Smith Island, which is the river side of the island. This puts the lighthouse over a mile from the pitch of Frying Pan Shoals. Frying Pan Shoals is one of the reasons that Old Baldy was originally built. Frying Pan Shoals extend from the southeast point of Bald Head island in the shape of a frying pan for eighteen miles. Since Old Baldy is located more than a mile from the point of the shoals the light was never strong enough to reach the end of the shoals. A First-Order light was only able to reach approximately eighteen miles, so a Fourth-Order light would obviously not be able to reach nineteen miles.<sup>68</sup>

Complaints about Old Baldy's ineffectiveness eventually lead to the construction of another lighthouse on Bald Head Island. This lighthouse was built on the pitch of the shoals making it much more effective. In 1903 the Cape Fear Lighthouse was lit for the first time and with its lighting Old Baldy was made primarily a harbor light. In 1914 Old Baldy was changed to an unattended gas light, and managed by the keeper of the Cape Fear Light. Old Baldy remained lit until 1935 when it was deactivated. During World War II Old Baldy served as a radio beacon station for the United States Coast Guard. Since the federal government sold Old Baldy as surplus property in 1963 the lighthouse has changed ownership many times. Today it is owned

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<sup>67</sup> Holland, *America's Lighthouses*, 111-112.

<sup>68</sup> Holland, *America's Lighthouses*, 111-112.



by the non-profit Old Baldy Foundation, which keeps the lighthouse open to visitors and runs the Smith Island Museum in a re-created keeper's house.<sup>69</sup>

Sometime during the later quarter of the nineteenth century another building was added to the light station bringing the total of buildings up to three, the tower, the keeper's dwelling, and the third building. This third building is believed to have been built as or at least used as an oilhouse. The oilhouse was most likely built around 1880 and is roughly twelve by twenty-four feet, with a door at each end and likely no windows in the original building. Today the building is divided into two equal sized rooms and there are four windows in the building two on each long wall. It is likely that the oilhouse was built in 1880 when the lighthouse was reactivated because the light was most likely fueled with kerosene at this point and new lens and lamp were installed. In 1878 the Lighthouse Board had decided after tests were run that kerosene was an acceptable fuel and began to introduce it into lighthouses with Fourth-Order or smaller lenses. Using kerosene instead of sperm or whale oil required that the lamps in the lenses be changed. It is doubtful that the federal government would have wanted to pay for new lamps to burn sperm oil when they knew that they were in the process of phasing out sperm and whale oil as a fuel choice for lighthouses. While there is no concrete proof available at this time to establish that this building was built as an oilhouse there are good reasons to believe that it was.<sup>70</sup>

### **Ocracoke Lighthouse**

The North Carolina legislature authorized the building of a lighthouse on Ocracoke Island at the same time that they did for Bald Head. This act established a commission of seven men to find land suitable for a lighthouse and to collect a duty that was levied to raise the money

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<sup>69</sup> Holland, *America's Lighthouses*, 112; *National Register Nomination Bald Head*, 5.

<sup>70</sup> Holland, *America's Lighthouses*, 23.

to fund the lighthouse.<sup>71</sup> However the Ocracoke lighthouse was not started before the federal government took over lighthouses. Although North Carolina had given the federal government a deed for the tract of land on Ocracoke that the seven man commission had deemed suitable for a lighthouse, Congress ignored this land and decided to establish the lighthouse on Shell Castle Island. Shell Castle Island was a low lying island that was actually, “a massive bed of oyster shells, half a mile in length but only twenty yards or so in width, its top layer of shells alternately submerged and exposed as the inlet tide rose and fell.”<sup>72</sup> Completed sometime between 1798 and 1803 the Shell Castle Island Lighthouse was fifty-four feet tall and used one large oil fueled lamp. By roughly 1816 the Lighthouse was rendered useless because of the shifting shoals although it continued to function until 1818 when it was destroyed by lightning. After the Lighthouse was destroyed it was replaced with a lightship that also was proven ineffective. On May 7, 1822 Congress appropriated twenty thousand dollars to build the current lighthouse on Ocracoke Island; the lighthouse was completed in 1823 for only \$11, 359.35 including the keeper’s quarters.<sup>73</sup>

Standing sixty-five feet high and rising seventy-five feet above the mean sea level the Ocracoke Lighthouse was the shortest lighthouse on the Outer Banks. The Lighthouse still appears today much as it did almost two hundred years ago. Built out of bricks, covered with mortar, and white washed, the walls of the Lighthouse are five feet thick at the bottom and taper to two feet at the top. There is one door that provides entrance to the Lighthouse and four windows. The windows are six-over-six, double hung construction.<sup>74</sup> Originally the Lighthouse

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<sup>71</sup> Clark, *The State Records of North Carolina v. 25*, 54-55.

<sup>72</sup> Stick, *Lighthouses*, 15.

<sup>73</sup> Stick, *Lighthouses*, 15-17; Terrance Zepke, *Lighthouses of the Carolinas: A Short History and Guide*, (Sarasota, Florida: Pineapple Press, Inc, 1998), 42-47; “Significance,” in *National Register of Historic Places Nomination for Ocracoke Light Station*, prepared by Ronald G. Warfield, 1977, 3;

<sup>74</sup> Zepke, *Lighthouse of the Carolinas*, 45; Stick, *Lighthouses*, 23-24; National Park Service, *Bodie Island Lighthouse: Historic Structure Report*, (Atlanta, Georgia: Cultural Resources Division, Southeast Regional Office,

was fitted with a valve lamp and reflectors until 1854 when the reflectors were replaced with a Third-Order Fresnel lens.<sup>75</sup> In 1860 technology once again changed the Lighthouse when the vapor lamps were replaced with a Franklin lamp. At the beginning of the Civil War the Confederates extinguished lighthouses along their coasts so that the Union Navy could not benefit from the lights. At Ocracoke the light was not only extinguished but the Fresnel lens was removed. In 1864 the Union had gained possession of Ocracoke Island and Lighthouse and a new Fourth-Order Fresnel lens was installed and lighted.<sup>76</sup>

Following the Civil War, the Lighthouse was re-cemented and whitewashed in 1868 along with the repainting of the lantern house and deck. The stairs were also renovated during this time. In 1899 a new model Fourth-Order Fresnel lens was installed and the light could be seen from fourteen and a quarter miles away as a fixed white light. In the beginning of the twentieth century the light was electrified and the oilhouse was turned into a generator house. By 1937 the light had changed from a fixed white light to a flashing white light with a five second flash of light followed by a twenty-five second eclipse. Sometime since then the light was changed back to a fixed white light and it is still visible from a little over fourteen miles away. In 1946 the Ocracoke Lighthouse was automated and there was no longer a need for a keeper. In 1957 the keeper's quarters and other property were given under a special use permit to the

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2004), 47-50; *Ocracoke Light Station*, (National Park Service Pamphlet, revised June 2005), 1; "Description," in *National Register Nomination Bodie Island*, 2.

<sup>75</sup> Fresnel lenses are Ordered by size with the largest and most powerful lens being a 1<sup>st</sup>-Order lens and the smallest a 6<sup>th</sup>-Order. Lenses are measured by the distance from the center of the light to the inside surface of the lens. A 1<sup>st</sup>-Order lens has a radius of 36.2 inches and a 4<sup>th</sup>-Order lens of 9.8 inches, giving the inside diameter of a 1<sup>st</sup>-Order lens to be slightly over six feet and that of a 4<sup>th</sup>-Order lens to be slightly over a-foot-and-a-half. National Park Service, *Ocracoke Lighthouse Historic Structure Report*, (Washington, D.C: Southeast Regional Office National Park Service, April 1990), 27; *Ocracoke Light Station*, 2.

<sup>76</sup> There is some discrepancy about when the light was relit, whether it was 1863 or 1864, 1864 is the date given in the Historic Structure Report. *Ocracoke Lighthouse Historic Structure Report*, 11; "Description," in *National Register Nomination Ocracoke Lighthouse*, 2; Stick, *Lighthouses*, 53-57; Zepke, *Lighthouses of the Carolinas*, 45-46; Cloud, *Ocracoke Lighthouse*, 6; *Ocracoke Light Station*, 1; "Description," in *National Register Nomination Ocracoke Lighthouse*, 2.

National Park Service, and since then the quarters have served as a ranger station for Cape Hatteras National Seashore.<sup>77</sup>

### **Cape Hatteras Lighthouse**

North of Ocracoke Island is one of the most dangerous places on the Atlantic Coast of the United States. Cape Hatteras and Diamond Shoals which lay right off the Cape have earned the nickname the Graveyard of the Atlantic because of the number of shipwrecks that occurred in the area. Some attribute this nickname to Alexander Hamilton but there is no concrete proof of this.<sup>78</sup> Cape Hatteras Light Station was originally built in 1803 and has undergone many changes since then. The station was built to help guide ships around the dangerous Diamond Shoals that extend from Cape Hatteras fourteen miles out into the ocean. Not only do the shoals make this area dangerous but two ocean currents also run very close together near the shore making it hazardous for mariners. These currents are the northern flowing Gulf Stream and the southern flowing Labrador Current. During the nineteenth century this was especially dangerous to mariners because most ships followed the coast as closely as they could while sailing. This created problems at Cape Hatteras because sailors going south had to avoid both the shoals and getting caught in the Gulf Stream while those going north had to avoid the Labrador Current and the shoals. Hamilton, as the Secretary of the Treasury, was one of the people responsible for encouraging Congress to erect a lighthouse at Cape Hatteras. The original light station consisted of a ninety foot tower made of brick and sandstone, a keeper's house, and an oil vault. The first changes to the station came only a year after the tower was lit when the original oil cisterns were replaced with larger ones. The next changes came when the keeper's house was rebuilt in 1828

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<sup>77</sup> Cloud, *Ocracoke Lighthouse*, 7; *Ocracoke Lighthouse Historic Structure Report*, 11; "Significance," in *National Register Nomination Ocracoke Lighthouse*, 3. The special use permit that allowed the park service to use the quarters and grounds was Special Use Permit DTCCG-Z71105-86-RP-021P.

<sup>78</sup> Carr, *The Cape Hatteras Lighthouses*, 24-25.

and in 1854 the tower was extended to raise the height to one hundred and fifty feet and a first order Fresnel lens was installed. The tower was also painted at this time with the first seventy feet of the tower being white and the rest of it red, this paint job allowed the tower to more effectively function as a day mark.<sup>79</sup>

Like all lighthouses on the Outer Banks and throughout the South, Cape Hatteras was turned off at the beginning of the Civil War. Cape Hatteras received much better treatment than Bodie Island lighthouse did, which was blown up to prevent Union forces from using it. At Cape Hatteras the Confederates simply removed the first order lens from the tower and shipped it inland to Washington, North Carolina and eventually to Henderson, North Carolina when Washington was invaded. Since the Confederates had only removed the lens and not destroyed the tower the Union was able to install a new lens after they took control over the Outer Banks, and the lighthouse was fully functioning again by the summer of 1863. The original Fresnel lens remained hidden until after the Civil War ended. When in September of 1865 Union forces found the lens in Henderson, the army shipped the lens out of North Carolina and eventually it ended up at the Lighthouse Supply Depot on Staten Island, New York. Three years later in 1868 the lens was sent to back to its maker in France to be refurbished.<sup>80</sup>

While the original Fresnel lens was in France being repaired a new tower was constructed at Cape Hatteras. The Lighthouse Board had decided that the old tower was in enough disrepair that it would be more cost effective to replace it. Construction of the new tower took almost two years, mostly because the building crew was frequently ill and could not work; weather also delayed the construction at times. The original Fresnel lens was re-installed in the new tower

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<sup>79</sup> National Park Service, *Cape Hatteras Light Station: Cultural Landscape Report*, (Atlanta, GA: National Park Service, Cultural Resources, Southeast Region, 2003), 9-10; Carr, *Sentinel of the Shoals*, 32-40; Stick, *Lighthouses*, 18-21.

<sup>80</sup> Carr, *Sentinel of the Shoals*, 49-50.

prior to its lighting on December 16, 1870. The lens that had been in the old tower since 1863 was sent to a new lighthouse in California. The remarkable part of this is that many people did not realize that the original lens had been reinstalled and until the early twenty-first century when a researcher by the name of Kevin Duffus found the document in the National Archives explaining that the original lens had been reinstalled. For over a hundred and thirty years it was believed that the original Fresnel lens from Cape Hatteras was missing and was still hidden someplace in North Carolina.<sup>81</sup>

The new tower was one hundred and ninety feet tall and three years after its completion it was painted a black and white spiral. The tower was painted in this design to make it a distinctive day mark for mariners, and the pattern became closely associated with this landmark. A second keeper's dwelling was also built 1871 and this was used as the principal keeper's house while the former house was used for the two assistant keepers and their families. The last major addition to the light station that still stands today was the construction of an oilhouse in 1892. At some point the 1803 oil vault disappeared and historians are unsure what became of it. The oil house was built when the fuel for the light was switched from whale oil to the more flammable kerosene. Once the new tower was built the old tower was destroyed because the Lighthouse Board feared that it was in such bad shape that it would collapse and cause injury.<sup>82</sup>

The next major change that occurred at the light station was the introduction of electricity to the station in 1934. Two large generators and a bank of batteries were installed in the oilhouse and the incandescent oil vapor lamp was replaced with an electric light bulb. These changes turned out to be very short lived though; erosion had been threatening the tower for some time and in 1936 waves actually reached the base of the tower during high tides. The decision was

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<sup>81</sup> Jones, *The Lighthouse Encyclopedia*, 32-33; National Park Service, *Cultural Landscape Report*, 12.

<sup>82</sup> National Park Service, *Cultural Landscape Report*, 12-16; Carr, *Sentinel of the Shoals*, 64-80.

made to abandon the tower and a replacement skeletal tower was built approximately a mile away near the town of Buxton, North Carolina. Once the skeletal tower was operating the federal government gave the light station and all of its land to the National Park Service and a year later on August 17, 1937 Cape Hatteras National Seashore came into being.<sup>83</sup>

The National Park Service completed some upgrades to the light station during the first few years after they acquired the property, most of these changes involved upgrading the living quarters. In 1937 the principal keeper's house and the double keeper's dwelling had electricity and running water installed and the principal keeper's house was painted both inside and out. This was the extent of the work that was completed during the early years of the park.<sup>84</sup>

Residents of Hatteras Island had never been happy with the decision to abandon the 1870 tower and continued to hope that the tower could be saved. By 1948 the erosion that had caused the tower to be abandoned had reversed and the high tide level was one thousand feet away from the base of the tower. At this time the Coast Guard, which had assumed responsibility for all lighthouses in 1939, began to inquire into the possibility of using the 1870 tower as an active lighthouse once again. In December of 1948 the Coast Guard and the National Park Service came to terms and agreed upon a twenty year use-lease for the tower and the oilhouse. By this time the majority of lighthouses across the country were automated and had no keepers so the Coast Guard had no use for the keeper's quarters. Before the Coast Guard could begin using the tower as an active aid to navigation again, however, repairs needed to be made to fix the effects of vandalism and neglect of twelve years. The original Fresnel lens had been left in the tower when it was abandoned and vandals stole many of the prisms, graffiti was also prominent in the tower, and many of the windows had been smashed over the years. It took slightly more than

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<sup>83</sup> Carr, *Sentinel of the Shoals*, 97-104; National Park Service, *Cultural Landscape Report*, 18.

<sup>84</sup> National Park Service, *Cultural Landscape Report*, 18-20.

twelve months for all of the damage to be repaired including having a new aero-beacon installed as the Fresnel lens was deemed beyond repair. The tower was also painted both inside and out. On January 23, 1950 the lighthouse was fully operational again and was completely automated due to a photoelectric cell which controlled when the light turned on and off.<sup>85</sup>

### **Bodie Island Lighthouse**

Just north of Hatteras Island lies Bodie Island. A light has shown intermittently at Bodie Island since 1848. The Bodie Island light was built to help southbound mariners guide their ships around Cape Hatteras and the Diamond shoals without encountering the northern flowing Gulf Stream. The need for a lighthouse on Bodie Island was first brought to Congress's attention in 1837. In that year Congress asked the Navy Board to compile a list of locations south of Chesapeake Bay that needed lighthouses or other aids to navigations and for the secretary of the treasury to follow through with the board's recommendations. The Navy Board appointed Napoleon L. Coste, the Lieutenant Commander of the Revenue Cutter the *Campbell*, the task of studying the cost and suggesting locations. Coste recommended erecting a lighthouse on Bodie Island to help guide southbound vessels around Cape Hatteras and Diamond shoals.<sup>86</sup>

From these reports in 1837 until the beginning of construction in the summer of 1847, the main delay was the ongoing argument about the best location. Land for the lighthouse also had to be purchased. The building of the first Bodie Island lighthouse was supervised by an ex-collector of customs who had little experience with construction. He was probably hired because he was willing to work cheaply, as Pleasonton was generally more concerned with finances than he was with quality products. The supervisor ignored Pleasonton's request to drive piles for the foundation if it appeared that the foundation would be sitting in mud. Instead of driving piles the

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<sup>85</sup> Carr, *Sentinel of the Shoals*, 104-106.

<sup>86</sup> Stick, *Lighthouses*, 42; Light-House Board, *Compilation*, 65-66.



first Bodie Island lighthouse was built on a foundation of two layers of brick. Pleasonton could do little about this as he did not find out about it until after the tower was completed. The tower was fifty-four feet tall and made of brick and was finished in the fall of 1847, although the light was not lit until the first half of 1848.<sup>87</sup>

The supervisor's decision to not drive piles turned out to be a costly mistake. Just two years after the tower was completed it was a foot out of plumb, leaning towards the East. Pleasonton had to spend fourteen hundred dollars having the tower straightened. In 1854, after the Lighthouse Board had taken control of all lighthouses, a fourth order Fresnel lens was installed. By 1859 the light had once again begun to lean and was not worth fixing.<sup>88</sup> The Lighthouse Board spent twenty-five thousand dollars to have a new tower built. The second Bodie Island lighthouse was built on piles and was once again made of brick. It was eighty feet tall and its third order lens shone ninety feet above sea level. Although this tower was well built it had an even shorter life than the first tower. The second tower was lighted for the first time on July 1, 1859 and was destroyed in November of 1861 by retreating Confederate soldiers. The Federal government did not bother to try and rebuild the light during the war, and since the original tower had been demolished when the second tower was completed no light shown from Bodie's Island until after the end of the war.<sup>89</sup>

After the Civil War, when the Lighthouse Board could once again begin normal operations in the South, they began to look for an alternate location for the Bodie Island light. A new lighthouse was not built until 1871. One of the reasons for the delays was the need to purchase land for the lighthouse at a new site, as erosion was threatening the old site. Once

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<sup>87</sup> Holland, *America's Lighthouses*, 123-125; Stick, *Lighthouses*, 42-43.

<sup>88</sup> National Park Service, *Bodie Island Lighthouse: Historic Structure Report*, 9.

<sup>89</sup> Holland, *America's Lighthouses*, 123-125; National Park Service, *Bodie Island Lighthouse: Historic Structure Report*, 10.

construction of the station began, work was completed in a relatively swiftly and a light was exhibited for the first time on October 1, 1872. The new tower was one hundred and fifty feet high and displayed a First-order Fresnel lens. The design of the lighthouse had been copied from Cape Hatteras which had been a replica of the Cape Lookout light. Shortly after the tower was completed a double keeper's quarters was also completed.<sup>90</sup>

There is one difference in the design and construction of Bodie Island from Cape Hatteras Bodie Island has an attached oil house. The lighthouse tower has attached to it a small building consisting of two rooms, one a work room and the other an oil storage room. When the lighthouse was built in 1871 sperm oil or whale oil was still being used at all lighthouse. Because of this it is likely that the oil room was designed to hold sperm or whale oil and not kerosene as most other oil houses were. Kerosene was not introduced as a fuel for lighthouses until the late 1870s and then it was gradually introduced at fourth order lenses and smaller until it was proven to be safe and effective and was eventually introduced into large lenses. When Bodie Island switched from sperm oil to kerosene is not known, but it is doubtful if kerosene was ever stored in this room. The Lighthouse Board was very concerned with fire and explosions caused by kerosene and asked keepers to help minimize this risk by not keeping the kerosene in the tower.<sup>91</sup>

There was a keeper present at Bodie Island Lighthouse until 1940 and it is not clear when the light was switched to electricity or when it was automated. The National Park Service was given the land and the buildings of the Station except the tower in 1953 to become part of Cape Hatteras National Seashore. This arrangement ultimately led to much confusion between the Park Service and the Coast Guard. When the land had been given to the Park Service the Coast Guard retained the tower and a one hundred by one hundred foot plot of land. Most of this

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<sup>90</sup> Stick, *Lighthouses*, 67-68.

<sup>91</sup> Jones, *Lighthouse Encyclopedia*, 115; Holland, *America's Lighthouses*, 23.

confusion came from a 1972 agreement that allowed the National Park Service to open portions of the tower to visitors but also made the Park Service responsible for the maintenance of these areas. The confusion was based around which entity, the Park Service or the Coast Guard, was responsible for maintenance. Both entities thought that the other should be responsible for the maintenance and because of this maintenance issues were not addressed until they became large problems. The Park Service decided the best way to solve these problems would be to gain ownership of the tower and remaining land. Steps were taken to make this happen in the early 1990s but the transfer from the Coast Guard to the Park Service was not finalized until July 13, 2000. This agreement excluded the original Fresnel lens which the Coast Guard retained. However, five years later in 2005 the Coast Guard transferred ownership of the lens to the Park Service even though the lighthouse is still used as an active navigational aid.<sup>92</sup>

Today Old Baldy is owned by a non-profit organization and Ocracoke, Cape Hatteras, and Bodie Island are all owned by the National Park Service. All of the lighthouses are open to the public in some form as historic sites. These sites are all in different states of preservation and have different forms of interpretation. Of these four lighthouses all but Old Baldy are still functioning aids to navigation. The history of these lighthouses is being preserved today but the preservation needs to go farther and be more focused. The reasons for preserving these structures are vague and often have little to do with their importance as symbols of maritime history in the United States. This lack of focus in the preservation efforts can be seen in the interpretation that is offered at these sites. Interpretation at historic sites that have been preserved should include the preservation and the reasons why it was preserved; if these reasons are unclear the interpretation suffers.

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<sup>92</sup> National Park Service, *Bodie Island Lighthouse Historic Structure Report*, 14-19; Hartrampf, Inc., *Value Analysis Study for Preserve/Rehabilitate Bodie Island Lighthouse and Oil House (CAHA 059651) Cape Hatteras national Seashore*, (Atlanta: published by author, 2006), 4.

## Chapter 4: Historic Preservation in the United States

While the narrative of lighthouse technology ends for the most part in the mid 1900s the chronicle of lighthouse preservation does not even begin until the late 1900s. In order to fully understand lighthouse preservation it is necessary to place it within the greater context of historic preservation as a whole. Lighthouse preservation would not be possible if historic preservation in the United States had not evolved from its beginnings. Preservation in the United States started in the 1850s and was a hobby for the wealthy and stayed that way for all of the nineteenth century and part of the twentieth century. In the 1920s preservation began to develop into a movement that was not completely controlled by the elites of society. In the mid twentieth century the federal government began to be involved in preservation. The federal government's participation is what allowed lighthouse preservation to occur.

Preservation as a movement in the United States began in the 1850s with the saving of George Washington's Mount Vernon by Ann Pamela Cunningham and the Mount Vernon Ladies Association of the Union (MVLA). During the early stages of the preservation movement it was mainly undertaken by women such as Cunningham who came from the middle to upper class. These women were educated and were also able to take the time away from their families to undertake such projects. Preservation was seen as an acceptable hobby for women because it related to the home and family. At this time preservation was focused on saving houses, mostly those that had been owned by rich, white, elites. Preservation was and would for a long time be a movement by the middle to upper classes for and in recognition of the middle and upper classes and their values and dreams. In his book *Historic Preservation: An Introduction to Its History, Principles, and Practice* Norman Tyler remarks on how influential Cunningham and the Ladies Aid Association were in the early preservation movement. Tyler states, "This significant effort to

save Mount Vernon also helped form the early trends of the preservation movement in the United States: 1. Preservation activities were largely supported by private individuals. 2. Women had a prominent role in these activities. 3. The goal of most efforts was to save individual landmark buildings.”<sup>93</sup> The preservation movement in the nineteenth century saved buildings because they were associated with some form of patriotic symbol, whether it was an important historical event (or supposed event) or a famous person. Preservationists in the nineteenth century cared little about preserving buildings because of their architecture.<sup>94</sup>

The reasons for any preservation effort will always be complex for the simple reason that preservation is a humanistic endeavor. During the late nineteenth century preservation efforts were undertaken as part of the patriotic revival associated with the Colonial Revival. This patriotism was also a way that the white, Protestant, elites reacted to the large numbers of people immigrating from Eastern and Southern Europe. The middle and upper classes began to worry that the new immigrants were not embracing American culture and turned towards preservation as a way to help or attempt to force immigrants assimilate. Preservationists believed that if they could show immigrants what a ‘proper’ American house had looked like, or even better where and how a famous American had lived, the immigrants would have a better understanding of the country and its cultural norms. By doing this, elite preservationists hoped that the immigrants would become more like themselves, with conservative values and ideas, and that they would leave behind their foreign traditions and ways that were viewed as threatening to the ways of the middle class. Mount Vernon is a perfect example of how preservation was used as a patriotic symbol. Patricia West writes in her book *Domesticating History: The Political Origins of*

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<sup>93</sup> Norman Tyler, *Historic Preservation: An Introduction to Its History, Principles, and Practice*, (New York: W.W. Norton & Company, 2000), 34.

<sup>94</sup> William J. Murtagh, *Keeping Time: The History and Theory of Preservation in America*, (New York: Preservation Press, John Wiley & Sons, Inc, 1997), 30; Tyler, *Historic Preservation*, 33-34.

*America's House Museums* that, "Add to electoral expansion the commercial revolution, mass immigration, growing class stratification, and the gnawing controversy over slavery aggravated by territorial extension, and the stridency with which conservative cultural prescriptions were advocated at mid-century becomes understandable. Notable among such responses was the cult of George Washington..."<sup>95</sup> As West points out the mid nineteenth century was not a stable time in America. Even after the Civil War and the passage of the thirteenth amendment had decided the slavery question, there were still many issues with which Americans struggled. With such rapid change taking place throughout the country, Americans used preservation as a way to not only remember their past but to help guide them in their future.<sup>96</sup>

By the twentieth century the preservation movement in America had changed slightly. One of the major changes in the preservation movement happened in 1906 with the passing of the Antiquities Act. This was the federal government's initial involvement in the preservation field. This act primarily aimed to protect historic sites on federal property from looting. This measure was a response to the scavenging of the Cliff Palace dwellings of Mesa Verde and the Casa Grande ruins and was the first piece of historic preservation legislation in the United States. It gave the administration of historic sites and preservation efforts to the secretary of the interior, who is still in charge of these efforts today.<sup>97</sup>

Another change in the early twentieth century was that men began to actively participate in preservation movements and projects and women were pushed out of the movement or into positions within the movement that men deemed were suitable for women. Women were often

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<sup>95</sup> Patricia West, *Domesticating History: The Political Origins of America's House Museums*, (Washington, D.C: Smithsonian Institution Press, 1999), 3.

<sup>96</sup> Murtagh, *Keeping Time*, 30-31.

<sup>97</sup> Tyler, *Historic Preservation*, 35-36; Murtagh, *Keeping Time*, 12, 53.

allowed to help in the decorating of the preserved site, but were often excluded from the more business like positions such as managing the project or the money.

Another and more prominent transformation in the early twentieth century was that the reason for preserving a place changed. People began to protect buildings because of their architectural value and not because they were associated with an event or person. William Sumner Appleton, the founder of the Society for the Preservation of New England Antiquities (SPNEA), was one of the first people to push architectural preservation in the United States. SPNEA was founded in 1910 by Appleton. Appleton and SPNEA were heavily influenced by the Colonial Revival that took place across America from roughly the centennial in 1876 until the onset of World War I. The Colonial Revival movement was in many ways also a response to the new wave of immigration. People began to look to the past for support in an ever changing society. This veneration of the past took many forms, the most notable being architecture and home décor. The Colonial Revival subsequently led to the growing popularity of neo-Georgian architecture. Appleton and others like him used this popularity as a reason to preserve buildings purely for their aesthetic value.<sup>98</sup>

The creation of the National Park Service in 1916 is the next important date in preservation and was the next step forward in the federal government's involvement. One of the important outcomes of the creation of the NPS was that it helped to bring preservation to the West and Southwest of the United States. Before the creation of the Park Service, the vast majority of preservation efforts had taken place on the East Coast. This inclusion of the West and Southwest into the preservation field allowed for the field to expand, not only geographically but in the things that were considered for preservation. Many of the early sites preserved in the West

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<sup>98</sup> Murtagh, *Keeping Time*, 32-34; Tyler, *Historic Preservation*, 57.

and Southwest were places such as the Cliff Palace and other Native American Sites along with natural areas.<sup>99</sup>

The Park Service began to have a large effect on the preservation world in the 1930s with the implementation of the Historic American Buildings Survey (HABS). HABS was created in 1933 as a response in part to Great Depression and also to the need for an architectural archive of the nation. HABS was never meant to preserve or save buildings. It was meant to document architecturally important buildings around the country so that even if the buildings were destroyed there would be an accurate record of them. Another government program very similar to HABS is HAER, the Historic American Engineering Record. HAER includes projects that are deemed significant for their engineering. HABS, like the National Park Service helped to push the preservation field past saving only large, beautiful buildings. HABS included surveys of all types of buildings from large to small, from grand to ordinary, and included buildings such as barns, lighthouses, post offices, and other buildings that were generally ignored by the preservation world. The HABS surveys are still being conducted today. The program declined for a while during the late 1930s and WWII but was revived again during the early 1950s.<sup>100</sup>

Between the creation of the National Park Service and the beginning of the HABS surveys there were important developments within the private sector of the preservation field. In 1926 W.A.R. Goodwin paired with John D. Rockefeller, Jr. and began to work on the preservation/recreation of Colonial Williamsburg and in 1929 Henry Ford established Greenfield Village in Dearborn, Michigan. These two efforts share a few similarities, the most notable being that they were both funded by prominent, wealthy men. Both Greenfield Village and Colonial Williamsburg are similar also in that they were both new ideas to the preservation movement.

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<sup>99</sup> Murtagh, *Keeping Time*, 54-55.

<sup>100</sup> Tyler, *Historic Preservation*, 41-42; Murtagh, *Keeping Time*, 55-58.



Rockefeller and Goodwin set out to restore and recreate a complete town, not a single building. Henry Ford was not satisfied to recreate a town that had once been but instead set out to recreate what was in his mind a perfect town that showcased American's ingenuity and progress. Ford bought buildings that he enjoyed or that he believed would be useful in his village and had them moved to this property. Both Greenfield Village and Colonial Williamsburg caused the preservation field to take notice and debate what best practices should be. Ford's action made preservationists wonder how moving buildings affected their integrity, while Colonial Williamsburg brought the discussion of preservation versus restoration versus recreation to the table. These two projects also allowed the preservation world to look beyond single buildings and begin to see neighborhoods and districts as historic sites.<sup>101</sup>

This focus on neighborhoods as areas to be preserved can be seen in the 1931 creation of the 'Old and Historic District' in Charleston, South Carolina. The district was created to preserve the area as a fundamentally residential neighborhood that was being threatened by gas stations and what today would be called architectural salvage. The district was created by the city council and was the first time a government had attempted to preserve a complete neighborhood. New Orleans would adapt a similar law five years later in 1936 establishing the Vieux Carré as a historic district. For the most part historic districts were slow to catch on in the preservation field. It was hard for people to understand why a whole neighborhood or district should be preserved when previously single buildings had been enough. This was one of many ways that the preservation field began to expand in the 1930s, but World War II temporarily halted this progress.<sup>102</sup>

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<sup>101</sup> Murtagh, *Keeping Time*, 35-38; Tyler, *Historic Preservation*, 37-39, 57.

<sup>102</sup> Tyler, *Historic Preservation*, 39-40, 58; Murtagh, *Keeping Time*, 59-61.

Although the preservation world paused for World War II, it became active once the war had ended. The most important happening in preservation after World War II was the creation of the National Trust for Historic Preservation. The National Trust was created in 1949 and is a quasi-governmental organization. The National Trust holds a charter from congress supporting its establishment and members of the government are ex-officio members of the board of trustees while at the same time being a private, non-profit corporation. Because the Trust is linked to the federal government it is able to act as a uniting force and go-between connecting federal and private preservation groups. The Trust helps to insure that important historic properties are sold or given to owners who want to and have the means to care for the property, whether that owner is a government agency or a private group or person. The Trust is also the first and still the largest nationwide preservation group. The Trust also owns select historic properties that for one reason or another would be difficult for the federal government to own and operate. As the Trust has grown and expanded over time it has increasingly focused its efforts on education. The Trust tries to not only educate preservationists on the latest developments within the movement but to educate the public at large about the benefits of preservation. The Trust also educates Congress when issues facing Congress could effect preservation, such as when tax credits are up for renewal.<sup>103</sup>

The next important event in the history of preservation was the passing of the National Historic Preservation Act of 1966. The Preservation Act of 1966 established many of the devices commonly used by preservationist today. The National Register of Historic Places was created in the 1966 Act, State Historic Preservation Offices were organized under the act, matching grants to the National Trust were created under this act, and the Advisory Council on Historic Preservation was created. The National Register is operated by the National Park Service and

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<sup>103</sup> Tyler, *Historic Preservation*, 42-44; Murtagh, *Keeping Time*, 40-48.

provides a list of historically significant properties around the country. The properties on this list must meet certain criteria and must be approved by local state preservation boards.

The Preservation Act of 1966 also addressed the creation of historic districts. The act specifically supported this idea thereby supporting the idea of protecting neighborhoods and districts and not only single buildings. The Advisory Council on Historic Preservation is composed of high ranking political officials namely the secretary of the interior, the secretary of transportation, and the secretary of agriculture along with private citizens. The purpose of the Advisory Council is to provide the President with information when a historic building or site is threatened by a federal activity, such as the building of a highway.<sup>104</sup>

Since the passage of the Historic Preservation Act of 1966 it has been updated many times to reflect altered conditions. The majority of these changes have been minimal. Over the past forty years the preservation field has continued to expand and become more inclusive. This inclusiveness has allowed for such preservation efforts as the Lower East Side Tenement Museum in New York City. The Tenement Museum preserves the history of garment workers that lived in tenements across New York. Preservation is no longer a movement only for elite, white, Protestant Americans. Along with becoming more comprehensive over time, the people and groups responsible for preservation have changed. When the preservation movement started in the United States in the 1850s it was a practice undertaken by private citizens and groups, today the governments on federal, state, and local levels are involved.

Without this participation the government, especially at the federal level, it is dubious as to whether lighthouse preservation would exist. One of the main reasons for this is that lighthouses were built as federal property and only recently have some been deactivated and declared surplus government property. Lighthouse preservation is also a special kind of

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<sup>104</sup> Murtagh, *Keeping Time*, 66-76; Tyler, *Historic Preservation*, 44-50.

preservation that can be incredibly expensive to undertake. There is also the issue that some lighthouses such as Cape Hatteras, Ocracoke, and Bodie Island are in need of preservation while they are still functioning aides to navigation. There are numerous private groups around the country that preserve lighthouses but the majority of these groups receive help from some government agency or the National Trust.

## Chapter 5: Lighthouse Preservation

Lighthouse preservation is a fairly new sub-group of the preservation movement. Since the late 1980s the federal government has taken steps to make lighthouse preservation not only easier but also more popular. In 1988 the federal government celebrated the bicentennial of lighthouses being under their control. As part of this celebration over three million dollars was given to different groups working towards preserving lighthouses. Following this year of celebration the next big move the federal government made in lighthouse preservation was when Congress passed the National Historic Lighthouse Preservation Act of 2000. This act was an amendment to the 1966 National Historic Preservation Act. The Lighthouse Preservation Act gave the government an easier way to give historic lighthouses to different groups and government agencies so that they could be preserved. Lighthouses in North Carolina have been affected by all of these developments in lighthouse preservation. Bald Head is an example of a lighthouse preserved by a non-profit group. Cape Hatteras has undergone the most controversial type of lighthouse preservation, that of relocation. Ocracoke and Bodie Island have had minimal preservation work completed so far. Extensive work on Bodie Island is scheduled to start in the next year. Ocracoke is waiting for money to become available for the required preservation work; this is common with lighthouses throughout the country regardless of who they are owned by.

Lighthouse preservation is an especially difficult and expensive type of preservation; many non-profits have trouble raising the money needed for this type of work. Also lighthouses were built by and for the federal government, and until 2000 it was hard for the government to dispose of unneeded lighthouses. Lighthouse preservation is a relatively new category within the preservation movement. Because many lighthouses are still in use as active aids to navigation a

lot of people assume that the buildings are being taken care of and properly looked after. Unfortunately this is not true. Once keepers were no longer needed at lighthouses because of electricity, many lighthouses were abandoned except for an annual or bi-annual visit by Coast Guard personnel to check on the station and the light.<sup>105</sup> This lack of staff on site has allowed light stations to fall into disrepair and neglect. One can not completely blame the Coast Guard for this. Their concern is not with preserving historic structures or even maintaining them, it is with providing affective aids to navigation, and lighthouses are no longer as important in this role as they once were. One must also recognize that once the Coast Guard realized people were not only unhappy with what was happening to light stations but also that other government agencies were equipped to deal with such buildings, they reformed their procedures.

Lighthouse Preservation has become increasingly popular in the past twenty years since the Lighthouse Bicentennial in 1989. The Lighthouse Bicentennial was a year long program to commemorate the two hundredth anniversary of the federal government taking control lighthouses. The federal government designated that the celebration started on August 7, 1989. August 7<sup>th</sup> was the day that the federal government officially took control of aids to navigation from the different states. The major program of the Lighthouse Bicentennial was the Bicentennial Lighthouse Fund. The Fund was proposed by George Mitchell, the Senate Majority Leader. The money from the Fund went to state historic preservation offices (SHPOS), and from there was dispersed to different historic lighthouses to be used for preservation or rehabilitation. The money was allocated to the SHPOS in May of 1988 and had to be dispersed by September of that year. One of the properties that received money through this program was Ocracoke Light Station. The seventeen thousand dollars designated for Ocracoke was used to research and write a Historic Structure Report. The Report was prepared by the National Park Service and detailed

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<sup>105</sup> NPS, *Handbook*, Part II, 2

the work that needed to be done on the lighthouses. From 1988 until 1990 over three million dollars was given away.<sup>106</sup>

Lighthouse preservation became easier in 2000 when Congress passed public law 106-355, the National Historic Lighthouse Preservation Act of 2000. The bill was a bi-partisan act that was introduced in the House of Representatives by Congressman Mark E. Souder (R-IN), and in the Senate by Senators Carl Levin (D-MI) and Frank Murkowski (R-AK). The essential item of this Act was that it allowed the federal government to transfer historic light stations to non-profit organizations, community groups, state or local governments, other federal agencies besides the Coast Guard, and educational groups. One of the key requirements of these transfers is that the organizations that take ownership of the site make it available to the public. These organizations must also prove that they can financially care for the lighthouse. If the group is unable to meet these requirements the property can be lost. This act allows the federal government a way to ensure that historic light stations are properly taken care of without having to carry the burden of the cost while allowing the federal government to have some oversight.<sup>107</sup>

Lighthouse preservation in North Carolina is an example of what national activities. The National Park Service is involved in lighthouse preservation in North Carolina and around the country. The Old Baldy Foundation that owns Bald Head Lighthouse is an example of a non-profit group that owns and maintains a historic lighthouse. These non-profit groups exist throughout the country and own and operate many lighthouses as historic sites, in part thanks to the Historic Lighthouse Preservation Act of 2000. Old Baldy, Cape Hatteras, Ocracoke, and Bodie Island are currently all in different stages of preservation. Each of the lighthouses has

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<sup>106</sup> Nicholas Dean, "U.S. Marks 200 Years of Lighting the Way," *Preservation News* 9, (September 1989), 1, 6; Eddie Nickens, "Americans 'Roll Up Their Sleeves' to Save Lighthouses," *Preservation News* 7/8, (July/August 1991), 10; "Two Centuries of Lighting the Way," *Preservation News* 3, (March 1989), 14; Carol A. Minick, "Bicentennial Lighthouse Fund," *Cultural Resource Management* 12, 4 (1989), 27.

<sup>107</sup> Jim Noles, "A New Opportunity for Old Lighthouses," *Cultural Resource Management* 2, (2001), 39.

undergone some form of preservation and restoration and each of these lighthouses is open to the public as a historic site. The similarity in the preservation of these lighthouses ends there. Cape Hatteras and Bald Head have undergone extensive preservation work, while Ocracoke has had some preservation work done but still needs more, and Bodie Island has only had minor work done.

Old Baldy Light Station has had both preservation work done and also a recreation of the keeper's quarters rebuilt. This is the only historic light station in North Carolina that has had a recreation project but this is not uncommon elsewhere. The history of the preservation of Old Baldy is similar to many lighthouses around the United States that are owned by non-profit organizations. After the deactivation of the Old Baldy in 1935 no major changes occurred at the site until the 1980s. In 1983 the island was bought by Bald Head Island Limited, a corporation that wanted to develop the island. In 1985 the Old Baldy Foundation was formed and given the ownership of the light station. By the time that the foundation had acquired the site, the 1885 keeper's house had been destroyed and the light tower was in bad shape. The wooden stairs inside the tower were no longer safe, large pieces of stucco were missing from the outside of the tower, and there were no windows or doors left. Throughout the late 1980s and the 1990s the Old Baldy Foundation raised money and worked on preserving the lighthouse. The preservation and restoration work included replacing the doors and windows. The copper lantern was also replaced. New plaster was made to match the old and applied to the outside where it was needed. After the outside work had been completed the stairs inside the tower were restored and replaced.<sup>108</sup>

Preservation of the tower was completed in the mid 1990s and the Foundation then focused on re-creating the keeper's dwelling to use it as a museum dealing with the lighthouse

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<sup>108</sup> Nickens, "Americans 'Roll Up Their Sleeves' to Save Lighthouses," 20.



and the island. Construction on the re-creation started in 1999 and was completed the following spring. No preservation work has been undertaken on the oilhouse at Old Baldy. Before the keeper's dwelling was rebuilt the foundation changed the oilhouse into men's and women's bathrooms. These bathrooms are no longer used by the site and have fallen into disrepair. The Foundation is currently focusing on putting a new roof on the oilhouse and turning the oilhouse into extra exhibit space.

Like Old Baldy, Cape Hatteras has undergone extensive preservation work. For most of the later part of the twentieth century, preservation efforts at the Light Station have been basic upkeep of the site, new paint and some adaptive reuse of the spaces. The double keeper's quarter was adapted to be used as a museum space for the park's Museum of the Sea. It was also used to serve as a visitor's center for the park as early as 1955. Previously the oil house had served as a visitors contact station for a brief time. The most pressing problem facing the Light Station and the Park Service at this time was once again the ocean. While the erosion had been reversed during the 1940s, the reversal was only temporary and by the late 1970s the ocean was threatening the base of the light tower again. After a storm in the early spring of 1980 put the lighthouse in a more perilous position, the Secretary of the Interior asked the Corps of Engineers to complete a long range plan for saving the Light Station. The Corps finished their report in 1982 and recommended using a seawall to surround the light tower and to move the rest of the buildings as the best possible solution for saving the site.<sup>109</sup>

The National Park Service was not the only form of government involved in saving the lighthouse. During the early 1980s the Park Service had a restricted, tight budget and was not sure if they would be able to obtain the considerable amount of money needed to save the Light Station. In 1981 Jesse Helms, one of North Carolina's Senators, and James Hunt, North

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<sup>109</sup> NPS, *Cultural Landscape Report*, 22-27; Carr, *Sentinel of the Shoals*, 106-109.

Carolina's governor set aside their political differences and became co-chairs of the Save the Cape Hatteras Lighthouse Committee. The committee was an idea of a North Carolina businessman who knew both Helms and Hunt and the committee functioned as part of the North Carolina Travel Council. The goal of the committee was to raise a million dollars towards the saving of Cape Hatteras Light Station. Before the committee had reached their goal of a million dollars, they gave some of their money to the National Park Service to help with the cost of slowing the erosion so that a permanent solution could be found.<sup>110</sup>

For their part the National Park Service was looking for long term solutions to save the historic site. At first the Park Service liked the idea of using a seawall to protect the tower without having adverse affects on nature. However, after more consideration and another study by the Corps of Engineers it was decided that the seawall idea was actually not very feasible, eventually the seawall would succumb to the pressures of the ocean also. The National Park Service was looking for a long range plan that would hopefully solve the problem of erosion for good. Once the Park Service had rejected the seawall plan they started looking for other solutions. While the Park Service sought a solution, they needed to help eliminate the immediate threat to the site with temporary measures. These measures included adding sand to the beach and using sand bags to help stop the erosion while a plan was finalized. Both the Corps of Engineers and MTMA, a private company of architects based out of Raleigh, had suggested that it was possible to move the lighthouse to a new location. The idea of moving the lighthouse was first presented to the public in the spring of 1980 at a meeting for concerned community members. However the committee of community members thought the idea was not well thought out and that the estimate was too low and rejected the idea.<sup>111</sup>

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<sup>110</sup> Carr, *Sentinel of the Shoals*, 111-113.

<sup>111</sup> Carr, *Sentinel of the Shoals*, 113-119; NPS, *Cultural Landscape Report*, 27-29.

The temporary measures that the Park Service had taken were enough that they were able to take their time in deciding on an action and carefully studying the options. In 1987 the Park Service asked the National Academy of Sciences to study the options for the lighthouse. The options the Park Service asked the Academy to consider were the seawall, two options for rehabilitating an existing groin field, and moving the site. A year after the Academy began studying the Light Station, they gave the Park Service their recommendations and the Park Service agreed with the recommendation that the best way to save the site was to relocate all of the buildings farther inland. The Park Service stressed that they were concerned with disturbing historical significance of moving the buildings from their original location. In order to maintain as much historical integrity as they could, the Park Service conferred with the North Carolina State Historic Preservation Office and agreed to place all of the buildings in their original spatial relation to each other.<sup>112</sup>

The Park Service also had to worry about how the move would affect the site's status on the National Register of Historic Place, since integrity of location is one of the criteria for acceptance onto the National Register. If things went well with the move, the Park Service would simply have to amend the nomination to reflect the new location. In 1989 the National Park Service published their Cape Hatteras Lighthouse Complex Protection Alternatives/ Development Concept Plan/ Environmental Assessment. The Assessment outlined proposed goals for the move including maintaining the historical integrity and reinforcing the existing groin until it could be moved. The Assessment also stated that once the move was complete the tower and the double keeper's quarters would be reopened to visitors and that the principal keeper's quarters should be turned into a house museum and opened to the public. However the oil house was to remain closed to the public so that either the Coast Guard or the Park Service

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<sup>112</sup> NPS, *Cultural Landscape Report*, 29-30.

could use the building as they needed it. At this time the Coast Guard was using the oil house to store the emergency back up generator for the lighthouse.<sup>113</sup>

While the plan for moving the Light Station was formed in 1989 it would be another ten years before the move would actually take place. The National Park Service was busy during this decade completing work on the tower to make it more stable for moving. The walls were stabilized and the metalwork throughout the lighthouse was repaired and rebuilt where needed. Including the cost of stabilizing the coast, the Park Service spent roughly three million dollars during this ten year period to make sure that the lighthouse was ready to be moved. In the ten years between when the decision was made to move the lighthouse and it was actually relocated many people opposed the idea. Some opposed the idea because they were afraid that the lighthouse was not structurally sound enough to be safely transferred, others opposed it because they thought moving the Light Station would make it less historically significant, a few others believed that nature should be allowed to take its course and claim the lighthouse. The majority of the public wanted to save the lighthouse. They just were not sure if relocating it was the best way.<sup>114</sup>

Ultimately the Park Service felt that even with public contention moving the Light Station was the best way to save the site. Congress appropriated the first money to go towards the move in 1998. In 1999 they gave the National Park Service the rest of the eleven point eight million dollars needed to shift the complete complex. The Park Service chose International Chimney Corporation to move the lighthouse and other buildings and in February of 1999 they began. By the end of March the principal keeper's quarters, the oil house, the double keeper's quarters, and the cisterns were all traveled to the new site; none of the buildings were damaged

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<sup>113</sup> NPS, *Cultural Landscape Report*, 29-32.

<sup>114</sup> Carr, *Sentinel of the Shoals*, 116-130; NPS, *Cultural Landscape Report*, 30-32.

during the move. It took twenty three days to relocate the light tower twenty nine hundred feet to the new site. The new site was sixteen hundred feet from the ocean, roughly the same distance that the tower was originally from the ocean when it was built in 1870. Four months after the tower reached its new location the light was once again exhibited, and the following May the tower was once again opened to visitors.<sup>115</sup>

Cape Hatteras has by far undergone the most extensive preservation and restoration work of the lighthouses within Cape Hatteras National Seashore. Although Ocracoke Light Station has not undergone nearly the amount of preservation work as Cape Hatteras, it has had some work done. In 1977 the National Park Service nominated the Ocracoke Lighthouse for the National Register of Historic Places List and on November 25, 1977 the nomination was approved. The Lighthouse fulfills criteria A and C of the National Register. Criteria A states that the structure must have an “association with events that have made a significant contribution to the broad pattern of our history.”<sup>116</sup> Criteria C demands that a structure must embody “the distinctive characteristics of a type, period, or method of construction.”<sup>117</sup> Ocracoke Lighthouse was classified by the National Park Service as a building that must be preserved, or a class A building.<sup>118</sup>

Because the Lighthouse has always been, and still is, a functioning aid to navigation it has been continually maintained and therefore, had, until the early 1990s, avoided any large preservation or restoration project. Beginning in the late 1980s concerns were raised about the condition of the Lighthouse and what should be done to preserve it, especially considering that

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<sup>115</sup> NPS, *Cultural Landscape Report*, 32-33.

<sup>116</sup> NPS, *Handbook*, Part 1, 1; NPS *Ocracoke Lighthouse Historic Structure Report*, 3; National Park Service, “Guidelines for Evaluating and Documenting Historic Aids to Navigation,” *National Register Bulletin 34*, (Washington, D.C.: National Park Service, Interagency Resources Division, 1990), 5.

<sup>117</sup> NPS, *Handbook*, Part 1, 1; NPS, *Ocracoke Lighthouse Historic Structure Report*, 3; “Guidelines,” *National Register Bulletin*, 5.

<sup>118</sup> NPS, *Ocracoke Lighthouse Historic Structure Report*, 3.

the Lighthouse has been on the National Register of Historic Structures since 1977. When efforts were undertaken to address these concerns events occurred that ultimately lead to the partial preservation of the lighthouse and also to new ownership of the lighthouse. In 1987 the Coast Guard began to make inquiries into the appropriateness of painting the Lighthouse and replacing the doors and windows. On May 27, 1987, David Brook, the Deputy State Historic Preservation Officer for North Carolina, answered a letter from Marvin Barnes, the Coast Guard's Environmental Protection Specialist. This letter expressed concerns that the State Preservation Office had with the Coast Guard's plan to paint and repair the Lighthouse. Specifically the Preservation Office was alarmed by the Coast Guards plans to replace all of the windows and frames, "it appears that they could be repaired as needed and repainted. The total replacement of all window frames and sash with new vinyl-clad or aluminum-clad units with snap-in muntins would be a violation of the *Secretary of the Interior's Standards*."<sup>119</sup> The State Preservation Office also offered to meet with an engineer or other official from the Coast Guard to discuss the project and stressed the need to follow the *Secretary of the Interior's Standards*.

On September 22, 1987 David Brook was once again in contact with the Coast Guard. Brook's letter informed the Coast Guard that the changes they had made to their plans for work on the Lighthouse were in compliance with the *Secretary of the Interior's Standards*. The changes to the plan included "the replacement of the deteriorated window frames and sashes with new ones milled to match the originals..." instead of the replacement of the windows with aluminum or vinyl frames and sashes.<sup>120</sup> After numerous communications between the Coast

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<sup>119</sup> David Brook, Deputy State Historic Preservation Officer of North Carolina, to Marvin H. Barnes, Jr., *Ocracoke Lighthouse, Exterior Painting and Repairs, Specification No. 7690, Hyde County ER 87-8154*, 27 May 1987, Ocracoke Preservation Society Research Library.

<sup>120</sup> David Brook, Deputy State Historic Preservation Office of North Carolina, to Captain C. S. Park, Chief, Aids to Navigation Branch, United States Coast Guard, *Ocracoke Lighthouse Maintenance, Hyde County, ER 88-72-42*, 22 September 1987, Ocracoke Preservation Society Research Library.

Guard and the State Preservation Office the plan was finalized.<sup>121</sup> The Coast Guard contracted out the work to be done on the doors and windows to a private firm in 1988 and the work was begun in February of 1989. Once the work was started, some of the residents of Ocracoke found that the contractor was not following the guidelines set out by the Coast Guard and State Preservation Office. Three of these residents including Ellen Fulcher Cloud, a trustee of the Ocracoke Preservation Society, went to the contractor and pointed out that they were not installing the correct type of windows. The contractor dismissed the concerns and continued to install vinyl windows and a steel door. The steel door had been approved by the State Preservation office as a security measure even though it was not historically correct. The Preservation office deemed the steel door, “justifiable given the recent assaults which vandals have been making on Coast Guard lights.”<sup>122</sup> Before leaving the Lighthouse Cloud and her acquaintances asked what would be done with the old windows and they were informed that the old windows were going to be destroyed.<sup>123</sup>

After being dismissed by the contractor Cloud and her two associates left the Lighthouse to inquire what could be done to stop the installation of the new windows. After making many phone calls to the National Park Service, the Coast Guard, Congressmen Walter Jones’s office, and the State Preservation Office, Cloud became aware of the letter from May of 1987 that specifically told the Coast Guard that vinyl windows were not appropriate and could not be used. After learning this, Cloud and her associates returned to the Lighthouse to further inspect the work that was being done and the windows that had been removed. When they arrived at the Lighthouse they discovered that the contractor had attempted to lock the Lighthouse by twisting

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<sup>121</sup> Cloud, *Ocracoke Lighthouse*, 46.

<sup>122</sup> Brook, to Park, 27 September 1987. The light at Cape Hatteras had been broken by vandals prior to this causing the Coast Guard concern about security issues.

<sup>123</sup> Cloud, *Ocracoke Lighthouse*, 46-49.

wire around the latch. After breaking into the Lighthouse Cloud and her associates found the windows to be in good condition and took them to insure that they would not be destroyed.<sup>124</sup>

After securing the windows with the Ocracoke Preservation Society, Cloud and her associates made another round of phone calls to inform the agencies involved that they had taken the windows, since technically it was stealing. The result of these calls was a meeting scheduled for the following week between the National Park Service, the Hyde County Commissioner, the Coast Guard, and Cloud and her associates. Before the meeting Cloud, acting as a trustee of the Ocracoke Preservation Society, accepted formal responsibility for the windows by writing a receipt to the Coast Guard, at the Coast Guard's request. At the meeting the Coast Guard officials agreed to have new windows milled in the manner of the original windows and have them installed in the place of the vinyl windows. This outcome was satisfactory for all of the parties involved and the issue was thought to be solved.<sup>125</sup>

At this same meeting the Coast Guard also agreed to remove battery operated lights that had been installed on the gallery rails surrounding the lens when the backup generator had quit working in 1988. The installation of these lights required the Coast Guard to drill holes through the base of the Lighthouse so that they could run cables up to the lights. It has been argued that the drilling of these holes weakened the structure and allowed moisture into the Lighthouse. While the appearance of the auxiliary lights was not historically appropriate the lights were more of an issue for the residents of Ocracoke than for the National Park Service. The Coast Guard

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<sup>124</sup> Cloud, *Ocracoke Lighthouse*, 46-50; Zepke, *Lighthouses of the Carolinas*, 47; Chief, Williamsport Preservation Training Center, to Manager, Harpers Ferry Center, *Transmittal of TASK DIRECTIVE, Ocracoke Island Lighthouse*, 7 June 1990, Ocracoke Preservation Society Research Library.

<sup>125</sup> Cloud, *Ocracoke Lighthouse*, 49-53; Zepke, *Lighthouses of the Carolinas*, 47.



had not consulted anyone prior to the addition of the lights either, which only heightened tensions among the concerned parties.<sup>126</sup>

In April of 1988 before any of the work on the windows of the Lighthouse had been done the National Park Service, Coast Guard, and State Preservation office entered into agreement number 5190-8-8001 which allowed the National Park Service to apply for and receive grant funds to complete a historic structure report and perform preservation work on the Lighthouse. Why the Coast Guard continued with their plans for work on the Lighthouse after this point is not known. Although the historic structure report was not completed until 1990 work began under it in October of 1989. This work included the removal of algae from the inside bricks of the Lighthouse and the replacement of stair brackets on the interior stairs. When the report was completed it listed twelve items of work that needed to be done on the Lighthouse. These twelve items were classified as critical, serious, and minor. Listed as critical was the need to ventilate the inside of the tower and to make it water tight to stop the growth of algae. The serious list included seven items; the repair or replacement of door and window lintels, the cleaning and repair of the lantern metal, the replacement of the lantern glazing, the repair of the lantern base drum, the repointing of the interior walls, the repair of the entrance stoop and walk, and the cleaning and repainting of the interior spiral stairs. The minor list included: the replacement of the vinyl windows with the originals or historically correct reproductions, the repainting of the floor and lantern, the patching of window sills, the removal of the auxiliary lamps. The estimated cost of all of the suggested repairs was \$115,595 with the most expensive project being the raking and repointing of the interior brick mortar joints at almost fifty thousand dollars.<sup>127</sup>

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<sup>126</sup> Cloud, *Ocracoke Lighthouse*, 45-46; *Ocracoke Lighthouse Historic Structure Report*, 5.

<sup>127</sup> NPS, *Ocracoke Lighthouse Historic Structure Report*, 3-5, 41-44.

As money became available the National Park Service addressed the issues outlined in the historic structure report, although many of the minor repairs were done first as they were less expensive. In July of 1990 the Williamsport Training Preservation Center was contracted to replace the vinyl windows with the original windows and to reconstruct a door like the original. This work was administered through the National Park Service but the Coast Guard paid for the work. The windows were reinstalled but for reasons unknown the door was not reconstructed and installed.<sup>128</sup> The following year Williamsport Training Preservation Center was once again contracted to perform more work on the lighthouse. This work included the repairing of the lintels over the door and over one window. Also included was an estimate to repair the ceilings at two other windows. The cost of these repairs and estimates was six thousand five hundred dollars and was funded through a grant from the Bicentennial Lighthouse Fund.<sup>129</sup> In 1994 work was once again funded by the Bicentennial Lighthouse Fund, the amount of this grant was \$9,739.66. The work included repairing more window lintels, replacing sills on four of the windows, the restoration of inside woodwork around the windows, the reconstruction and installation of the door that was not completed in 1990, and the replacement of the hand railing around the lantern.<sup>130</sup>

After 1994 preservation efforts at the Ocracoke Lighthouse slowed because the National Park Service's attention was drawn elsewhere, namely to the Cape Hatteras Lighthouse. Although large preservation efforts have been stalled since the mid 1990s progress has continued to be made in the transfer of ownership of the Lighthouse from the Coast Guard to the National

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<sup>128</sup> Williamsport, to Harpers Ferry, *TASK DIRECTIVE*; Cloud, *Ocracoke Lighthouse*, 59.

<sup>129</sup> Lawrence D. Roush, to Acting Superintendent, *Ocracoke Light Station Repairs*, 24 June 1991, Ocracoke Preservation Society Research Library.

<sup>130</sup> David Brook, Deputy State Historic Preservation Office of North Carolina, to Joe Wallis, Preservation Assistance Division, National Park Service, *Bicentennial Lighthouse Fund Grant*, 22 February 1994, Ocracoke Preservation Research Library.

Park Service in 1999. This transfer had been discussed since 1990 and finally occurred after almost ten years of discussion and paperwork. With the transfer of the Lighthouse to the National Park Service the Coast Guard entered into a special agreement with the Park Service to maintain the lens while the rest of the maintenance was the responsibility of the National Park Service.<sup>131</sup>

With the transfer to the National Park Service the future of the Lighthouse has become less complicated. The Park Service now has complete say over what can and cannot be done to the building. Many of the difficulties involved with the preservation efforts have been erased by the transfer. When the Coast Guard owned the Lighthouse they did not view it as a historical structure but as a functioning aid to navigation. The Coast Guard's functions do not include cultural resource management, they function to provide safe sea travel and save lives. The National Park Service does function to manage cultural resources. The Park Service is in charge of the National Register of Historic Places and also owns other historical structures, including other lighthouses. The Cape Hatteras National Seashore alone owns all three of the historic lighthouses located within its boundaries, Cape Hatteras, Bodie Island, and Ocracoke. While the transfer of the Ocracoke Lighthouse to the National Park Service has been overall a positive move there have been some downsides. Like all preservation groups and agencies Cape Hatteras National Seashore limited funds and at the end of the 1990s that money was being spent on saving the Cape Hatteras Lighthouse. Today Cape Hatteras has been saved and now the Park Service is turning towards the preservation of Ocracoke and Bodie Island lighthouses both of which still required major work. At this time the Park Service is focusing on Bodie Island and it is not known when any form of work will begin on the Ocracoke Light Station.

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<sup>131</sup> "Ocracoke Light Station," *National Park Service Pamphlet*, 1; Regional Director, Southeast Region National Park Service, to Superintendent, Cape Hatteras National Seashore, *Memorandum, Transfer of Ocracoke Island Lighthouse*, 15 June 1990, Ocracoke Preservation Society Research Library; Cloud, *Ocracoke Lighthouse*, 57-62.

The main reason the National Park Service is currently focusing their attention and money on preserving Bodie Island Light Station is that it has undergone no preservation efforts to date. This is because the light is still a functioning aid to navigation and has been continuously maintained and has never suffered from prolonged periods of neglect. Although the tower has not been neglected the harsh climate of the coast has taken its toll on the tower, especially the metal and iron elements. While the tower has been adequately maintained the National Park Service is currently getting ready to spend approximately three million dollars on the light tower to make the structure safe for visitors. At this time the majority of the tower is closed to the public. When staffing allows, tourists are able to enter the oil room, work room, and bottom level of the tower, but are not able to climb the tower. The main reason for this restriction is that the stairs are not currently safe for large numbers of visitors.<sup>132</sup>

The Park Service plans to begin these preservation efforts in the spring/summer of 2008. These efforts include rehabilitating the light tower and attached oil house to make them accessible to visitors and also to restore the original Fresnel lens. This preservation and rehabilitation work will include repointing all of the vertical joints in the stone base of the tower, repainting both the interior and the exterior of the tower and oil house, repairing windows, fixing or replacing the cast iron components of the tower, and re-roofing the oil house. When the Bodie Island Light Station was added to the National Register of Historic Places, the Park Service chose not to name a period of significance for the site. The main reason for this was that the light is still used as a navigation aid and the site as a whole has undergone very few changes, most of the changes that have taken place at the site involve the fuel for the light or the ownership of the site. By not placing a period of significance on the site the Park Service also allowed themselves more leeway in dealing with preservation issues than if they had declared a period of

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<sup>132</sup> NPS, *Bodie Island Lighthouse: Historic Structure Report*, 123-128; Hartrampf, Inc., *Value Analysis*, iii.

significance. Since the period of significance is still on going the Park Service does not have to use historically correct methods to preserve the tower, although in most cases they are doing so. One of the main ways that not naming a period of significance is helping the Park Service is by allowing them to make the tower safe for climbing without hurting the historical integrity.<sup>133</sup>

The deteriorating staircase was the largest problem facing the Park Service when they began planning the preservation and rehabilitation of the site. The staircase is currently badly deteriorated and some of the treads are completely or partially missing. The main concern for the Park Service was in maintaining the historic integrity of the staircase while simultaneously allowing some form of access for visitors. In order to allow unlimited access for visitors the entire staircase would have had to undergone major restoration efforts and also the support system for the stairs would have had to have been augmented. The stairs were not designed to support large numbers of people; they were designed for the keeper and assistant keeper to have access to the light. The stairs are fairly narrow and the landings are inadequately braced to support any large number of people. Ultimately ten different alternatives were presented to the Park Service for their consideration. Two of the alternatives would not have allowed visitors to climb the lighthouse, and one of these alternatives would not have allowed visitors inside the building at all. The rest of the alternatives would allow visitors access to the building and the ability to climb the tower. The most radical idea was to replace the entire stair system, another was to replace all of the stair treads and stringers but not the landings, and the third alternative was to replace the damaged treads only and to limit the number of people allowed in the lighthouse at one time. The Park Service has chosen to go with the third alternative of replacing only the damaged parts of the staircase and limiting the number of people in the

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<sup>133</sup> Hartrampf, Inc., *Value Analysis Study*, 5-7.

lighthouse at one time to twenty-three. This allows visitors to climb the tower without significantly deteriorating the integrity of the structure.<sup>134</sup>

Preservation efforts at Bald Head Island, Cape Hatteras, Ocracoke, and Bodie Island lighthouses have all had different focuses and outcomes. The main goal of all of these preservation efforts however was similar in that it was to preserve the lighthouse as a historic site that would be open to visitors and allow visitors the widest range of experiences possible. So far Cape Hatteras and Old Baldy have successfully completed the majority of their preservation efforts. Ocracoke and Bodie Island are both still in need of large scale preservation work and will hopefully receive the attention they need in the near future.

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<sup>134</sup> Hartrampf, Inc., *Value Analysis Study*, 14-15.

## Chapter 6: Beyond Preservation the Need for Interpretation

Preserving historic lighthouses is not enough though. Historic sites need to be more than shrines to beauty. Historic sites need to offer education, interpretation and programming along with preserving history. If history is simply preserved and not interpreted there is no point in preserving it. Historic sites need to be educational above all and education can not happen without some form of interpretation. Bald Head, Cape Hatteras, and Bodie Island all offer some form of interpretation. Ocracoke Lighthouse offers little to no interpretation. Cape Hatteras has the most interpretation of any of the lighthouses in North Carolina but quantity does not necessarily mean quality. Bodie Island offers basic interpretation but they are limited on space and do not interpret all of the buildings that comprise the site. Bald Head offers broad interpretation and they are planning to expand their interpretation space to include more information about the technological history of the site. Each of these lighthouses could improve their interpretation in some way.

Interpretation should be inclusive and offer visitors many different ways to connect with the site. Freeman Tilden, author of *Interpreting Our Heritage*, lays out six principles of interpretation. These principles suggest what good interpretation should and should not be. The first of Tilden's six principles is that, "any interpretation that does not somehow relate what is being displayed or described to something within the personality or the experience of the visitor will be sterile."<sup>135</sup> This rule means that interpretation needs to connect to the visitor on some level; it can not be above the visitor or make the visitor feel inferior. Tilden's second principle is that, "information is not interpretation."<sup>136</sup> This is one of the problems that all of the historic lighthouses in North Carolina face. Each of the lighthouses offers information to their visitors

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<sup>135</sup> Freeman Tilden, *Interpreting Our Heritage*, (Chapel Hill: The University of North Carolina Press, 1977), 9.

<sup>136</sup> Tilden, *Interpreting Our Heritage*, 9.

but they have trouble taking the information and making it into interpretation that appeals to visitors. Tilden's fifth principle is also important to historic lighthouses. Tilden's fifth principle states that, "interpretation should aim to present a whole rather than a part."<sup>137</sup> Interpreting a whole at a historic light station means including the administrative, cultural, and technological history of the site along with the history of the preservation work in the interpretation. Historic lighthouses need to move past the often romanticized and simplified interpretation that they offer to visitors and become more inclusive.

Of the historic lighthouses in North Carolina Ocracoke offers the least amount of interpretation. Ocracoke, like many other light stations, has a complicated history that should be interpreted at the site along with the narrative of how the site was preserved. Today the light station is part of Cape Hatteras National Seashore and is not really open to the public. Visitors can look at the light station, but only from behind a fence that is approximately fifty feet away from the lighthouse tower. All of the buildings that compose the light station are within the fence. Another very minor issue with Ocracoke is that it is the least accessible light station within Cape Hatteras National Seashore. To get to Ocracoke Island one must take a ferry, either a free ferry from Hatteras Island or a paid ferry from either of two other locations. Each of these ferry rides is slightly over three hours. Ocracoke by far offers the least amount of interpretation of any of the light stations in Cape Hatteras National Seashore, which should allow for a complete and new interpretation to be undertaken without having to redo anything. Ocracoke is, as far as interpretation goes, a clean slate for the National Park Service. Interpretation at Ocracoke Light Station is virtually lacking. The only year round interpretation that is available is a bulletin board by the parking lot (that only accommodates five cars) and one small sign near the lighthouse. Both the sign and the bulletin board offer much of the same information about the

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<sup>137</sup> Tilden, *Interpreting Our Heritage*, 9.



history of the site. The sign also identifies the keeper's quarters and the oil house.(See figure 1) This sign is also outdated at this time because it still says that the Coast Guard owns the lighthouse, which is not true. Besides this sign there is one more sign at the site that simply declares that the Light Station is on the National Register of Historic Places.(See figure 2) As one can tell by looking at this sign it is also time to replace it, part of one corner is gone and in general the sign looks rather worn. Besides these signs the only other information is through the bulletin board. Posted on the bulletin board is the brochure that the National Park Service has published about Ocracoke Lighthouse, one side of the bulletin gives a brief history of the light station and the other side gives a brief history and description of the Fresnel lens. The bulletin that NPS published on Ocracoke is very similar to the brochures that they have also published for Cape Hatteras Light Station and for Bodie Island Light Station. The back of the Ocracoke and Bodie Island are in fact the same information about the Fresnel lens. These bulletins are the only form of interpretation that is offered to most visitors. The bulletins are also not available at the light station for visitors to take. The bulletins are available at the Park's visitor's center that is located approximately a mile away from the lighthouse. Also, there is no staff on site at the light station to help visitors or provide extra interpretation.

The fence separates visitors from the light station complex. Visitors are able to walk outside of the fence on a boardwalk and get within roughly fifty feet of the lighthouse tower; the other buildings in the complex are slightly farther away. The light station is made up of the tower, an oilhouse, the double keepers' house, and three other out buildings. There is no signage to name any of these buildings let alone explain the purpose they served. The Ocracoke bulletin does mention the double keepers' quarter and has a picture of it and also mentions the oilhouse but does not identify which outbuilding it is, nor does the one informative sign easily identify the

oilhouse. The bulletin is a good first step in interpretation at the site but it should not be the only form of interpretation offered to visitors. The bulletin also needs to be made available onsite to visitors. Even with limiting visitors access to the station and grounds there are still many ways that more affective interpretation could be implemented. A simple way to offer more comprehensive information would be to have more signage at the site. At the very least there should be signage labeling all of the buildings and giving a brief description of their purposes.

The story of Ellen Fulcher Cloud and her associates stealing the windows to help the preservation effort is a perfect way of interpreting the preservation of the site without it being too technical for most visitors. While the story of Cloud and her companions stealing the windows from the Lighthouse is not the best sort of preservation story, it is a story that many people would find interesting and could easily relate to because it was carried out by normal, interested, citizens and not a government agency or selective group. The story of the windows is a great way of highlighting how citizens can be involved in preservation and how their involvement can have real impact. Stories such as this one make for great interpretive tools, because they are so easy for people to connect with. Also the whole story of the preservation of the light station needs to be told so that visitors understand the process. This would be particularly interesting in a setting such as Cape Hatteras National Seashore where visitors are most likely visiting more than one historic lighthouse, especially if the each light station explained the preservation process that went on at it, visitors would be able to understand how complex an undertaking preservation is.

Ocracoke Light Station requires a large scale preservation effort as well as an effort at interpreting the site to visitors. The *Long-Range Interpretive Plan* that the Park Service recently published for Cape Hatteras Seashore does not mention any changes for the interpretation at Ocracoke Light Station. This is troubling because this publication will guide the Park's

interpretive activities for roughly the next ten years. The Park Service claims that the Light Station is a historic site but they operate it more as a ranger station and private residence than anything else. Restricting access to the buildings and offering sparse interpretation does not reflect well on the Park Service. To be sure, some visitors are content to simply look at the outside of the buildings but much more should be offered.

Bodie Island lighthouse offers slightly more interpretation than Ocracoke does, but not by much. While the Park Service has plans to preserve and rehabilitate the lighthouse they do not at this time, have any definite plans for updating the interpretation that is offered at the light station. Currently the interpretation offered at the site is limited and outdated. There are no signs outside other than the sign proclaiming the site to be on the National Register and a sign that says that funding for the preservation is being raised through the Save America's Treasures program.(See figure 3). Besides the tower and attached oil house there are three other structures that compose the site, the double keeper's quarters, an outbuilding, and a visitor comfort station or bathroom building. One source of confusion is that the outbuilding and the comfort station look much alike yet the outbuilding is from the 1920s and the comfort station is from the 1990s. There is nothing to notify the visitors that the comfort station was not an original building to the site or even that it is not a historic building. The outbuilding is not at all identified either, leaving visitors to wonder what its purpose was and is. The outbuilding is also closed to visitors.(See figure 4).

The double keeper's quarters serves as a book store and visitors center. Only the bottom level of the keeper's quarters is open to the public as the second floor is used for staff offices. Half of the first floor is used for a gift shop and the other half has a small museum display about the lighthouse and also an information desk that is staffed by volunteers. Luckily one of the volunteers is the last keeper's son, so he is able to offer information about what it was like to

spend summers at the lighthouse, but he is not able to be at the site all of the time. The exhibits briefly cover many topics including the Fresnel lens, lighthouse preservation, how lighthouses are becoming obsolete, and the basic facts about Bodie Island Lighthouse. These exhibits are well done and offer visitors good overviews of the topics but do not provide adequate depth. Along with the exhibit, visitors are able to take a brochure about the lighthouse with them. This brochure gives a basic history and simple facts about the lighthouse. The back of the brochure offers a history and explanation of the Fresnel lens. Again this brochure is adequate but there needs to be more interpretation offered to visitors.

There is little interpretation within the lighthouse. There are simple computer printed signs in the work room, oil room, and one at the base of the tower. The sign in the work room simply states that the keepers used the room for storage. The sign in the oil room is slightly more complex and mentions that once kerosene was introduced a new oil house was built that has since been destroyed.(See figure 5). The sign at the bottom of the tower explains why there is a well inside the lighthouse. A metal gate and fence across the bottom of the stair way ensures that visitors do not try to climb the stairs. The fence and gate will be removed when the preservation and rehabilitation of the tower are complete and visitors are allowed limited access to the stairs. The interpretation offered at Bodie Island is accurate and informative but insubstantial. Hopefully this issue will be addressed after the preservation and rehabilitation efforts have been completed and the lighthouse is once again opened to visitors. At the very least there will at that point be staff of some sort inside the tower when it is open to help control the number of people on the staircase at one time and these staff could be trained in interpretation.

Where Bodie Island has scant interpretation, Cape Hatteras Light Station has a interpretation that is unfocused and incomplete. After the light station was moved to the new site

the Park Service built a new building to act as a comfort station for visitors. Since the move a visitor contact station has also been built next to the comfort station. The contact station includes ticket sales for climbing the light tower, an information desk, and the bookstore. Until the contact station had opened the bookstore was in the lower level of the principal keeper's quarter. Now that the bookstore has moved to the contact station the principal keeper's quarters is closed to visitors, part of the space is used for staff offices and storage but the lower level of the building sits empty for the most part. Since the completion of the contact station in the early twenty-first century little has changed at the Light Station.<sup>138</sup>

Since moving the Light Station has been completed, the National Park Service has turned their attention to other lighthouses in Cape Hatteras National Seashore and has done little with updating the interpretation that is offered to visitors at Cape Hatteras Light Station. Although it has by far the most interpretation, Cape Hatteras Light Station has perhaps the most confusing interpretation of the three lighthouses in the Seashore. Like the other light stations within the seashore, Cape Hatteras focuses most of their interpretation on the light tower. While Cape Hatteras does offer some interpretation about the other buildings that compose the site this interpretation is not enough.

Perhaps the most confusing part of the interpretation at Cape Hatteras is that there is very little explanation of why the whole complex was moved from its original site in 1999. The pamphlet that NPS has published on Cape Hatteras does in passing mention that the complex was moved, "In 1999, after years of study and debate, the Cape Hatteras Light Station was moved to its present location."<sup>139</sup> There is no mention of the reasons why the complex was moved. Other than this brief mention of the move in the pamphlet the other form of written

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<sup>138</sup> NPS, *Cultural Landscape Report*, 32-37.

<sup>139</sup> National Park Service, *Cape Hatteras Lighthouse: Guardian of Diamond Shoals*, (Pamphlet, revised March 2005), 1.

interpretation offered is a binder that sits on the information desk counter in the Museum of the Sea. The binder offers information and pictures about the move but it is not very noticeable and it is doubtful that most visitors look through the binder or even know that it is available to them. It would be a simple step to take the information from the binder and use it to create a two dimensional exhibit about the move. The one problem with this would be finding a space to display the exhibit as the Museum of the Sea is already very full.

Most of the interpretation at the site is done in the double keeper's quarters where the Museum of the Sea is located. Inside the double keepers' quarters there is also a small presentation room that can seat up to 25 people. Throughout the year different videos are shown in this room that relate to Cape Hatteras Light Station or the whole Park, during the summer two different movies are shown once a day each and also by request. Both of these movies deal with moving the lighthouse. The down side to these movies is that they are both an hour long and many visitors do not want to invest that amount of time to watch them. There are also other videos offered to visitors upon request. Two of the other videos offered are the "Graveyard of the Atlantic" part I and II, these two videos discuss the ship wrecks that have occurred off of Cape Hatteras. This is the extent of audio-visual interpretation offered at the site; the rest of the interpretation is either through pamphlets or museum displays.<sup>140</sup>

The Museum of the Sea in the double keeper's quarter covers many different topics, but little of it is directly related to the Light Station. Topics covered in the museum include fishing, coastal erosion, boating, hunting, the Cost Guard, lifesaving stations, the Graveyard of the Atlantic, and the Outer Banks during wars throughout time including the Civil War, World War I and II. The museum offers one very small and brief display pertaining to the lighthouse but it

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<sup>140</sup> National Park Service, *Cape Hatteras National Seashore: Long-Range Interpretive Plan*, (Washington, D.C.: Government Printing Office, 2007), 36.

focuses solely on the tower. This display does include a picture of the original 1803 lighthouse. While the information being interpreted at the Museum of the Sea is interesting and worthwhile, the Park Service would do better to focus on the Light Station at this museum and move these other displays to another area. (See figure 6) Along with the binder that discusses the move there is also a binder at the information desk that offers a brief history of the Light Station. However, like the binder on the move it is doubtful that many visitors make use of this resource. The museum also does not discuss in any way what the original purpose of the building was. There is an information desk in the museum that is staffed by either a park ranger or a volunteer when the museum is open. These people answer questions and are responsible for starting the movies.

Besides the interpretation offered in the Museum of the Sea, there is very little interpretation offered to visitors. The tower is open for visitors and those over the height of forty-two inches are allowed to climb the lighthouse during the summer months, roughly from Memorial Day to Labor Day each year. During the rest of the year the bottom of the lighthouse is open for visitors and a staff member is on duty in the tower to answer questions that visitors may have. The oil house is interpreted through a small sign located inside the tower that has a picture of the oil house and explains its purpose. (See figure 7) The other building on the site is the Principal Keeper's Quarters, and it is not interpreted in any way. Both of these buildings are closed to the public. There is only one sign offering interpretation at the whole site. This sign is located beside the walkway that leads from the comfort and contact stations to the Light Station. This sign is entitled "Life at the Light" and offers a few brief paragraphs about living at the station. The sign also shows a historical photo of the station and labels the buildings shown in it. One slight problem with the picture is that from the angle it was taken the oil house is hidden by the lighthouse and therefore visitors may be left wondering what the oil house is exactly as there

is no signage for it. While this sign is very nice it can not interpret the whole site nor should the Park Service expect one sign to do so.(See figure 8)

This is the extent of the visitor interpretation offered at the Light Station. At set times each day staff a park ranger presents a thirty minute program about either the history of the lighthouse or the history of the Outer Banks. These programs happen at ten in the morning and at three in the afternoon. However visitors can only take part in these programs if they are at the site during these times, limiting their effectiveness. In the 2003 National Park Service publication *Cape Hatteras Light Station: Cultural Landscape Report* there are suggestions that the primary keeper's quarters be turned into a house museum showing how the keepers lived. At this time nothing has been done to make this happen and the *Cape Hatteras National Seashore: Long-Range Interpretive Plan* published in 2007 does not mention any plans to create a house museum. Currently the principal keeper's quarters is used as office and storage space and is closed to visitors except at certain times when rangers lead tours through the building; however these tours only occur when there is enough staff making it inconvenient and unreliable for visitors. These tours can also only reach so many visitors again limiting their effectiveness.<sup>141</sup>

Along with the current site of the Light Station visitors can also visit the old site, or the parts of it that are not under water already. At the old site visitors are able to see where the light originally stood because part of the old foundation remains. There is one sign at the old site that shows a picture of the Light Station and offers some information about the keeper's job. There are no indications of where any of the other buildings stood besides the tower and again no explanation of why the Light Station was moved. Neither the 2003 *Cultural Landscape Report* nor the current *Long-Range Interpretive Plan* mentions any ideas for offering interpretation of

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<sup>141</sup> National Park Service, *Long-Range Interpretive Plan*, 44-45; National Park Service, *Cultural Landscape Report*, 36.



the old site at this time. As long as the site still accessible to visitors some form of interpretation should be offered, even if it is simply outlining where all of the buildings used to stand and briefly explaining why the Station was moved. Partially interpreting the move here would be an excellent idea because visitors would be able to see how close the ocean was coming to the Station and better imagine what the fate of the Station would have been if it had not been moved.

This is the extent of interpretation offered at Cape Hatteras Light Station. The National Park Service has plans for updating the interpretation at Cape Hatteras but it is not known when any of these plans will take place. One of the goals that the Park Service hopes to complete in the next one to two years is to edit the movie, “Move of the Century”, down to a fifteen minute version to be shown in the presentation room at Cape Hatteras and also a five minute version to be shown throughout the park. In the *Long-Range Interpretive Plan* there are also plans to evaluate the exhibits at the Museum of the Sea and update the exhibits in the long term. The interpretive plan also calls for more staffing throughout the park and at Cape Hatteras for there to be a new full time year round District Interpreter Park Ranger along with two more new positions. While these positions and changes are outlined in the interpretive plan only time will tell as to whether or not the changes will be made. Currently the Park Service is focusing most of its money and time on preserving and rehabilitating the Bodie Island Light Station so it is possible that things at Cape Hatteras might not change significantly in the next few years.<sup>142</sup>

Old Baldy Lighthouse might not offer as much interpretation as Cape Hatteras Lighthouse does but the interpretation that they offer is more inclusive of the site. One of the reasons that Bald Head has less interpretation than Cape Hatteras is simply that they have less space to offer interpretation. The re-created keeper’s house serves as the Smith Island Museum, and this is where interpretation takes place at the site. The museum is a very small building to

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<sup>142</sup> NPS, *Long-Range Interpretive Plan*, 51-65.

begin with and only the first floor of the building is open to the public, with the second floor being used for staff offices. Half of the first floor is used as a gift store and the other half is a hodgepodge of artifacts and interpretation. These artifacts include a section of a Fresnel lens and a model of the Civil War era Fort Holmes that surrounded Bald Head Lighthouse. There is however always some one available at the museum to talk with visitors and answer any questions that they may have.

The Old Baldy Foundation is currently gathering the money to transform the oilhouse from out-of-date and unused restrooms into exhibit space so that they may have room to explain the changes over time in how Old Baldy was lit. This building is the perfect place to talk about these changes as it was most likely constructed because of one of these changes. The Foundation hopes to use this exhibit space to explore the technological history of lighthouses and specifically Old Baldy. The Foundation plans to have a model of a Fresnel lens in the new exhibit space so that they can show visitors how the lens worked and also other exhibits that deal with the technology of lighthouses. Once this exhibit area is complete Old Baldy will have ample room to offer interpretation on both the cultural history of the lighthouse and the island and also the technological changes that took place at the light. One of the great opportunities that is offered to visitors at Old Baldy year round is the chance to climb to the top of the lighthouse. This allows visitors to more completely understand what the keeper's life would have been like, having to climb to the lantern room multiple times during a night to check on the light and haul fuel up the stairs. Old Baldy is the only one of these four light stations that allows visitors to climb the lighthouse throughout the year. At Cape Hatteras visitors are able to climb the lighthouses only during the summer months, roughly from Memorial Day to Labor Day.

Each of these four lighthouses offers visitors some form of interpretation, even if it is not much. What all of these sites have in common is that they need to make their interpretation more inclusive. Ocracoke needs to offer actual interpretation, not simply a pamphlet that offers a brief history of the site. Part of the problem with the Ocracoke site is that it needs to undergo a large amount of preservation work for the light tower to be safe for visitors. Bodie Island offers slightly more interpretation than Ocracoke does but the majority of this interpretation focuses solely on the light tower, the other buildings on the site are almost completely ignored in the interpretation. Plans are in the works to beginning a large preservation and restoration project in the summer of 2008. The main goal of this work is to make the tower safe enough for visitors to climb the tower in small groups. Once this work is completed hopefully the interpretation at the site will be updated and expanded to be more inclusive. Cape Hatteras offers the most interpretation but like Bodie Island this interpretation is focused solely on the light tower. The interpretation at Cape Hatteras also ignores some important parts of the sites history, specifically that the whole site was relocated almost half a mile in 1999. While Bald Head does not offer as much interpretation as Cape Hatteras they offer the most inclusive interpretation. Bald Head is also currently making plans to turn their oilhouse into extra exhibit space that will focus on the technological history of the site. They hope to include a model of a Fresnel lens in this space. Historic lighthouses need to move past their romanticized history and base their interpretation and programs on facts.



Figure 1: The only signage at Ocracoke Light Station offering interpretation.



Figure 2: The sign at Ocracoke Light Station declaring it is on the National Register.



Figure 3: The outside signage at Bodie Island Light Station.



a.

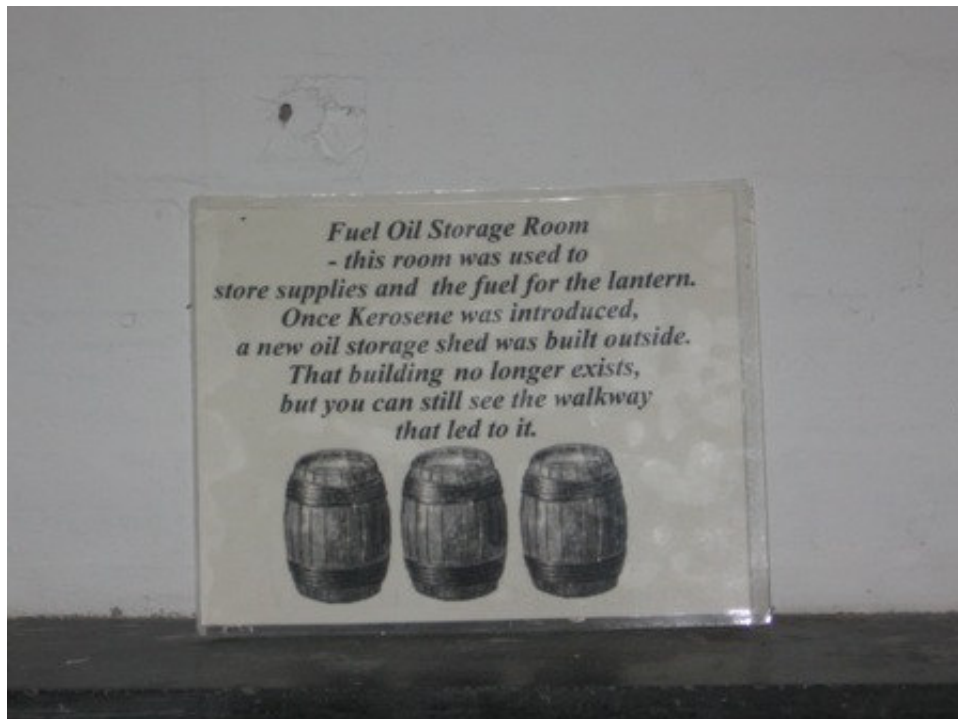


b.

Figure 4: a. Outbuilding at Bodie Island. b. Comfort Station at Bodie Island.



a.



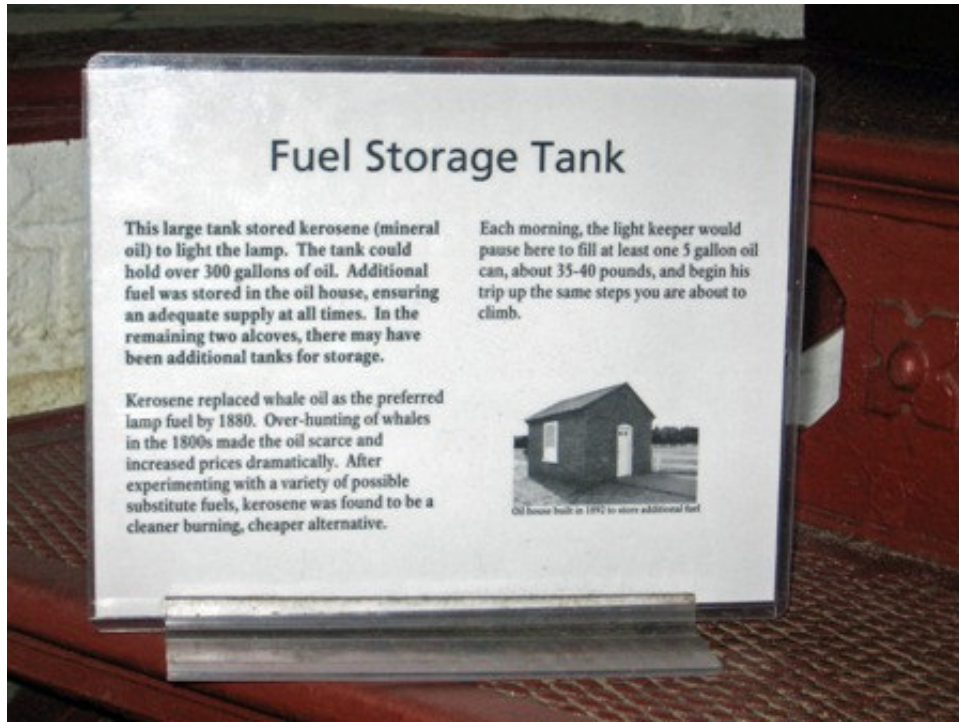
b.

Figure 5: a. The sign in the work room of Bodie Island Lighthouses. b. The sign in the oil room of Bodie Island.





Figure 6: Exhibit on the Cape Hatteras Lighthouse in the Museum of the Sea.



a.



b.

Figure 7: a. Sign interpreting the oil house in the light tower at Cape Hatteras.  
b. The oil house at Cape Hatteras Light Station.



Figure 8: The only outside sign at Cape Hatteras Light Station, offering a brief description of what it was like to live at the lighthouse.



Figure 9: The Oilhouse at Old Baldy, plans are to turn this building into exhibit space that will focus on the technological history of the site.

## CONCLUSION

Historic lighthouses in North Carolina need to be more inclusive in their interpretation. As part of the field of public history historic lighthouses need to be up to date on all aspects of running a historic site. This means that their interpretation needs to be inclusive and not based on romanticized history. By ignoring the administrative and technological history of their sites, historic lighthouses are perpetuating the idea of lighthouses as romantic places. The interpretation at historic lighthouses needs to be based on fact and treat light stations as complete sites and not simply focus on the light tower. By including the other buildings that may make up a light station in their interpretation, historic lighthouses would ultimately make their interpretation more comprehensive.

Historic Lighthouses in North Carolina are not the only ones around the country that suffer from poor interpretation. In Maine the Monhegan Lighthouses is owned by the non-profit Monhegan Historic and Cultural Museum Association. While the Museum owns the lighthouse and uses the buildings for their museum their programming has very little to do with the lighthouse. According to their web-site the permanent exhibits include topics such as lobstering and fishing, Indian life, shipwrecks, furniture, dolls, clothing from area people, a 1900s kitchen, ice cutting equipment, and paintings from the local art community. The Museum also has special exhibits and those for the past nine years have not included anything about lighthouses, they have mostly been focused on some aspect of art. The Museum went so far as to re-create the assistant keeper's dwelling to use it as an art museum. Even the name of the museum and organization ignore the fact that they own and are located at a historic lighthouse.<sup>143</sup>

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<sup>143</sup> Monhegan Historic and Cultural Museum Association website, <http://www.monheganmuseum.org/index.htm>, accessed on 11 March 2008.

Not all lighthouses have poor interpretation. In Washington the Admiralty Head Lighthouse is owned by the Washington State Parks and Recreation Commission, although it is operated by the Washington State University Beach Watchers. The Beach Watchers took over the operation of the lighthouse when the Washington State Parks system faced severe budget cuts and were no longer able to afford the running of the site. Although it is hard to tell what their actual interpretation is based on their web-site, the web-site provides a detailed history of the site and of the site's technological history. The web-site discusses the reasons why the lighthouse was built, why it was moved, rebuilt, how the light was fueled, how the light keepers lived, and even a brief history of the Fresnel lens. If all of this information is included in the interpretation at Admiralty Head then they are offering a very comprehensive and complete history of the site.<sup>144</sup>

In Michigan as part of the Pictured Rocks National Lakeshore the National Park Service owns and maintains the Au Sable Light Station. Based on the information available from the National Park's website on Au Sable Light Station they offer much more inclusive interpretation there than they do at any of the lights in Cape Hatteras National Seashore. From the website one is able to download two different pamphlets produced by the Park Service. The first is a brief two page account of the history of the site with a short paragraph on the future plans for the site. The second pamphlet is more of a small booklet that is twelve pages long. This booklet offers information about why the lighthouse was built, how it has been maintained over time, the life of the keepers, the restoration, and a brief history of the administration of lighthouses in the United States. This is much more information than is offered on the websites for Cape Hatteras, Bodie Island, or Ocracoke. The National Park Service should expand the information available on these websites so that they reflect the type of information available from the Au Sable Light.

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<sup>144</sup> Admiralty Head Lighthouse website, <http://admiraltyhead.wsu.edu/>, accessed on 11 March 2008.

Lighthouses in North Carolina are not the only ones that offer poor interpretation. However, there are lighthouses around the country that offer comprehensive interpretations to their visitors. Lighthouses are still a relatively new form of publicly interpreted historic sites. It has really only been since the Lighthouse Bicentennial that lighthouses have been preserved and opened to visitors. Considering this relatively short amount of time the interpretation that is being offered is a good starting point, but it needs to be expanded on and further developed. Hopefully in the future historic lighthouses in North Carolina and throughout the country will move past the romanticized histories that they are currently offering and take their history seriously. Historic sites have a responsibility to tell the truth to their visitors and by ignoring a large part of their history, historic lighthouses are not doing this. That there are historic lighthouses throughout the country that do offer truthful, well researched, interpretation indicates that it is an attainable goal that all lighthouses should be working towards.

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APPENDIX  
Poems about Lighthouses

**Henry Wadsworth Longfellow**  
**The Lighthouse**

The rocky ledge runs far into the sea,  
And on its outer point, some miles away,  
The Lighthouse lifts its massive masonry,  
A pillar of fire by night, of cloud by day.

Even at this distance I can see the tides,  
Upheaving, break unheard along its base,  
A speechless wrath, that rises and subsides  
In the white lip and tremor of the face.

And as the evening darkens, lo how bright,  
Through the deep purple of the twilight air,  
Beams forth the sudden radiance of its light  
With strange, unearthly splendor in the glare!

Not one alone; from each projecting cape  
And perilous reef along the ocean's verge,  
Starts into life a dim, gigantic shape,  
Holding its lantern o'er the restless surge.

Like the great giant Christopher it stands  
Upon the brink of the tempestuous wave,  
Wading far out among the rocks and sands,  
The night-o'ertaken mariner to save.

And the great ships sail outward and return,  
Bending and bowing o'er the billowy swells,  
And ever joyful, as they see it burn,  
They wave their silent welcomes and farewells.

They come forth from the darkness, and their sails  
Gleam for a moment only in the blaze,  
And eager faces, as the light unveils,  
Gaze at the tower, and vanish while they gaze.

The mariner remembers when a child,  
On his first voyage, he saw it fade and sink;  
And when returning from adventures wild,  
He saw it rise again o'er ocean's brink.

Steadfast, serene, immovable, the same  
Year after year, through all the silent night  
Burns on forevermore that quenchless flame  
Shines on that inextinguishable light!

It sees the ocean to its bosom clasp  
The rocks and sea-sand with the kiss of peace;  
It sees the wild winds lift it in their grasp,  
And hold it up, and shake it like a fleece.

The startled waves leap over it; the storm  
Smites it with all the scourges of the rain,  
And steadily against its solid form  
Press the great shoulders of the hurricane.

The sea-bird wheeling round it, with t din  
Of wings and winds and solitary cries,  
Blinded and maddened by the light within,  
Dashes himself against the glare, and dies.

A new Prometheus, chained upon the rock,  
Still grasping in his hand the fire of Jove,  
It does not hear the cry, nor heed the shock,  
But hails the mariner with words of love.

“Sail on!” it says, “sail on, ye stately ships!  
And with your floating bridge the ocean span;  
Be mine to guard this light from all eclipse,  
Be yours to bring man nearer unto man!”

**Epes Sargent**  
**The Light of the Lighthouse**

I.

The closing of a day in June,  
Mild, beautiful, and bright!  
The setting sun, the crescent moon,  
Mingling their doubtful light!  
The west wind brings the odor sweet  
Of flowers and new-mown hay;  
While murmuring billows at our feet  
Breathe of the salt sea spray.

II.

We stroll along the wide sea-beach,  
A ladye faire and I,  
And con what Nature's page may teach  
In ocean, earth, and sky.  
And, as across the waters blue,  
With roving glance we gaze,  
A light springs suddenly to view---  
It is a beacon's blaze!

III.

O, lambently the new-born flame  
Disparts the purple air;  
In childlike wonder we exclaim,  
To see a sight so fair.  
"How bright," the ladye saith, "its ray  
Shoots o'er the tranquil tide!  
Now listen to the tale, I pray,  
With yonder shaft allied.

IV.

"Upon that island's narrow ledge  
Of rocks with sea-weed strown,  
Fringed by the thinly-scattered sedge,  
The lighthouse towers alone.  
There, 'mid the sea's perpetual swell,  
The dash of breakers wild,  
Two solitary beings dwell---  
A father and his child!

V.

"Three years ago, no friendly light  
Across the dark reef beamed;  
A white flag on the rocky height,  
The only signal, streamed.  
Poor Francis Lorne had then a wife,  
And he had children five;  
He led a fisherman's bold life,  
And merrily did he thrive.

VI.

"It was on Independence Day,  
To Mary Lorne he said,  
'My sloop is rocking in the bay,  
Our flag at her mast-head.  
Come, gentle wife, your work throw down,  
And, children, come with me;  
And we'll all take a trip to town,  
This day's great sights to see.

VII.

"On board! on board! Fair blows the gale;  
My boat is swift and strong;  
With streamers gay and loosened sail,  
How will she sweep along!  
The sky is clear and beautiful,  
Bright gleams the breezy morn;  
We'll skim the blue waves like a gull!  
We will!" said Francis Lorne.

VIII.

"O, joyful heart, exult not so!  
Mistrust that prospect fair;  
It is the lure of death and woe,  
The ambush of despair!  
That night the storm, in wild array,  
Clove through the billows dark,  
And, in a cloud of foam and spray,  
Rushed on the fated bark.

IX.

"The morning's dim, unconscious smile,  
That hushed the raging blast,  
Disclosed upon that rock-bound isle  
Two forms the surge had cast.  
There, folded to the father's breast,  
His youngest daughter lay;  
They are but two---where be the rest?  
Ye ruthless billows, say!

X.

"Alas for him! From death-like sleep,  
When memory was recalled,  
He could not groan---he could not weep---

His reason was appalled!  
A grief, that blanched his sun-burnt face,  
Thenceforth upon him grew---  
A grief that time could not erase,  
And hope could not subdue.

XI.

"And when, at length, on yonder spot,  
Was reared the lighthouse spire,  
To him was given the lonely lot  
To tend the beacon fire.  
There, from the busy world apart,  
Its clamor and its care,  
He lives, with but one human heart  
His solitude to share.

XII.

"But O, Aurora's crimson light,  
That makes the watch-fire dim,  
Is not a more transporting sight  
Than Ellen is to him!  
He pineth not for fields and brooks,  
Wild-flowers and singing birds,  
For Summer smileth in her looks,  
And singeth in her words.

XIII.

"A fairy thing, not five years old,  
So full of joy and grace,  
It is a rapture to behold  
The beauty of her face!  
And O, to hear her happy voice,  
Her laughter ringing free,  
Would make the gloomiest heart rejoice,  
And turn despair to glee!

XIV.

"The ocean's blue is in her eyes,  
Its coral in her lips;  
And, in her cheek, the mingled dyes,  
No sea-shell could eclipse!  
And, as she climbs the weedy rocks,  
And in the sunshine plays,



The wind that lifts her golden locks  
Seems more to love *their* rays.

XV.

"When the smoothed ocean sleeps unstirred,  
And, like a silver band,  
The molten waters circling gird  
The island's rim of sand,  
She runs her tiny feet to lave,  
And breaks the liquid chain;  
Then laughs to feel the shivered wave  
Coil down to rest again.

XVI.

"And, when the black squall rends the deep,  
The tempest-cradled maid,  
To see the white gulls o'er her sweep,  
Mounts to the balustrade:  
Above her head and round about,  
They stoop without alarm,  
And seem to flout her threatening shout,  
And her up-stretching arm.

XVII.

"Once, Francis sought the neighboring town,  
And she was left alone;  
When such a furious storm came down  
As never had been known.  
'My child!' the wretched parent cried;  
'O friends, withhold me not!  
The bravest man, in such a tide,  
Would quail on that bleak spot.'

XVIII.

"He strove, till faint and out of breath,  
His fragile boat to gain;  
But all knew it was certain death  
To tempt the hurricane:  
And wilder grew the tempest's power,  
And doubly black the night,  
When, lo! at the appointed hour,  
Blazed forth that beacon-light!

XIX.

"The sea-fog, like a fallen cloud,  
Rolled in and dimmed its fire;  
Roared the gale louder and more loud,  
And sprang the billows higher!  
Above the gale that wailed and rang,---  
Above the booming swell,  
With steady and sonorous clang,  
Pealed forth the lighthouse bell!

XX.

"Warned by the sound, ships inward bound  
Again the offing tried;  
And soon the baffled Tempest found  
His anger was defied:  
The billows fell, the winds, rebuked,  
Crept to their caverns back;  
And placidly the day-star looked  
Out from the cloudy rack.

XXI.

"Bright through the window-panes it smiled  
Upon the little bed,  
Where, wrapped in slumber deep and mild,  
Ellen reposed her head.  
Her friends, her father seek the place;  
Good saints have watched her charms!  
Her blue eyes open on his face,  
And she is in his arms!"

XXII.

The voice was mute, the tale was told;  
Sacred be my reply!  
Along the wide sea-beach we strolled,  
That ladye faire and I.  
Blessed, ever blessed and unforgot,  
Be that sweet summer night!  
And blessings on that wave-girt spot,  
The lighthouse and the light!

**Joseph Ceravolo**  
**Lighthouse**

All this summer fun.  
The big waves, and waiting  
(the moon is broken)  
for the moon to come out  
and revive the water. You look  
and you want to watch as  
men feel the beer breaking  
on their lips, and women seem like  
the sun on your little back.  
Where are you closer to everything?  
in the plants? on the photograph or  
the little heart that's not  
used to beating like the waves' foam?  
A wasp is  
looking for a hole in the screen.  
No. There's no man in the lighthouse.  
There's no woman there, but there is  
a light there; it is a bulb.  
And I think how complete you are  
in its light. Flash ..... Flash .....  
.....  
And I think of how our room  
will smell; You lying on one bed  
and we in the other,  
facing the ... flash .....  
..... Flash

**James Laughlin**  
**The Lighthouse**

You are my lighthouse. Ceaselessly  
your rotations beam over the sea  
and land. Birds are guided by them  
and so are travelers lost in the  
moors. You are my compass and light.