2000

Point Betsie: The Future of the Great Lakes Lighthouse

Mary Sarah Alfson
University of Pennsylvania

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POINT BETSIE:
THE FUTURE OF THE GREAT LAKES LIGHTHOUSE

Mary Sarah Alfson

A THESIS

In

Historic Preservation

Presented to the Faculties of the University of Pennsylvania in
Partial Fulfillment of the Requirements for the Degree of

MASTER OF SCIENCE

2000

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Dedication

This thesis is dedicated:

To Mom, Dad, Poppa, and Grandma for their love and support over the last 25 years.

To Christa, for all her help and support while this work was in progress.

To my friends – Shelby, Michelle, Emily, Ty, and Rebecca - for putting up with me over the past three years while I completed school, especially during the last few months!

And to Sarah – for the last fourteen years. I wouldn’t have made it without you.

Thank you all!
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Figure 6.4 “Examples of current Point Betsie merchandise available in area stores.” The same examples are seen repeatedly throughout the area. Photographed by author.
Introduction
Lighthouses in the United States have traditionally been viewed more in light of their romantic appeal and nostalgic atmosphere than for their practical functions. While most people appear to be less than knowledgeable about the function of lighthouses, they typically see them in light of the romantic ideal of living alone on the edge of the water, saving helpless shipwreck victims. The drudgery of life in lighthouses before they were automated is often overlooked or misunderstood. Practically speaking, lighthouse keepers were underpaid and overworked individuals, who could go for months at a time from limited to no contact with outsiders. Often separated from their families for months, they were susceptible to illness with no recourse to medical help, drowning, at times starvation, and the general deprivation of many amenities that most people today require in life (running water, electricity, a radio or phone, etc.).

The emergence of lighthouses in the United States is seen as marking a period in history where the importance and significance of water borne trade was finally realized. Americans were attempting to show the rest of the world that they were as modern and as innovative as Europeans, and they (the Americans) did not want to be seen as lacking in any of the basic signs of a true civilization. And, historically, lighthouses were seen in many quarters as a sign of civilization. From a more basic and materialistic perspective, with the variety and length of the coasts on the United States, lighthouses were essential in order to save money and lives by reducing the number of shipwrecks.

With the further advancement of trade within the United States, and the beginning of the development of the Midwest, the construction of lighthouses along the shores of the five Great Lakes (Erie, Huron, Michigan, Ontario, and Superior) was inevitable. The
varied and often deadly shores contained numerous bays, harbors, shoals, and points, all of which contributed to the need for a system of navigational aids. Oftentimes underestimated in the danger the Great Lakes present, sailors quickly learned that the hazards of the uncharted waters were as deadly, if not more so, than the waters of the oceans. Also to be taken into account were the dangers of the unpredictable and ever changing weather that characterizes the Great Lakes. Sudden gales and storms are common in the “winter” season, which can begin as early as August and last as late as June.

As the Great Lakes' trade and water borne commerce expanded and lighthouses continued to be built, other factors came into play. The Midwest was quickly being settled, and many areas of northern Michigan became tourist meccas, providing an outlet from the heat and congestion of cities such as Chicago and Detroit. In addition to tourists, the Great Lakes were used as a key means of transporting new settlers to areas farther west. A new settler could travel as far as Chicago, Duluth, or other areas of Wisconsin and Minnesota and then continue on into the Great Plains from there.

As industries increased, such as coal and lumbering, water borne trade reached its all time high. The advent of railroads contributed to this fact, rather than detracting from it. Cargoes could be shipped across Lake Michigan still in the same railroad car, which decreased the cost needed for transportation. The ships were also able to transport materials from Chicago to and from Detroit and the areas in between for less cost and at a faster rate than could be done using railroads.

In addition to all this trade, the tourist industry continued to blossom. The area of
Benzie County, along Lake Michigan, became a particularly popular spot due in part to the ease of transportation via the Ann Arbor Railroad, which not only ran passenger trains but also provided tour boats to the area. The company owned and operated one of the most successful resort hotels, the Frontenac, in Frankfort, Michigan. The hotel catered to hundreds of guests on a daily basis throughout the summer months.

Frankfort was also home to one of the most important lighthouses located on Lake Michigan – Point Betsie. The Point Betsie lighthouse was constructed in 1858 to mark one of the key locations on the Lake Michigan shipping routes. The area to the north of the point is known as the Manitou Passage, which marks the shorter route for ships to take when heading north to the Straits of Mackinaw. The Point Betsie Lighthouse also marks the point where southbound ships change their course for various locations (Chicago, IL; St. Joseph, MI; Milwaukee, WI) and where north bound ships either head for the Straits of Mackinaw or to Duluth, Minnesota.

The construction of the Point Betsie lighthouse was accomplished in a fairly short amount of time, resulting in shoddy construction and a need for almost constant repairs over the first fifty years of its existence. The last set of major repairs occurred in 1939 when the Coast Guard obtained control of the United States Lighthouse Board. Finally automated in 1983, Point Betsie was one of the last lighthouses in the United States to be served by an active keeper, as opposed to a timer-operated light.

For ten years after its automation the lighthouse continued to serve as housing for Coast Guard personnel and their families. Finally, in 1993, the lighthouse was closed up and the personnel relocated, due to severe boiler problems and other general upkeep
issues. Since then the lighthouse has remained empty – an easy prey for vandals. The Coast Guard recently announced that the Point Betsie Lighthouse was to be surplused\(^1\), and turned over to the Bureau of Land Management. At this time future ownership of the lighthouse has not yet been decided. The process of transferring properties from the Coast Guard is a lengthy and time-consuming process. The future of this beautiful lighthouse is not determined, with many people interested, but no one knowing what the actual outcome will be.

This thesis is an attempt to document the history of lighthouses in the United States and specifically the Great Lakes. The purpose of this is to provide the context for understanding how and why the Point Betsie Lighthouse was constructed. The importance of the Point Betsie lighthouse is presented through an in depth history of the lighthouse and the surrounding area, including the stories of some remarkable lighthouse keepers. Finally, while no single correct solution exists to answer the question of what will happen to this lighthouse, general information and options are provided in this study giving context and guidance for the eventual transfer and reuse of the Point Betsie Lighthouse.

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\(^1\) Lighthouses are becoming obsolete and unnecessary to United States Coast Guard programs, so they are slowly being turned over the General Services Administration (GSA) and the Bureau of Land Management (BLM). When these properties are given to the GSA or to the BLM, the process is called “surplusing.”

Chapter 1:

Evolution of the Great Lakes
Chapter I

Evolution of the Great Tales
The Great Lakes have played a key role in the development of commerce, trade, and the westward movement of immigrants in the United States. The use of the lakes for industry, transportation, and recreation has been an ongoing theme in the history of the region, and it plays a key role in the overall development of the country. The Great Lakes have been neglected in the quantity and quality of research conducted on their history and impact on American society and culture. Few definitive works have been written on them or on their influence and importance to the country. Despite this, the fact remains that the Great Lakes were one of the earliest economic successes for this continent, despite the difficulties of settlement and the dangers inherent in waterborne trade and transportation.

In 1541, Jacques Cartier became the first proven white man to navigate the St. Lawrence River as far as what is today Montreal, Canada. Following this lead, Etienne Brule became one of the areas key explorers, with his 1618 discovery of Lake Superior and the connecting passages between it and Lake Huron. Jean Nicolet followed Brule's example and continued the exploration of the waterways, discovering Lake Michigan in 1624. A number of men followed these examples, expanding and infiltrating the areas surrounding the Great Lakes. The Jesuits sent out a number of missionaries to the Native Americans in this region, and they also contributed greatly to the knowledge of the

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2 While there is speculation that Norwegian explorers reached the upper shores of Lake Michigan and Lake Superior prior to Europeans, there is no proven evidence at this time.
waterways and the landscape.³ It wasn’t until 1669, however, that Lake Erie was discovered, by Joilet.⁴

In 1671 the fight for the ownership of the Great Lakes began, with France claiming the entire area surrounding the lakes. This was to mark the first in a number of disagreements over the ownership of the area, disagreements that would not be resolved until after the end of the War of 1812 with the British loss to the United States. A series of wars between England and France, ended with the 1763 defeat of the French in the French and Indian War. Britain gained control of the Great Lakes at this time.⁵ In 1796 Great Britain surrendered the majority of the ports on the Great Lakes to the United States, and emphasis on settlement of the Great Lakes began. Areas of settlement and ownership were finalized after the War of 1812 when the boundaries for the two countries were firmly established.⁶

Throughout the struggle for control of this area, the key factor remained the same: trade. Beginning with the native Americans and their use of canoes, a wide variety of vessels have sailed the Great Lakes bringing trade and prosperity to the region. According to M. Stephen Salmon, “...the opening of the west and the concurrent growth of the grain trade were the primary factors in the creation of a modern lakes fleet.”⁷ By 1848 there were over 774 sailing vessels on the Great Lakes, and by 1868 there were over

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⁵ Russell McKee. *Great Lakes Country*. (New York: Thomas Y. Crowell Company, 1966), 131. There were actually four wars fought between England and France, all of which listed the colonies as part of the prize: King William’s War from 1689-1697; Queen Anne’s War from 1702-1713, King George’s War from 1744-1748, and the French and Indian War from 1754-1763.
1,800. This dramatic rise of the shipping industry parallels developments in agriculture, pioneering, and the general settlement of the west. As other outlets for products developed, lake trade declined, so that by 1900 there were again fewer than 1,000 vessels sailing the Great Lakes.  

"A large birch back canoe on the rapids".

![Figure 1.1](image)

On August 9th, 1679, the first ship on the Great Lakes was launched on Lake Erie. This ship was the “Griffon” and was built by LaSalle to help establish colonies on the Lakes. Unfortunately for him, the success of the Griffon was limited, due to the scarcity of supplies, and the difficulties of sailing on the Lakes. The lack of permanent settlements and trade routes contributed to the difficulty of LaSalle’s mission, as did the uncharted waters of the Lakes. It wasn’t until the 1780s that any type of significant trade

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was conducted on the Lakes, although fur traders had been operating in the area for many years.

The early 1800s saw the rise of the fur trade and the subsequent increase of sailing vessels on the Great Lakes. The success of the waterborne trade was dependent on the increase in settlements in the Midwest as well as on the movement of society in general from a mainly agrarian one to an industrialized society. The Great Lakes provided a means of settlement as well as a means of shipping supplies to and from the new colonies. The growth of both of these was dependent on the continued success of the other.

By 1818 the first steamship appeared on the Lakes, called the "Walk-In-The-Water" or simply "The Steamer" for short. Walk-In-The-Water made a regular run from Buffalo, New York, to Detroit, Michigan, carrying supplies and passengers. In 1825, with the opening of the Erie Canal, trade revived in the region. At this point, merchants and opportunists realized that it was cheaper to ship cargo through the waterways than it was to send materials overland by wagon. Compared to the rough wilderness, which oftentimes had no system of roads, the Lakes seemed the safer and more favorable option. In addition, the rates for transportation on the Great Lakes were reasonable, and oftentimes more affordable than land transportation. The 19th century was truly the key period for the rise of the shipping industry.

In the early 1830s both the territory of Michigan and the state of Ohio were in contention over property along their border. Both were claiming a single stretch of land, and a "war" was fought over it. (The Michigan-Ohio War in 1835). Ohio won, and as a
consolation prize, Michigan was awarded the Upper Peninsula. Michigan received statehood four years later in 1837.\textsuperscript{10}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{image}
\caption{Three masted schooner Our Son out of Milwaukee.}
\end{figure}

In 1840 the first mining rush began in the Great Lakes territories – copper had been discovered in the Upper Peninsula, by Douglass Houghton, a state geologist. This immediately brought about a new focus for the area and provided another line of endeavor for the ships on the Great Lakes. Not only were ships bringing prospectors into the area, they were transporting the copper out of it. The mining industry became a large supporter of shipping on the Great Lakes and remains one to this day. In the late 1840s iron was discovered, which helped insure the prosperity of the region.

\textsuperscript{9} James Cooke Mills. \textit{Our Inland Seas}. (Chicago: McClurg, 1910), 103.
By the 1850s, logging was added as a key industry, and the Great Lakes had been established as one of the main waterways in the United States. Construction on the Soo (Sault) locks began in this time period, and the locks opened in 1855. The opening of the locks allowed ships easier access to and from Lake Superior. In 1881, the original locks at Sault Ste. Marie were replaced with the Weitzel Lock, which still operates today. It was joined, in 1896 by the Poe lock, and the Canadian Locks. In 1914 and in 1919 two more locks were added, due to the increase in trade on the Lakes. The final and largest lock was built in 1943, and it is called the MacArthur lock. Up until the end of the 1940’s, the average tonnage to pass through the Soo Locks exceeded that of the Suez Canal, the Panama Canal, and the Manchester Canal – combined.\textsuperscript{11}

\textit{Bulk cargo ship. George M. Humphrey. 1954. 710 feet long, and 75 feet wide, carried over 22,000 gross tons}

By 1955, there were over 750 vessels sailing on the Great Lakes, capable of carrying over 5 million tons altogether. The variety of types of sailing vessels found on the Lakes is typical of the wide range of products transported, and is also dependent on the long history of sailing on the Great Lakes. These vessels have included, through the past two centuries, bulk carriers, package freighters, oil tankers, car ferries, and passenger vessels – to name a few.

The rise and decline of the shipping industry on the Great Lakes is tied directly to the construction and management of lighthouses on the Great Lakes. As the shipping industry increased the danger to ships and their crews became more and more apparent. Lighthouses were constructed to help alleviate this danger. The growth of lighthouses on the Great Lakes was a slow process, and caused the ruin of a great number of ships and the deaths of a great number of men and women. A common misconception existed (and still does) that the Great Lakes are relatively small and harmless, and that they are therefore safer for sailing. Patently untrue, the Great Lakes suffer from a number of conditions which make sailing them highly treacherous. Fresh water freezes faster than salt water, causing ice damage and hampering movement of vessels. Weather conditions change within the space of minutes, and the wind and water levels rise to levels which can easily swamp or capsize the largest vessel. Currents are unpredictable and channels and harbors easily become restricted with the onset of winter. These issues and factors were the main ones in the construction and growth of lighthouses on the Great Lakes.

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12 See Chapter 3
Throughout the years lighthouses have become landmarks and icons for American society. The Great Lakes lighthouses are no different. To people within the boundaries of the Great Lakes region, lighthouses represent the past history and importance of the area. They stand as reminders for the prosperity and success that once characterized the region. The romantic appeal of the lighthouse as a life-threatening career is coupled with the beautiful maritime settings and the peaceful appearance of the locations.

Lighthouses also serve as cultural icons for small communities. They are considered local monuments and communities are proud of their maritime heritage and their lighthouses. The lighthouse is seen as a belonging to a local community, and community members are generally willing to work hard to keep “their” monument in the community. Often times the lighthouses also serve as a tourist attraction, contributing to the financial well being of small communities.

Part of the American landscape, it is important to see lighthouses for their worth both as maritime aids and as representations of an important part of the American heritage. The necessity of preserving these structures grows more strongly every year, as weather, vandals, and simply neglect continue to take their toll on the lighthouses. Preservation and ownership issues are only just beginning to be dealt with in regards to the lighthouses. Recognition of the importance and history of the Great Lakes lighthouses is only slowly becoming an issue that requires attention, and the next few years will prove to be key to saving the Great Lakes Lighthouse.
Chapter 2:

Evolution of Lighthouses in the United States
Chapter 7

Evolution of Lightphones in the United States
With the settlement of the American colonies and the continual increase in waterborne trade both within the colonies and with Europe, it became essential that some type of navigational aid be incorporated into the coastline of America. Prior to 1789, the lighthouses that did exist in the colonies were constructed individually by either colonial governments, or more commonly, by individual cities and merchant organizations. Faced with the continual loss of profit due to shipwrecks, merchants banded together to force local governments to devise and construct lighthouses. The first to be constructed was the Boston Light on Little Brewster Island. Put into service on September 14, 1716, the Boston light was 60 feet high and consisted of a simple conical tower. The second light in the colonies was not built until thirty years later in 1746, when the light at Brandt Point on Nantucket Island was lit.¹

By 1789 it was obvious that the existing lights were not of a quality sufficient enough for the growing shipping industry. On August 7th, 1789, the 9th Congressional Law was written creating the Bureau of Lighthouses, whereby all existing lighthouses were transferred to the control of the Federal Government.² This was the first act of Congress that provided for any public work on the part of the federal government. The Act states that the Federal Government would provide:

the necessary support, maintenance, and repairs of all lighthouses, beacons, buoys, and public piers erected, placed, or sunk before the passing of this act, at

¹ Francis Ross Holland Jr. *America's Lighthouses: An Illustrated History.* (New York: Dover Pub, 1972), 10-12. The earliest lighthouses in America are: Little Brewster Lighthouse in Boston (1716), Brandt Point Light in Nantucket (1746), Tybee Island Light in Georgia (1748), Beveratal Lighthouse in Rhode Island (1749), New London Light in Connecticut (1760), Sandy Hook lighthouse in New Jersey (1764), Cape Henlopen in Delaware bay (1767), Morris Island Light in Charleston (1767), Plymouth Light in Massachusetts (1769), Portsmouth Lighthouse in New Hampshire (1771), and the Cape Ann Light in Massachusetts (1771).
the entrance of, or 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.

Lighthouses served a dual purpose. A well-maintained system of navigational aids was a sign of a civilized society, and Americans were eager to prove themselves, especially since the growth of the lighthouse system parallels the development of waterborne trade in the United States. One author at the time was quoted as saying:

Nothing indicates the liberality, prosperity, or intelligence of a nation more clearly than the facilities which it affords for the safe approach of the mariner to its shores.

But the key service that the lighthouses provided was assistance to mariners, who often times had no other indication of their location. Each light was distinctive in its coloring and shape and served as both night and day markers for all sea-going vessels.

Lighthouses in the United States grew in amazing numbers after this point. In 1800 there were sixteen lighthouses and by 1812 there were forty-nine. This number increased to twenty-one in the next twelve years, and by 1838 it had increased to a staggering amount - there were now two hundred and four lighthouses in the United States. This number would continue to grow until 1852 when the United States had three hundred and thirty-one lighthouses in existence. The all time high was reached just eight years later, in 1860, when there were 420 active lighthouses in the United States. At this time there were also fifty-three lightships, over 4500 beacons and buoys, twenty-one

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buoy-tenders and supply ships, 575 lighthouse keepers and assistants, and over 500
seaman assigned to the various lightships and supply vessels.  

The United States continually worked to upgrade the system of lighthouses to
match those of Europe and succeeded for a time in many ways. The focus of the system,
however, remained solely on ocean coast states, and despite their importance and effect
on marine transportation, it was not until 1818, that the first confirmed lighthouse appears
on the Great Lakes. (There are numerous possible explanations for this, all of which
will be addressed in Chapter 3). Some evidence reports that there was a lighthouse in
existence on Presqu’isle as early as 1810, while other sources indicate the Niagara Fort
Light was built in 1813. However, the earliest lighthouse that has definite evidence is
that of the Presqu’isle lighthouse being in existence in 1818.

During the first half of the nineteenth century, the control of American
lighthouses changed hands repeatedly. Initial control of the lighthouses was granted to
the first Secretary of the Treasury, Alexander Hamilton. This lasted until 1792 when the
then United States President, Alexander Hamilton, assigned control of the lighthouses to
the Commissioner of Revenue. Unfortunately, the Commissioner had very little
practical knowledge of lighthouses or how they were operated. This was to be a common

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6 See Appendix A for a complete listing of Great Lakes lighthouses.
7 Also known as Presque Isle.
(Ohio: Ninth Coast Guard District, 1976), 13.
9 George Weiss. *The Lighthouse Service: It’s History, Activities, and Organization.* (Baltimore, Maryland:
The Johns Hopkins Press, 1926), 3. It is interesting to note that in the early history of the lighthouse
service, it was not unusual to have orders or contracts signed directly by the President of the United States.
Many such early orders bear the signatures of George Washington, Alexander Hamilton, and Thomas
Jefferson.
trend in the management of the lighthouses for the next several years. In 1802, Albert Gallatin, the Secretary of the Treasury assumed responsibility for the lighthouse program, but by 1813 it had been transferred back to the Commissioner of Revenue. In 1820, it was once again passed back to the Treasury Department, this time to the 5th Auditor of the Treasury, a man by the name of Stephen Pleasanton. Unfortunately for the lighthouse service, Pleasanton remained in control of the Bureau of Lighthouses until 1852, when it was determined that the Treasury Department was not properly equipped to build and manage lighthouses.11

It is very possible that when Pleasanton first assumed control of the American lighthouses he was capable of the job. According to a Congressional Act, the duties of the “General Superintendent of Lights” were:

... to superintend the several matters and things connected with the light-houses, beacons, buoys, and public piers, as heretofore, of the United States, and to perform all duties connected therewith, under the direction of the Secretary of the Treasury, until otherwise ordered by law.12

It is important here to note that Pleasanton had no experience with lighthouses or other aids to navigation. He was in charge of a system that was handled mainly by contracts, with few actual staff members outside of the keepers and their assistants.

In 1820, the United States only had seventy active lighthouses, but by the time Pleasanton lost the job, there were over three hundred and thirty one active lights, not to mention the signal buoys, the lightships, and the fog signals, all of which had to be

managed, staffed, and maintained. He did make two significant changes during his
tenure as "Superintendent of Lighthouses". One of these changes was the introduction of
gas lamps into the lights. The Portland, New York, lighthouse was first to introduce a
gas burning light in 1829. The second significant change effected by Pleasanton was the
division of the Lighthouse Bureau into eight districts.¹³

Pleasanton had a very close relationship with the inventor and supplier of the
lamps and reflectors that were used by all American lighthouses. A former ship captain,
Winslow Lewis had designed the parabolic reflector system which was used in early
lighthouses, and which was, until the invention of the Fresnel lens, the most reliable form
of lighting in a lighthouse. In 1812, the Federal Government had bought from Lewis the
patent for his "reflecting and magnifying lantern" and had contracted

...with the said Winslow Lewis for fitting up and keeping in repair, any or all of
the lighthouses in the United States or territories thereof, upon the improved plan
of the reflecting and magnifying lanterns. ¹⁴

Lewis, however, was more interested in turning a profit than he was in updating
his lighting system, and Pleasanton relied on his opinion in all matters pertaining to the
lighthouse system. Lewis, a retired sea captain, also dabbled in the construction of
lighthouses. He was often given the bids to build new lighthouses, since he was good at
cutting costs and reducing expenses. For this reason, many of the lights that he built were
of poorer quality and needed maintenance and replacement much sooner than they should

(Ohio: Ninth Coast Guard District, 1976), 15.
¹⁴ Truman R Strobridge,. Chronology of Aids to Navigation and the Old Lighthouse Service, 1716-1939
(Washington, D.C.: United States Coast Guard, 1974)
have\textsuperscript{15}. At this point it is also important to note that Pleasanton had no maritime experience whatsoever, and while he did effect some early reorganization that were productive, he was not amenable to any changes in the lighting of lighthouses or in the methods of constructing them, mainly due to Lewis's influence.\textsuperscript{16}

\textit{3\textsuperscript{rd} order Fresnel lens at Fairport Harbor Lighthouse, Fairport, Ohio.}

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{image.png}
\caption{Figure 2.1}
\end{figure}

One key improvement in lighthouses that was slow to reach the United States was the Fresnel Lens, invented by Augustin Fresnel, in 1822. It is said that Fresnel:

...revolutionized lighthouse practice by developing a built-up annular lens comprised of a central spherical lens surrounded by rings of glass prisms, the central portions of which refract and the other portions both reflect and refract in the desired directions the light from a single lamp placed at the central focus.\(^{17}\)

These lenses were soon used in almost all European countries, due to their steady and constant light. The varying degrees of Fresnel lenses made it possible for the lighthouses to tailor the strength of the light to each specific site. Despite their obvious benefits and superior performance, the United States had only 3 Fresnel lenses in 1851\(^{18}\). This was mainly due to the influence of Winslow Lewis, and it took a direct order from Congress to force Mr. Pleasanton to purchase more such lenses.\(^{19}\)

Fresnel Lenses were the most innovative technique for lighting to occur in the lighthouse industry. Operated originally by Argand lamps, the lenses also worked with gas and electric lamps. Constructed in seven different sizes (1\(^{\text{st}}\) order, 2\(^{\text{nd}}\) order, 3\(^{\text{rd}}\) order, 3 \(\frac{1}{2}\) order, 4\(^{\text{th}}\) order, 5\(^{\text{th}}\) order, and 6\(^{\text{th}}\) order) with the lowest number being the largest lens, and the highest number being the smallest lens. The size of the lens is determined based on the focal length of the lens, that is, the distance from the center of the light to the inner surface of the lens, as illustrated in the following chart:\(^{20}\)

---

The larger lenses were used mainly on oceans, and the smallest lenses on rivers and smaller harbors. The 3-½ lens was created for use on the Great Lakes, although the entire range can be found on the Great Lakes. These lenses differed greatly from those of Winslow Lewis, who did not vary the size of his lenses like Fresnel did.

As his term as 5th Auditor and Superintendent of the Lighthouses continued, Pleasanton gained a number of enemies and despite his opposition they were able to achieve a few small successes against him. In 1837 Congress called for a board of naval officers to examine the newly proposed sites for lights and to determine the necessity of the proposed lights. This resulted in the 1838 division of the Lighthouse Board into smaller districts with six on the Atlantic and two on the Great Lakes. Each district was assigned a naval officer to inspect all of the aids to navigation in his district and to report on the condition of each with recommendations for future courses of action.\(^\text{21}\)

In 1847, Congress moved the responsibility for the construction of lighthouses from the 5th Auditor of the Treasury to the Corps of Engineers. They assumed full responsibility for selecting sites for lighthouses and for constructing them. By 1851 Congress realized that American lighthouses were vastly inferior to those of European countries, and they ordered a study of all American lighthouses. The committee, after researching American lighthouses, proceeded to compare them to those of Europe. America’s lighthouses were found decidedly lacking in many areas, including poor management, shoddy construction, poor training of keepers, and inferior lighting apparatuses. In response to this report, Congress established the Lighthouse Board on October 9th, 1852.22

The newly formed Lighthouse Board consisted mainly of members of the team who wrote the 1851 report. Composed of nine members, the first Lighthouse Board included four naval officers, two Army officers, and three civilian members.23 Their duties, as described by Congress were to:

...discharge all the administrative duties of said office [Secretary of the Treasury] relating to the construction, illumination, inspection, and superintendence of lighthouses, light-vessels, beacons, buoys, seamarks, and their appendages and embracing the security of foundations of works already existing, procuring illumination and other apparatus, supplies and materials of all kinds for

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23 Francis Ross Holland Jr. America's Lighthouses: An Illustrated History. (New York: Dover Pub, 1972). The original Board was composed of Commodore William B. Shubrick, Navy; Commander S.F. DuPont, Navy; Brigadier General Joseph G. Totton of the Corp. of Engineers, Navy; Lt. Thornton A. Jenkins, Naval Secretary; Lt. Col. James Kearney of the Army Corps of Engineers; Capt. E.L.F. Hardcastle, Engineering Secretary, Army; A.D. Bache, Superintendent of Coastal Surveys, civilian; Joseph Henry, First Secretary of the Smithsonian, Civilian; and one other member to be determined.
building and for rebuilding when necessary, and keeping in good repair, the lighthouses, light-vessels, beacons, and buoys of the United States.\textsuperscript{24}

They immediately proceeded to divide the country into twelve districts, with individual inspectors for each. They also began the publication Light Lists, which listed updates, changes, and additions to the aids to navigation along all of the coastal areas. During the first seven years of the Lighthouse Board they also updated all existing lights to Fresnel Lenses.\textsuperscript{25}

Over the next fifty years, the Lighthouse Board attempted to bring the American lighthouse system up to par with those of Europe, especially France and England. They experimented with fuels for the lamps. Natural gas was used as early as 1829, but it did not become a popular source until later, due to the expense of manufacturing it on site. Using Argand lamps, the original lighthouses were fueled with sperm oil as their fuel source. As sperm oil became more and more expensive, they experimented with colza oil, but that too proved ineffectual in terms of expense.\textsuperscript{26} Lard oil became popular in the mid-1860s and kerosene in the 1870s. The Lighthouse Board was determined to find a source that was both effective and inexpensive. By 1900 electricity was being used at many lighthouses, and the majority of United States lights employed electricity by the end of the 1930s.\textsuperscript{27}


\textsuperscript{26} Colza Oil: colza oil was popular in Europe and America in the early nineteenth century as a source of lamp fuel. It quickly became too expensive, and was replaced with other fuel sources such as lard oil.

The 1880s and 1890s saw a number of new changes introduced into the lighthouse system, beginning in 1880 with Keepers being granted police powers in regards to the property and wrecks that they dealt with. In 1882 the first lights were placed on bridges in the United States, and these were also run by the Board. In 1884, uniforms were issued to all the staff of the Lighthouse Board (including keepers, assistants, lightship crews, and tender crews). The year 1886 saw the next major change through the Presidential Reorganization Act, which redesigned the districts and reassigned the staff accordingly. The number of districts was raised to 16, as opposed to the previous 12. (Later, three more districts were added, all along the Mississippi River and its tributaries)\(^{28}\)

In 1896, President Grover Cleveland added the Lighthouse Service to the Pendleton Civil Service Act of 1883, thus requiring all lighthouse staff to take a civil service exam before being certified to work. They were also now eligible for treatment and care by the Public Health Service\(^{29}\).

Due to the increased trade and the transformation of the United States from an agrarian society to an industrial society, the Department of Commerce was formed in 1900 and the Board of Lighthouses was transferred there in 1903 due to its close relation to trade within the United States and abroad. In 1910 the Bureau of Lighthouses was created by an Act of Congress\(^{30}\). The Bureau accomplished a number of improvements in the first decade of its existence. In 1911, a system of rewards and morale incentives

\(^{28}\) See Appendix C for a list of the current 19 districts
\(^{30}\) 36 Stat. L. 534
was created with efficiency stars and pennants. They became highly prized and
prestigious awards within the Lighthouse Bureau.

Keepers who have been commended for efficiency at each quarterly inspection
during the year are entitled to wear the inspector’s star for the next year, and those
who receive the inspector’s star for three successive years will be entitled to wear
the Commissioner’s star. The efficiency pennant, being the regular lighthouse
pennant, is awarded to the station in each district showing the highest efficiency
for a year, and may be flown during the succeeding year.31

In 1915, the first unwatched gaslight was introduced in the United States. This was to
become the new trend – unwatched and unmanned lighthouses. By 1918, electricity,
phones, and radio beacons had been established in many lighthouses, especially those that
were most isolated. Retirement benefits were also instituted at this point. Prior to 1918,
there were no benefits for Lighthouse service, which led to many men working years
longer than they should have (or than they were truly able to do.)32

In 1939, under President Franklin D. Roosevelt’s Reorganization Plan No.
11, the Bureau of Lighthouse made its last major adaptation, when it was merged with the
Coast Guard Service. It stated:

...that the Bureau of Lighthouses in the Department of Commerce and its
functions be transferred to and consolidated with and administered as a part of the
Coast Guard. This consolidation, made in the interest of efficiency and economy,
will result in the transfer to and consolidation with the Coast Guard of the System
of approximately 30,000 aids to navigation (including light vessels and
lighthouses) maintained by the Lighthouse Service on the sea and lake coasts of
the United States, on the rivers of the United States, and on the coasts of all other
territory under the jurisdiction of the United States with the exception of the
Philippine Island and Panama canal proper.33

31 Annual Report of the Commissioner of Lighthouses to the Secretary of Commerce and Labor for the
(Ohio: Ninth Coast Guard District, 1976), 27.
33 Annual Report of the Secretary of the Treasury on the State of finances for the Fiscal year Ended June
Finalized on July 1, 1939, this was a progressive and positive move on the part of the government.

The merging of these two agencies came with the potential for many problems and difficulties. The Coast Guard was an all military service, while the Bureau of Lighthouses was a civilian agency. The integration of the two would require that the Bureau of Lighthouses change to a military operation – something that would be difficult for many of its employees. Another issue that had to be dealt with was the decentralization of the lighthouse bureau. While the main offices were in Washington, D.C. many of the districts operated on a semi-autonomous basis, which would no longer be possible with the governing structure of the Coast Guard.

The merger proved to be an asset to both the Coast Guard and the Bureau of Lighthouses. Economically, it saved the two agencies over one million dollars in the first year. The centralization of the two administrations and the merging of supply depots and stores aided in this endeavor. Personnel in the Bureau of Lighthouses were given the option to enlist in the Coast Guard. If they chose to, they were assigned ranks within the existing structure, although the ranks were lower than would have been desirable. Civilians who chose not to enlist were able to serve out their career in the Coast Guard as civilian employees. All new employees, however, had to be members of the Coast Guard. The civilian age of the lighthouse employee was over 34.

The Coast Guard is still the owner of the majority of the United States aids to navigation. Under their control, all American lighthouses have been automated, and

many have been decommissioned as being unnecessary. Those that are decommissioned serve many roles today, from bed and breakfast inns to local and State Park properties to museums. Many others are under the control of the National Park Service, which works closely with the Coast Guard to preserve American Lighthouses. Lighthouses are significant elements of the American cultural landscape, and many are significant to local communities as well as in United States history.
Chapter 3:

Evolution and Typology of Lighthouses
On the Great Lakes
Chapter 7

Evolution and T/Change of Psychological
On the Clover Line
The evolution of Lighthouses on the Great Lakes is intertwined with the rise of immigration and trade throughout the Great Lakes region. Ownership of the Great Lakes was not truly determined until the defeat of the English in the War of 1812, at which point, the boundaries between the United States and what would become Canada were decided. It wasn’t until after this war that steam ships were introduced to the Great Lakes, and it was the addition of these vessels that ushered in the new age of immigration and trade on the Lakes.

The first lighthouse to be constructed by the Americans on the Great Lakes was the Buffalo Light, also known as the Niagara Fort Light. Possibly constructed as early as 1781, its exact date is currently unknown. This is the only light known to have been constructed before the War of 1812. However, within twenty years of the end of the war, there were at least fifteen lighthouses standing on the Great Lakes: seven on Lake Erie, six on Lake Ontario, and two on Lake Huron. The following chart lists the lights, the year they were established and the Lake on which they are located:

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1 Note: this thesis is an analysis of the lighthouses owned by the United States, and does not take into account those that are owned and managed by Canada.

2 There is a great deal of controversy over the date of the first Lighthouse on the Great Lakes. Some scholars date the Buffalo Light as late as 1819, listing the Presque’ isle Light as the first, being built in 1813. For the purpose of this paper, the Buffalo Light will be considered the original Great Lakes Lighthouses. Francis Ross Holland. America’s Lighthouses: an Illustrated History. (New York: Dover Pub., 1972), T Michael O'Brien. Guardians of the Eight Sea: A History of the U.S. Coast Guard on the Great Lakes. (Ohio: Ninth Coast Guard District, 1976).
Original Lights on the Great Lakes

<table>
<thead>
<tr>
<th>#</th>
<th>Year:</th>
<th>Name:</th>
<th>Lake:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1781</td>
<td>Fort Niagara</td>
<td>Ontario</td>
</tr>
<tr>
<td>2</td>
<td>1818</td>
<td>Erie Land</td>
<td>Erie</td>
</tr>
<tr>
<td>3</td>
<td>1818</td>
<td>Buffalo Main</td>
<td>Erie</td>
</tr>
<tr>
<td>4</td>
<td>1820</td>
<td>Galloo Island</td>
<td>Ontario</td>
</tr>
<tr>
<td>5</td>
<td>1821</td>
<td>Marblehead (Sandusky)</td>
<td>Erie</td>
</tr>
<tr>
<td>6</td>
<td>1822</td>
<td>Charlotte-Genesee</td>
<td>Ontario</td>
</tr>
<tr>
<td>7</td>
<td>1822</td>
<td>Oswego West Pierhead</td>
<td>Ontario</td>
</tr>
<tr>
<td>8</td>
<td>1822</td>
<td>Rochester Harbor</td>
<td>Ontario</td>
</tr>
<tr>
<td>9</td>
<td>1825</td>
<td>Old Fairport Main</td>
<td>Erie</td>
</tr>
<tr>
<td>10</td>
<td>1825</td>
<td>Old Sodus Point</td>
<td>Ontario</td>
</tr>
<tr>
<td>11</td>
<td>1825</td>
<td>Fort Gratiot</td>
<td>Huron</td>
</tr>
<tr>
<td>12</td>
<td>1826</td>
<td>Ashtabula</td>
<td>Erie</td>
</tr>
<tr>
<td>13</td>
<td>1827</td>
<td>Dunkirk</td>
<td>Erie</td>
</tr>
<tr>
<td>14</td>
<td>1827</td>
<td>Tibetts Point</td>
<td>Ontario</td>
</tr>
<tr>
<td>15</td>
<td>1829</td>
<td>Barcelona</td>
<td>Erie</td>
</tr>
</tbody>
</table>

Figure 3.1

With the increase of trade and settlement throughout both the Great Lakes region and the western United States, construction of additional lighthouses continued at an astonishing rate. As is evident from the following table, the majority of the lighthouses constructed on the Great Lakes were built during the late nineteenth century. Prior to 1850, there were only fifty-six lighthouses, but by the end of the century, there were at least one hundred and fifty-five. Only sixty-two were constructed after the turn of the century, and only four after 1950 (at least one of which is a total reconstruction).

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3 Lighthouses did not appear on Lake Michigan until 1832, and did not appear on Lake Superior until 1849.
Lighthouses divided by year of construction.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number Constructed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-1812</td>
<td>1</td>
</tr>
<tr>
<td>1812-1829</td>
<td>15</td>
</tr>
<tr>
<td>1830-1839</td>
<td>22</td>
</tr>
<tr>
<td>1840-1849</td>
<td>18</td>
</tr>
<tr>
<td>1850-1859</td>
<td>26</td>
</tr>
<tr>
<td>1860-1869</td>
<td>20</td>
</tr>
<tr>
<td>1870-1879</td>
<td>35</td>
</tr>
<tr>
<td>1880-1889</td>
<td>21</td>
</tr>
<tr>
<td>1890-1899</td>
<td>26</td>
</tr>
<tr>
<td>1900-1909</td>
<td>16</td>
</tr>
<tr>
<td>1910-1919</td>
<td>11</td>
</tr>
<tr>
<td>Post-1920</td>
<td>25</td>
</tr>
</tbody>
</table>

Figure 3.2

The breakdown of the distribution of the 236 lighthouses is interesting to examine. Despite being the last two lakes to be explored and settled, Lake Michigan and Lake Superior host the largest number of lighthouses. Combined, they contain over half the total number of lights on the Great Lakes. The rapid development of the lights on these lakes aids in our understanding of the truly rapid growth of this area of the country.

Lighthouses based on location.

<table>
<thead>
<tr>
<th>Lake</th>
<th>Number of Lighthouses</th>
<th>Percentage of Lighthouses on the Great Lakes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Erie</td>
<td>49</td>
<td>21%</td>
</tr>
<tr>
<td>Lake Huron</td>
<td>30</td>
<td>13%</td>
</tr>
<tr>
<td>Lake Michigan</td>
<td>80</td>
<td>34%</td>
</tr>
<tr>
<td>Lake Ontario</td>
<td>20</td>
<td>8%</td>
</tr>
<tr>
<td>Lake Superior</td>
<td>57</td>
<td>24%</td>
</tr>
</tbody>
</table>

Figure 3.3
The five Great Lakes are each unique in the style, materials, and type of lighthouses that their shores support. The differences are due to the climate, terrain, and period of development of each lake area. These differences show the wide variety of lighthouses on the Great Lakes and highlight the importance of each. Great Lakes lighthouses should not all be categorized together, as each is a unique and individual structure, which contributed to the overall growth and prosperity of the region. It is necessary for preservationists, developers, and historians need to understand and appreciate the rich variety of culture and the types and characteristics of resources that these lighthouses represent.

The following is an overview of the types of lighthouses found among the Great Lakes, presenting characteristics specific to each type of lighthouses, including location and construction materials. There are eleven basic types of lighthouses that exist (or have existed) on the Great Lakes. Each type has specific characteristics that make it a unique type of lighthouse. Characteristics include construction material, lens size, and date of construction. While some lighthouse types are specific to certain of the Great Lakes, the majority are found throughout the five Lakes. The eleven types of lighthouses and their characteristics are listed on the following pages, along with a photographic example.

Types:

The following pages describe the various types of lighthouses located on the Great Lakes:
1. Art Deco: This type of lighthouse constitutes 3% (eight) of the total Great Lakes Light- houses. All eight of these light-houses were constructed between 1934 and 1950, with the majority being built in the 1930s. They are constructed of steel and concrete. This type is located on all the lakes except for Lake Ontario, and five are found on Lake Michigan.

2. Conical: (also called cylindrical). This is the most popular type of lighthouse on the Great Lakes, comprising 32% of the total (seventy-five). These lighthouses are found on all five lakes, constituting at least 25% of the lighthouses on any given lake. The most common construction materials are brick, cast iron, and rough stone. No correlation has been found between the material of construction and specific lakes.
3. Hexagonal: There are only three of these lighthouses on the Great Lakes, one each on Lake Michigan, Lake Superior, and Lake Huron. They differ from the octagonal only in the number of sides on the tower. All three were constructed in the 20th century and are built of either steel and concrete or of reinforced concrete. All three are still active and are managed by the Coast Guard.

4. Lightvessels: While not lighthouses as such, it is important to note the significance and importance of the lightvessels. These ships were used when it was impossible to construct a lighthouse, either due to funding, location, or the capabilities of the engineers at the time. Often times they replaced decaying or unstable lighthouses.
5. Modern: There are three lighthouses that are considered modern on the Great Lakes. The earliest was constructed in 1975, and the other two in the 1990s. They replaced older lighthouses that were past the point of being repaired. Made of steel and concrete, they are all active, and do not require any type of keepers quarter.

6. Octagonal: One of the more popular styles of lighthouse, there are thirty octagonal lighthouse on the Great Lakes (13%). This is one of the more versatile types of lighthouses, and is found throughout the Great Lakes with no regard to location. Octagonal lights are also constructed of a wide variety of materials, with no one material standing out as preferred for them.
7. Pyramidal: Found on three of the five Great Lakes (Michigan, Superior, and Erie) there are a total of twenty Pyramidal lighthouses on the Lakes (8%). These lights are mainly constructed of steel and wood, with those built before 1890 constructed of wood and those after 1890 of steel. The pyramidal lighthouses built of steel are also called skeletal-pyramidal, due to their frame construction.

8. Round: there are only five round lighthouses located on the Great Lakes, and they are spread on Lakes Michigan, Superior, and Huron. No specific construction material is noted, although all but one was built after 1890. Four of the lights contain 4th order Fresnel lenses, and the final one houses one of the eight 6th order lenses on the Great Lakes.
9. Schoolhouse: an uncommon type of lighthouse on the Great Lakes, there is only one in existence today. The building form is modeled on the “traditional” Midwestern schoolhouse form.

Figure 3.12

10. Skeletal: there are fourteen skeletal lighthouse on the Great Lakes today, located on all the lakes except Lake Ontario. They are constructed of either steel or cast iron, with the keepers quarters as a separate unattached building. All of the skeletal lighthouses are still active and are generally owned by the Coast Guard.

Figure 3.13
11. Square: These are the second most common lighthouses on the Great Lakes, constitute 28% of the total lights (65). They are found on all five lakes, and are constructed of a wide variety of materials. The majority are integral lighthouses, meaning that the actual light is part of the keeper’s quarters.

![Figure 3.14](image)

**Current Status:**

Lighthouses on the Great Lakes have been used by mariners for years, and they are still used by the ships that sail on the Lakes. While there have been innovations in maritime technology, these original aids to navigation are still key to sailing and maneuvering on the Great Lakes. With very few exceptions, all active aids to navigation (lighthouses and buoys) are managed and controlled by the United States Coast Guard. The few exceptions that exist do so only with permission of the Coast Guard. Many lighthouses are privately owned, but the Coast Guard retains an easement to the navigational aid.

However, as technology advances, and transportation on the Lakes dies down, the number of lighthouses needed is slowly declining, leaving many properties to be declared surplus by the Coast Guard. As they deactivate and decommission lighthouses, the property is transferred to the United States Bureau of Land Management who is then
responsible for the dissemination of information on the sale of the properties. When this occurs, there is a specific process that must be followed in order to ensure the proper transfer of the property.

As of December 1999, the Coast Guard has turned over nineteen lighthouses to the Bureau of Land Management. They have also listed an additional sixteen lighthouses that have been turned over to the General Services Administration. Both agencies dispose of excess Government properties, such as lighthouses. The process of obtaining a lighthouse from the Bureau of Land Management or the General Services Administration is a time consuming and involved process. When the Coast Guard initially declares that a property is an “excess” property, the land is offered to other federal agencies. If no federal agency expresses an interest in the property, it is offered to state and local governments. After the property has cleared all of these it is put up for public auction. However, lighthouses seldom reach the point of public auction. Many historic preservation agencies are able to procure a grant for stewardship of a lighthouse through a state or local government, which has obtained ownership of the lighthouse.

Some lighthouses are protected due to their status as part of a National or State Park. There are three National Parks in Michigan which contain a total of eight lighthouses and eight additional lighthouses in National Parks located in Wisconsin. They are:

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4 Manitou Island; Pointe Aux Barques; Point Betsie; Naubinway Island; Gull Rock; Eagle Bluff; Cana Island; Poverty Issland; Grand Traverse; Squaw Island; Big Sable; Little Point Sable; Isle Royal; Pilot Island; Thunderbay; Plum Island; Twin Pipe Islands; Passage Island; Rock of Ages
5 Eagle Harbor; Fort Niagara; Forty Mile Point; North Point; Seul Choix Point; St. Clair Flats, St. Martins Island; Tawas Point; Galloo Island; Harbor Beach; Toledo Harbor, Michigan City Pierhead; Round Island; Waugoshance; Granite Island; Escanaba
1. Isle Royale National Park: Isle Royale Lighthouses, Passage Island Lighthouse, Rock of Ages Lighthouse, and Rock Harbor Lighthouse

2. Pictured Rocks National Lakeshore: Au Sable Lighthouse and the two Grand Marais Harbor Lighthouses

3. Sleeping Bear Dunes National Lakeshore: South Manitou Island Lighthouse


The location of these lighthouses in National Parks and National Lakeshores affords them a greater level of preservation and maintenance, which many other lights do not have.

Various other lighthouses are also located in state or local parks, offering them additional protection and continued maintenance. Yet other lighthouses are already privately owned, which afford them a certain degree of protection. However, as with other privately owned historic buildings, there is little that can be done to ensure that the owners care for the property in a manner conducive to retaining the historic integrity of the lighthouse. Also, many of the privately owned lighthouses are not publicly accessible. While this may help to protect the buildings, it denies the public access to vital portions of their history.

Documentation:

At this point in time, very few lighthouses on the Great Lakes have received the type of documentation and recording that they need. There was a lighthouse survey conducted in 1983-1984 under the United States Coast Guard which listed many of the
lighthouses on the Great Lakes in one National Register Nomination under the title “U.S. Coast Guard Lighthouses and Light Stations on the Great Lakes: TR 84001375”. This, however, is a large group listing and does not give due justice to all of the lighthouses that exist on the Great Lakes. It is also an incomplete survey, including only a portion of the Great Lakes Lighthouses. Many of the remaining lighthouses have been determined eligible by the State Historic Preservation Officer, but the paperwork has never been completed. In addition to this, of all the lighthouses on the Great Lakes, only one is a National Historic Landmark. While it would be impossible to list all of the lighthouses as Landmarks, there are definitely others that deserve this type of recognition.

Another important method of documenting lighthouses is through the Historic American Buildings Survey/Historic American Engineering Records program. At this point there are only fourteen Great Lakes Lighthouses documented through this program, which constitutes a very small percentage of the total lighthouses.

This lack of documentation is surprising, considering the number of lighthouses and the significant role that they have played in the history of the Great Lakes and the United States in general. There is a definite need for a more complete documentation project, along with an easier way of accessing the information once it is compiled. In light of the decommissioning of many of these lighthouses, it is important that they be recorded. It is also important in some cases, due to the material deterioration of some lights. If they are not documented soon, there may be little left to document.

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7 National Park Service, National Register Information System (NRIS). Website: www.nr.gov/nrishome.com

8 National Park Service, National Historic Landmarks Information List. Website: tps.cr.nps.gov/nhl/
Future of the Great Lakes Lighthouse:

While there is a great deal of work that needs to be done in regards to the Great Lakes lighthouses, there are a number of organizations which are beginning to make significant steps in the right direction. These include historic societies, private owners, and three organizations that work with all the Great Lakes Lighthouses: The Michigan Lighthouse Project, the Great Lakes Lighthouse Keepers Association and the Great Lakes Lighthouse Museum.

The Michigan Lighthouse Project is a newly founded organization that serves as a clearinghouse of information on the processes and procedures necessary to transfer ownership of a lighthouse from the United States Coast Guard. There are a number of agencies which are part of the Michigan Lighthouse Project, including the Great Lakes Lighthouse Keepers Association, the Michigan Department of Environmental Quality, the Michigan Historic Preservation Network, and the National Trust for Historic Preservation. The Michigan Lighthouse Project has two main goals: to “increase the governmental and public awareness of lighthouse preservation issues and to identify ways to ensure the long-term preservation of Michigan’s lighthouses.”

The Great Lakes Lighthouse Keepers Association (GLLKA) has been active since the early 1980s. Their work brings together numerous lighthouse aficionados in an attempt to share information and stories relating to Great Lakes Lighthouses. GLLKA publishes a monthly newsletter and hosts various conferences on lighthouses. They also

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10 The Michigan Lighthouse Project only serves lighthouses in the state of Michigan.
11 For a complete list of partners in the Michigan Lighthouse Project, see Appendix D
maintain the St. Helena lighthouse, working with the Boy Scouts to continue maintenance and renovation on the historic structure.

The Great Lakes Maritime Museum is currently in the planning stages. Chaired by the former president of GLLKA, the museum’s goal is to preserve the complex maritime history of the Great Lakes Region, including the history of the lighthouses. They will be located in the lighthouse at Mackinaw Island, and hope to open within the next two years.

While these agencies do the best that they are able to, there is a definite need for more public involvement. The future of the Great Lakes lighthouses is uncertain and undefined. Numerous agencies have a role to play, and the overall outcome is still unknown. Public education and public involvement are the keys to saving these historic treasures.
Chapter 4:

A History of the Point Betsie Lighthouse and the Surrounding Areas
Chapter 4

A History of the Poincaré-Betti-Lefschetz and the Zariski-Verschelde Theorems
Frankfort and Benzie County:

The area of Frankfort and Benzie County was originally discovered by one of the earliest Jesuit missionaries to the area – Father Jacques Marquette. Fr. Marquette has reached legendary status in Michigan and the surrounding areas of the country, as a dedicated missionary and explorer. The site of his death is a subject of great controversy, and one of the proposed locations is just outside of Frankfort, Michigan. His supposed death in the area served as one of the tourist attractions in the late 1800s and early 1900s.¹

Despite Father Marquette’s explorations into this area of Michigan, the land was not settled until the mid-nineteenth century. In 1850 Joseph Oliver arrived in the area of Michigan now known as Benzie County. He settled with his family near Lake Michigan, in what is now known as Frankfort. Mr. Alvin Burt, who was a deputy surveyor for the state of Michigan, had previously surveyed the land in 1838. He said that:

the small lake at the mouth of the river Aux Becs Scies (meaning river to the bill of the spoonbill [a type of bird]) is deep and would make a commodious harbor for lake vessels, should the mouth of the river be improved.²

Nothing more was done to the area until Joseph Oliver settled there. In 1854 there was a fierce storm off the west coast of Michigan, and Captain Snow, who was based out of Chicago, was forced to weather out the storm in the harbor near Mr. Oliver’s land.³ So impressed by the natural conditions of the harbor, Captain Snow began a movement to have a permanent settlement founded on the harbor. In 1856 the construction on the

³ There is a discrepancy in both the name of Captain Snow’s vessel and in its cargo. Some sources list it as the schooner N.C. Watson, carrying a load of timber, while others list it as the Navigator, carrying corn.
Frankfort streetscape at the intersection of Main Street and Third Street.

Figure 4.1

Main Street in Frankfort – one of the many mid-nineteenth century buildings constructed in the town.

Figure 4.2
Point Betsie Lighthouse was begun. David Flury, the first lighthouse Keeper at Point Betsie and his family settled in the area in 1856, along with three or four other families.\(^4\)

The decision to build a lighthouse in Frankfort was based on the increase in trade and water traffic in the area. The rise in the number of ships using the harbor multiplied the chances of wrecks and other accidents. The final factor in the construction of the Point Betsie Lighthouse was the sinking of the steamer The Westmoreland in 1854. The ship was carrying 350 barrels of wine and brandy, as well as over $100.00 in gold coins. There were only three survivors and the entire cargo was lost. It seemed clear that the construction of a lighthouse would aid in navigation, and would provide assistance to ships that were in trouble.\(^5\)


\(^5\) Modern day Frankfort harbor, facing south away from Frankfort

![Figure 4.3](image)

49
In 1858 the first sawmill was constructed by Harrison Averill, in what is now known as Frankfort. The area continued to develop as the logging industry increased. In 1866 two piers were built to mark the boundaries of the Frankfort harbor, each measuring 600 feet in length and 18 feet in depth. In 1873 Frankfort was established as a village, containing 684 residents in an area of 1240 acres. In 1885 the charter for the town was revised, and it is still in use today. The 1894 census of the area listed over 8,000 residents of the county.

During this time period Frankfort was not only an active harbor for trade, it was also an active location for vacationers and tourists. The rise in boat traffic on the Great Lakes had created a new option of travel and pleasure boats and cruises were common. In 1900, the Ann Arbor Railroad Company decided to construct a 250-room hotel along the Aux Bees Scies River in Frankfort. The hotel was over 500 feet long and 100 feet wide, and it was three stories in height. The Ann Arbor Company also operate passenger railroad cars and ships, which were used to transport tourists up to Frankfort and to the Frontenac Hotel.

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A huge success for the next 10 years, the Royal Frontenac Hotel catered to hundreds of tourists, who were trying to escape from the heat and congestion of the cities. People arrived in Frankfort by boat and by railroad, with extra railroad cars being added in the summer months to meet the demands. Originally open year round, the Royal Frontenac was soon forced to close for the winter months due to the decline in tourists during the cold winter months. By 1912, with the improvements in transportation and the increase in use of the automobile, the Royal Frontenac was loosing guests at an alarming rate.\textsuperscript{9}

In 1912 a fire alarm sounded on the evening of January 12\textsuperscript{th}, in Frankfort Michigan. The Royal Frontenac Hotel was engulfed in flames. There was no way to save the hotel at that point, and it proceeded to burn to the ground. While the hotel
burned, however, people would run into whatever area of it they could, ransacking and looting whatever they could reach. The hotel was never rebuilt, and it marked the end of the prosperous tourist industry in Frankfort and the surrounding areas of Benzie County.¹⁰

In 1892 the Ann Arbor Railroad Company opened its first lake-crossing services, going from Frankfort, Michigan, across Lake Michigan to Kewaunee, Wisconsin. The ship was capable of carrying four carloads of coal. This method of transporting coal was much easier than the previous method, which had been costly and time consuming. Coal was transported to Frankfort, where it had to be unloaded and transferred to a special ship. It was then sent to Chicago and areas of Wisconsin where it was loaded back into railroad cars to be distributed throughout the Midwest. The opening of the Ann Arbor Car Ferries, allowed the railroad cars to be loaded on the ships and sent across the lake, cutting back significantly on both cost and time.

In 1894, the Ann Arbor Company began adding additional routes. It made regular runs to area harbors, loading and unloading coal cars. By 1906 the Ann Arbor Company had added three more ships to their car ferry business. Each ship would make at least two crossings a day. By 1924 seven ferries were in operation, with each one being longer and capable of carrying more tonnage than its predecessors. In 1925, the Ann Arbor car ferries carried over 80,000 cars, whereas in 1910 they had only transported 32,300 cars. This marked the high point of the car ferry industry, and business began to decline with the depression. Business continued to decline over the next three decades. The last

passenger ferry departed Frankfort on July 19th, 1950, and the coal car ferry business was abandoned in the 1960s.\textsuperscript{11}

By 1912, Frankfort was a village of over 1,600 people. Modern amenities such as electricity and a water plant had been constructed in the area. The harbor had been opened up and expanded, and it had become an important port for the distribution of cargoes over all of northern Michigan. While the main cargoes were lumber and flour, fruits, vegetables and other produce was also shipped out of the Frankfort Harbor. However, this was the turning point in the history of the area. The last sawmill in Benzie County closed in 1908, with the end of the lumbering boom.\textsuperscript{12}

History of the Point Betsie Lighthouse:

1853-1861: the early years

A presidential order was issued by President Franklin Pierce on April 4th, 1853 ordering the construction of a lighthouse at the location in Michigan known as “Point Aux Becs Seies.”\textsuperscript{13} In May of 1857 the exact location of the lighthouse was decided upon, and 9.52 acres was reserved for the construction of this federally owned lighthouse. The construction of the Point Betsie Lighthouse began in 1857 and was completed in 1858. Construction was finished in an amazingly short amount of time. The first reason for this was the necessity of completing the building before the start of the inclement weather, which could begin as early as September, and would last until the next May.

\textsuperscript{13} Arthur C. Frederickson. “100 Years a Sentinel on Lonely Beach.” Great Lakes Historical Society, Subject File, 4 May 1958.
The other reason for the short building period was the low quality of the construction – the work was done poorly and with less than standard materials.¹⁴

According to the Report of the Secretary of the Treasury on the State of the Finances for the Year, ending 1858... the Point Betsie Lighthouse was one of a number of ongoing projects to be completed in the 11th District of the Lighthouse Board, which:

...comprises the coasts of Lakes St. Clair, Michigan, Huron, and Superior, Green bay, and the straits connecting the lakes, several works, which have been under construction for some years, have been completed and lighted. These are Point Betsey, Eagle River, LaPointe, and Portage River light-houses.¹⁵

The first lighthouse Keeper, David Flury, and his family arrived shortly after the completion of the Lighthouse in February of 1859. Flury only served as Keeper for six months, leaving in August of 1859. He was replaced by Able Barnes, who served for only eleven months, before his death in July of 1859. During his short tenure, repairs were required on the Lighthouse, despite its completion a year earlier. This may be attributed to the poor quality of work done by the head of the Lighthouse Board – Edmund Pleasanton.¹⁶

The Point Betsie Lighthouse went through a number of Keepers early on in its existence. Upon the death of Able Barnes, his son took over (P. Barnes), but soon was

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¹⁵ The Report of the Secretary of the Treasury on the State of the Finances for the Year, ending 1858. (Washington, DC: James B. Steedman, Printer, 1858).

¹⁶ Thomas and Phyllis Tag. Lighthouse Keepers Database. (Columbus, Ohio: Great Lakes Lighthouse Research, 1999).
removed in July of 1861. During his tenure additional repairs were required on the Point Betsie Lighthouse.\textsuperscript{17}

\textbf{1861-1887: Doctor Alonzo Slyfield and his son Edwin Slyfield}

After the removal of P. Barnes, Doctor Alonzo Slyfield took over as Keeper of the Lighthouse. He served from July 11, 1861 until he was reassigned on May 23, 1882. Alonzo Slyfield also served as the doctor for the town of Frankfort. A number of repairs were made to the lighthouse during his tenure as Keeper.\textsuperscript{18} It is interesting to note that many sources list Alonzo Slyfield as the first Keeper of the lighthouse at Point Betsie. This may be due to the fact that he is the first Keeper to serve at the lighthouse for more than a few years. He is also one of the better known Keepers at the lighthouse.\textsuperscript{19}

Born June 1, 1825 in Concord Vermont, Alonzo J. Slyfield moved to Michigan with his parents in 1832. His first career was not that of a lighthouse Keeper. He trained as a doctor, and eventually he opened a drug store. He married Alice J. Latham and had seven children. In 1861, due to health reasons, he moved to the Point Betsie Lighthouse and began his tenure as Keeper. He continued to practice the medical professions, serving Frankfort and the surrounding areas.

During Doctor Slyfield’s tenure as Lighthouse Keeper a number of shipwrecks occurred off of Point Betsie. Unfortunately the Keeper’s logbooks for his tenure are no longer in existence, but other sources provide the names and dates of the various

\textsuperscript{17} The Report of the Secretary of the Treasury on the State of the Finances for the Year, ending 1860. (Washington, DC: George W. Bowman, Printer, 1860)
\textsuperscript{18} The eleventh district was the most expensive in 1860, due to the short work season and the inaccessibility of the lighthouses.
\textsuperscript{19} Thelma Elizabeth King. “A Glimpse at Point Betsie.” The Beacon 1 no. 5. (December 1983), 7.
Twelve recorded shipwrecks have been found during the years that Dr. Slyfield was Keeper. Of these twelve wrecks, ten of them occurred during storms, and eleven occurred between the months of August and November. The majority of the ships were driven ashore, at which point they would break up.

One particularly tragic wreck occurred on Oct. 4, 1862, when the three-masted schooner Black Hawk was caught in a storm. The ship was carrying a load of corn and stained glass, but was driven aground in the storm, and then sank. Due to the severity of the storm, rescue was impossible, and the entire crew was killed. For many of the wrecks it is unknown how many people died – or how many were even onboard during the wrecks. Oftentimes at least some of the crew were saved. One other particularly tragic wreck occurred on Sept. 17, 1881, when the steamer Columbia was caught in a storm with a crew of 16. None of them survived.

While the logbooks of Doctor Slyfield do not exist, the general duties of the lighthouse Keepers during a storm are known. Keeping the light going was the main task as well as keeping a lookout for vessels that were in trouble. The Keeper would also have to keep the glass of the light free of ice, which was a dangerous job in and of itself. In the event of a shipwreck, Keepers would attempt to save the sailors, often times at the risk of their own lives. After the storm, the Keeper had the unpleasant job of searching for the bodies of the dead sailors and burying them.

In addition to keeping the light burning, the Keeper’s job included general upkeep and repairs on the lighthouse. The Keeper would report to the Inspector for the district.

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20 A portion of the Lighthouse logbooks were stored in the same area as the 1890 census. The fire that destroyed this census also destroyed many of the records and logbooks of the Lighthouse Board.
on a yearly basis, detailing the repairs needed. Inspectors would also tour the lighthouses, noting the repairs that had been requested and listing others that they felt were necessary.\textsuperscript{22} In 1867, the Point Betsie Lighthouse required significant repairs to the Keeper's dwelling, including a new roof. Other minor repairs were also carried out. In 1868 more significant repairs were necessary:

Point Betsy: this Station is greatly in need of repairs; the plastering has fallen in many places, and the floors are considerably decayed. Some of the foundation stones of the tower have become displaced; they should be replaced and the entire foundation repointed.\textsuperscript{23}

The following year required extensive repairs to prevent the continued erosion of the sand at the foot of the tower. It resulted in the replacement of part of the tower foundation. This was the last major repair until the 1880s – only minor repairs were required in the 1870s.\textsuperscript{24}

The next major repairs occurred in the early 1880s near the end of the tenure of Alonzo Slyfield. The 1880, 1881, and 1882 Reports of the Secretary of the Treasury stated the following regarding the Point Betsie Lighthouse:

Point Betsy on Pointe aux Becs Scies, east side of Lake Michigan, Michigan. This is one of the most important lights of Lake Michigan. This highly important light has never been given satisfaction. The tower was built by contract in 1858, when the work was miserably done. A new tower with sufficient height to put the focal plane of light 100 feet above the lake should be built and the 4\textsuperscript{th} order lens

\textsuperscript{24} The Report of the Secretary of the Treasury on the State of the Finances for the Year, ending 1869. (Washington, DC: United States Government Printing Office, 1869); ibid, 1874; ibid. 1875; ibid. 1876; ibid. 1877.
should be replaced by one of the 3rd order. An appropriation of $40,000 is recommended for this work.25

The tower was never replaced, and the repairs were made slowly over a number of years. In 1882, Edwin Slyfield, the son of Alonzo Slyfield became the Keeper of Point Betsie, after his father was resigned in his favor26. He was Keeper there until he was transferred in 1888. There were five recorded shipwrecks during his tenure as Keeper—all of them occurring in a storm during the month of November (three in 1883 and two in 1886). Two, on November 19th 1886, were lost in the same storm. Both ships, carrying lumber, were driven ashore and wrecked. The Marinette suffered the loss of six of the seven crewmen, and the Menekaunee lost the entire crew of seven.27

Edwin Slyfield was Keeper at Point Betsie during the time when the light was most in need of repairs. In 1888, the following record exists of the assistance sent to Point Betsie:

An additional weight was sent to this station in October to improve the working of the revolving machinery of the illuminating apparatus and a spare pane of plate glass was sent to the station. Both tower and dwelling were poorly built brick structures, which were erected by contract in 1858. They are in poor condition and dangerously near the bank of the lake...28

These repairs were important to the operation of the light, but did nothing to change the conditions of the Keeper’s dwelling. The weight served to operate the chain machinery that turned the light. Without the proper equipment the Keeper would be unable to turn the light, which could be disastrous to ships in the area. The additional sheet of plate glass...
glass ensured that the Keeper could replace broken glass without having to wait for additional supplies to reach the lighthouse. (It could take months to get specific supplies to the lighthouse.)

1887-1893: Keeper Peter Dues and major repairs to the lighthouse

In 1887, Edwin Slyfield requested a transfer from his post as Keeper of the Point Betsie Lighthouse. His replacement was Peter Dues, who served from 1888 until 1893. He was the first Keeper to be assigned an assistant Keeper. Requests had been made for years asking for an assistant at Point Betsie, but it wasn’t until January 22, 1892 that one was authorized. The first assistant Keeper was Charles Butler, who served for two months and was then replaced by George Chamberlin, who served for a year, before his removal. He was reinstated a few months later. The reason for his dismissal is unknown. The year 1892 also introduced the first increase in salary that the lighthouse Keepers had received in over fifty years.

Keeper Dues was at Point Betsie during some of the most significant repairs to the dwelling portion of the lighthouse. In 1889, hardware for the replacement of the shutters and for re-shingling the roof were sent. Materials for a kitchen floor (to replace the dirt floor) were also provided. Keeper Dues and his family did all of the work. There were also reports in 1889 that the lighthouse was abandoned for a time, although no confirmation of this was found.

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29 Thomas and Phyllis Tag. *Lighthouse Keepers Database.* (Columbus, Ohio: Great Lakes Lighthouse Research, 1999)
30 List of General Correspondence of the Lighthouse Board, 1791-1900.
During 1890 the repairs that were necessary back in 1886 were finally completed on the station. The lapse of time between the request for repairs and the completion of the repairs contributed to the continued decline of the property, which in the end cost more to complete the necessary repairs.

This station was entirely renovated and put in good order. An examination was made of the tower and its foundation in April 1890. The walls were found to be sound though damp from solidity and the absence of air spaces, but the foundation was insecure owing to insufficient depth below the surface of the sand. This was strengthened by an underpinning of concrete four feet deep, in the form of a ring measuring sixteen feet external diameter at the base, twelve feet external diameter at the top, and four feet internal diameter... The inside of the tower was afterwards filled in from the bottom of the new footing to the floor level with concrete containing a large quantity of stone and was finished with a brick floor. The concrete apron surrounded the base of the tower, laid some seventeen years ago, was broken out to make the foundation and was replaced with new work. The shore immediately in front of the tower was protected by a revetment flanked by short jetties at each end... Above this there is a curb constructed of timber a foot square, four courses in height with cross pieces every twelve feet. The interior was filled with broken stone ballast, and the top planked in with 3 x 12 inch timber at a distance of 75 feet from each end of the revetment.32

These extensive repairs removed the need to build a new tower, which would have been even more costly than the repairs. The shoring up of the foundation ensured that the tower and dwelling would not collapse, which had been a threat. The revetments in front of the lighthouse helped to prevent the continued erosion of the beach front, which had been steadily declining over the years.33

As the shipping industry and tourism grew on the Great Lakes, it became more necessary to increase safety on the lakes. While it is impossible to control the weather and the threats that storms raise, it was possible to make the aids to navigation


60
(lighthouses) more conducive to assisting mariners. The patterns of the various lighthouses were altered to make them more distinctive. The light at Point Betsie was changed to a white light that flashed every ten seconds. Other safety measure included the establishment of a Coast Guard Life Saving Station, about 600 yards south of the lighthouse. In addition to this, a steam run fog-signal was requested for Point Betsie. The signal would blow in a distinctive pattern that would alert ships to their proximity to the lighthouse. This would be especially useful when the weather prevented the light from the lighthouse from reaching the ships.

As part of the addition of a fog-signal, a new oil house was needed for the property, and was constructed in 1891. It had a 360-gallon capacity and was built on a concrete foundation. The following request was also made again:

Point Betsey, Lake Michigan, MI. The act appropriation March 3, 1891 appropriation $5,500 for the establishment of a steam fog signal. Contract was make on June 23, 1891 for the construction of the duplicate fog-signal, boilers, and machinery. A new 4th-order lens for this station was ordered last winter. The construction of the fog-signal boilers was completed in 1892, and the machinery was installed at the lighthouse. The fog-signal building was also constructed at this point:

A frame fog-signal house, measuring 25 x 40 feet, with corrugated iron siding and roofing, and smooth iron lining, was built some 120 feet north of the lighthouse tower upon a substantial brick foundation. A brick curbed well was provided.

The fog-signal machinery was erected at the lighthouse and tested on December 22, 1891. The signals were then put into operation for the first time on December 31, 1891.

35 ibid
Other repairs were also made at the lighthouse property. A concrete cellar floor was laid over the original dirt floor in the lighthouse, and 530 feet of plank walks were laid out from the Keeper’s dwelling to the fog signal house.\textsuperscript{36}

The time period when Keeper Dues was at Point Betsie marked a decline in the number of shipwrecks that occurred off of Point Betsie. There were only two that occurred during his tenure and both occurred when a ship foundered in the shallower waters – they were not weather related.

\textbf{1893 – 1905: the interim period}

Peter Dues was replaced as Keeper by Soren Christianson, who served in that capacity from 1893 until 1895. His assistant Keeper was first Thomas Hart, who served six months and was replaced by Medad Spencer who served from May 1894 until his transfer in June of 1904.\textsuperscript{37} Medad Spencer served as Keeper of the lighthouse from 1895 until 1904. From this point onwards, the first and second assistant Keepers transferred frequently, generally staying only a year or two.

In 1895 further renovations were made to the dwelling at Point Betsie. The quarters were completely renovated. The dwelling itself was converted into two separate houses, and an additional six rooms were added to the rear of the building, providing housing for the Keeper and his two assistants. A sewer was added for the dwelling and a

\textsuperscript{36}ibid

\textsuperscript{37}Accounts of this time vary as to the Keeper of the lighthouse. Some local sources cite Medad Spencer as the actual Keeper from 1904-1906, and not the assistant Keeper.
3-foot walkway was constructed around the lighthouse. The old barn on the property was also completely reconstructed.\(^{38}\)

In 1897, the schooner *Addie*, foundered off of Point Betsie. She was carrying general household goods, including furniture. It is unknown if any lives were lost. The schooner missed the entrance to the Frankfort Harbor on her way north, and was literally washed ashore by the waves which were coming at her sideways.

*The schooner Addie on October 4, 1897 on the beach at Frankfort, Michigan*

![Image of the schooner Addie on October 4, 1897 on the beach at Frankfort, Michigan]

**Figure 4.5**

**Philip Sheridan (1905-1918):**

Philip Sheridan, who was stationed at Point Betsie from November 1905 until 1918, replaced Medad Spencer. The log books for the Point Betsie lighthouse do exist

for his tenure, so much more detailed records of the operations of the Lighthouse are available.

The following is a listing of the daily routine of the lighthouse Keeper and his assistants for the month of May 1905. By looking at the month as a whole it is easier to see the pattern of the job and the monotony of the responsibilities. Keepers were responsible for the entire upkeep of both the light and the dwelling, as well as the grounds of the lighthouse. Punctuation, spelling, and capitalization of letters are copied exactly from the logbook. (Explanations of the various activities and jobs have been footnoted.)

**MAY 1905:**

- **May 1:** painting white in tower cleaning cellar
- **May 2:** painted lamproom tower and hall floor painted black and green in signal
- **May 3:** sounding signal. painting green and black in signal.
- **May 4:** painted floors and stairs doors at signal and stepladder and benches and cupboard
- **May 5:**
- **May 6:** 1st Assistant to town 1:30pm-5:00pm
- **May 7:** Sunday
- **May 8:** cleaning in signal painting black and painted floor in tower
- **May 9:** polish measures bucket and service box cleaning out barn cutting wood
- **May 10:** polish no. brass varnishing kitchen 2nd Assistant to town 2:00pm-6:00pm

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39 The following selection is from: the Keepers Logbook for the Point Betsey Lighthouse. April 1905 - June 1913
40 The inside and outside of the tower and dwelling at the Point Betsie Lighthouse have traditionally been white.
41 Signal refers to the fog-signal and the building that it was located in.
42 One person was always supposed to be at the Lighthouse, in case a storm blew in, or a ship was in trouble. When there was only one Keeper at a lighthouse, his wife or children would often fill in when he was away.
43 Sunday appears to be the only day off that the lighthouse Keepers had. However, even on Sundays they had to tend the light.
44 The measures and the service bucket are part of the mechanisms on the illumination apparatus (the light)
May 11: painting smokestack and top of tower. 1st Assistant to town 2:00pm-6:30pm

May 12: went to town 8:00am-1:00pm cutting wood polishing whistle

May 13: Sunday

May 14: cutting wood

May 15: went up on the hill 10:00am-4:00pm sounding signal cutting wood

May 16: 2nd Assistant to town 10:00am-6:00pm
d butterfly splitting wood

May 17: raking up rubish cutting wood I and 1st Assistant to town 2:00pm-6:00m

May 18: painting black on tower chimney steps and doors and windows on wood shed and no. 2 boiler cover

May 19: cleaning in tower painting steps went upon hill 8:00am-7:00pm

May 20: Sunday

May 21: cleaning clockwork in tower 2nd Assistant to town 8:00am-1:00pm

May 22: Sunday

May 23: screening gravel making bench table

May 24: screening gravel

May 25: screening gravel

May 26: screening gravel 1st Assistant to town 8:00am – 1:00pm

May 27: polish no. 4 brass and whistle went to town 8:00am-1:00pm

May 28: Sunday

May 29: polish oil buckets and measures getting dirt for flowerbed

May 30: went upon hill 9:00am-7:00pm 1st Assistant to town 11:00am-6:30pm filling no 1 boiler

May 31: cleaned scales out of no. 2 boiler I and 1st Assistant to town 2:00pm-5:30pm

The daily routine at the lighthouse varied only slightly, usually depending on the season. Work on the outside of the lighthouse and the grounds was mainly done in the summer months. Cleaning and painting were year round jobs, although the outside

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45 Chimneys replaced the smokestack in 1907.
46 The whistle is the fog-signal whistle.
47 Large amounts of wood were required to fuel the fog-signal. Later the fuel source was changed to coal, but until then the Keepers had to cut wood for the signal, as well as for heating the dwelling.
48 "went upon the hill". The exact meaning of this phrase is unknown. It could indicated a "day-off" for that party – or they could be out hunting, gathering berries, etc...
49 the light was operated on a set schedule. The clock had to be kept in perfect working order to ensure that they light was lit at the appropriate time. Eventually, the light would be fixed to the clock, and would start automatically at the specified time.
50 Note that both May 21st and May 23rd are Sundays.
51 The road to the lighthouse and the paths surrounding the lighthouse were gravel and had to be continually worked on.
painting was done only in the summer months. Tasks such as cleaning the brass, cleaning the light, and polishing were done on a regular basis all year. Other jobs were done once a year in a specific month, such as whitewashing the exterior and replacing the winter carpets with summer ones which was done every April. Extra cleaning efforts appear to have been taken immediately prior to a visit by the Lighthouse Inspector, as the Keepers were rated on the appearance of the lighthouse as well as how well it was operated.

Specific changes made to the lighthouse over the next five years are documented clearly in the Keeper’s logs. They give an overall feel for life at the lighthouse and the smaller changes made to Point Betsie over a period of time, and are summarized in the following pages.52

In June of 1905 the lighthouse was inspected by Inspector Beatty of the 11th District. His report aided in the amount of supplies that were delivered to Point Betsie in July. Included in these supplies was a new clock, as the one at Point Betsie was old and needed more repairs than the Keeper was capable of completing. In August the entire exterior of the dwelling was painted. The new clock was installed and running on the 31st of the month.

Life at the lighthouse was a continual mix of work and personal life. On August 19th the 1st Assistant’s wife gave birth to a baby boy that died two days later. On the 26th, a girl baby was born to the 2nd assistant. These events are listed in the log along with the daily routine of the lighthouse, with no variation or specific notice. The lives of those who lived together were intertwined closely.
In September a cow was bought for the lighthouse. They also raised chickens, grew a small garden, and went hunting in order to supplement their supplies. A small event occurred in October, when a launch was disabled about 2 ¾ miles to the south of the lighthouse. The Frankfort (Coast Guard) Life Saving Station was notified and the boat was towed back to the harbor.

Station life continued routinely until the next spring when the new assistant arrived on April 1st. The start of the summer indicated a time to conduct repairs that were impossible to do in the winter months. The building was whitewashed during April, and new carpet was laid. In July a new privy was constructed, as was a cement walkway around parts of the lighthouse. A pump was put into the quarters of the 2nd Assistant as well as a new sink. September saw small changes to the privy. October saw the first occurrence of the illuminating apparatus (the light) stopping for a period of twelve hours, due to the snow and ice that were coating the outside of the tower.

In February of 1907 a coal chute was cut into the floor of the tower leading to the cellar, indicating the use of coal for heating. In March Mr. Stibbliz began his tenure as the new assistant Keeper. Routine duties were performed through the spring and summer of 1907. In October they tore down the smokestack and put in a brick chimney. They also put in new pumps and piping to the dwelling. In August of 1908 the lighthouse was finally equipped with water closets in the Keeper’s dwelling.

52 Unless otherwise noted, the following section is based solely on the Keepers Logbook for the Point Betsie Lighthouse.
53 The exact listing in the logbook is “Putting window in privy for airing out good.”
Late December of 1908 saw the wreck of a ship called the Rhine. This ship foundered in a storm on December 26th, with a loss of the entire crew of four. The logbook for the lighthouse reads as follows:

Julius Dorry was lost near Frankfort last night- 6:40pm all drowned. Sunday launch Rhine with Captain Hennath, Gus Staumbel, and Chase Kibby.

Two bodies, those of Julius Dorry and Gus Staumbel, were located days later. On January 5th, 1909, the body of Gus Staumbel was found about one mile north of the station. The Keeper and his assistants had been out looking for the body along with men from Frankfort. The second body wasn’t recovered until January 29th, when the Keeper was called to pull the body of Julius Dorry out of the river after some fishermen found it. Obviously the duties that the Keepers performed were not always fun or pleasant.

The next major wreck that is described in the Keeper’s logbook was on October 5, 1910. A steamer was outbound from Frankfort and it went ashore about ½ mile southwest of the lighthouse. It was carrying canned goods and hides, and the cargo was all thrown overboard. The remainder of the month the Keepers and their families salvaged various items that drifted ashore. Elizabeth Sheridan, the daughter of Philip Sheridan, remembered this wreck:

Ships would often go aground in those days. Once one washed up on a sand bar and had to dump a lot of a cargo to get off. So all that spring we would beach comb – what treasures we would find! Barrels of flour, as they leaked the flour was made into paste so in the center of the barrel the flour was good. The cans of food the labels came off so we didn’t know until we opened them what was in them.54

Other children remembered similar instances. Howard Kimble Jr., the son of Howard Kimble (a 2nd assistant to Philip Sheridan), remembers a story that his father told of a
ship (presumably the 1910 steamer the log book describes) that went aground with a load of hides. He still has the bear hide that his father found from the wreck.55

This entry was the last logbook entry that differed from the general duties during the tenure of Philip Sheridan as Keeper of Point Betsie. The routine of the lighthouse varied little – there were always repairs to be made, rooms to be painted, and lights to clean. The general tasks and duties appear to have remained the same for the next several years.

1918-1933:

The next set of logbooks for Point Betsie that have survived to today are from October of 1926 until December of 1933. The names of the Keepers for most of this time period are unknown.56 However, major changes and repairs were made to the lighthouse during this time period, mainly due to the creation of the Lighthouse Bureau, which attempted to regulate and restore the country’s lighthouses to a higher standard than had previously been attained.

A number of letters exist from October 22, 1912, from the Lighthouse Bureau to the Department of Commerce (who controlled the Lighthouse Bureau from 1910-1939). These letters list a number of repairs and renovations that were needed at the Point Betsie Lighthouse. They include the following:

Construction of an oil room and coal bin and sundry repairs needed to the fog-signal building. ($385.00)57

55 ibid
56 L.M. Danielson retired on May 8, 1928, but the length of his tenure is unknown. He was replaced by C.E. Tesnow on May 24, 1928. Edward Wheaton took over in 1934, but there may have been other Keepers between Wheaton and Tesnow.
Construction of new concrete walls from rear of Keepers dwelling to rear deck of boathouse. ($59.31)  

Additional footings under the new engine beds ($175.00)  

Deepening the well for fog-signal purposes and putting in old water tank in fog-signal building for gravity water cooling purposes. ($1100.00)  

Dismantling of old steam fog-signal plant...($205.00)  

The new fog signal system was not set in place until 1915. A number of other changes occurred in 1915, including the construction of new privies and a new wood shed, and a new roof for the Keeper's dwelling. The other major change to occur in 1915, was the change from oil wick lights to incandescent oil vapor lights.  

The next significant change to occur at Point Betsie took place in 1921, when the illuminating apparatus was changed from an incandescent oil light to an incandescence electric light. The old fog signal was also replaced with a diaphone and an electrically operated air compressor. The installation of the electric lights, as well as the new fog signal and other general repairs cost a total of $9820.00.  

A radio beacon was added in 1927, priced at $5778.00, which provided the Keeper with a new system of warning ships of their proximity to land. In 1928, Charles Tesnow began his term as Keeper of the Point Betsie lighthouse, where he served for six years, leaving in 1933. In 1928 regular phone service was provided to the lighthouse.  

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58 ibid  
59 ibid  
60 ibid  
61 ibid  
62 Request and Authorization of Purchase” from the United States Bureau of Lighthouses to the Department of Congress. March 30, 1915  
Up until this point, there had been a phone located halfway between the lighthouse and the Life saving station, which provided both with intermittent contact with the outside world (depending on weather conditions).

In 1929 the Keeper’s dwelling was wired for complete electricity, and the need for the oil house was ended. On September 25, 1929, the oil house was moved to the back of the fog-signal building, away from the actual lighthouse, where it remains today. Other changes included the conversion of the boathouse to a three-car garage. The property at the time was assessed for its value and the estimates are as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tower-brick attached to dwelling</td>
<td>$14,510.74</td>
</tr>
<tr>
<td>Fog Signal</td>
<td>$3,407.12</td>
</tr>
<tr>
<td>Boat House (conv. to 3-car garage)</td>
<td>$440.00</td>
</tr>
<tr>
<td>Steel oil house</td>
<td>$248.36</td>
</tr>
<tr>
<td>Frame Barn</td>
<td>$505.00</td>
</tr>
<tr>
<td>Frame outhouse</td>
<td>$120.00</td>
</tr>
<tr>
<td>Total value of buildings</td>
<td>$19,221.22</td>
</tr>
<tr>
<td>Land value</td>
<td>$7,478.78</td>
</tr>
<tr>
<td>Total value of property</td>
<td>$26,700.00</td>
</tr>
</tbody>
</table>

1933-1946: Edward Wheaton

Charles Tesnow was replaced in 1933 by Edward Wheaton who served until his retirement in 1946. During his tenure a number of significant changes occurred to both the Point Betsie Lighthouse and to the Bureau of Lighthouses in general. Working with

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64.“Questionnaire covering real estate owned by the United States”. Property Number 116. 1929. National Archives.

71
him in the lighthouse for the majority of his tenure were Henry LaFemier as 1st Assistant Keeper and Nels Nelson as 2nd Assistant Keeper.

In September of 1933, Edward Wheaton began his most lasting contribution to the Point Betsie lighthouse – the construction of the stone front porch to replace the existing wooden porch. Stones were brought up from the beach by wheelbarrow whenever Wheaton or one of his assistants had spare time. The porch wasn’t finished until June of 1934.

65 unless otherwise noted, the information in the following section is from The Keepers Logbooks for the Point Betsie Lighthouse. January 1934 – January 1944.
In August of 1934 the Keeper’s quarters were outfitted with bath tubs and a hot water heater was put into the building. The tubs had been bought in 1931, but were not actually installed until August of 1934.

In September of 1934 the construction of the stone flowerbeds began in the front of the dwelling. They were built with stone matching that of the front porch, and are still extant today. A number of trees were also planted along the boundaries of the properties, including cedar and balsam fir trees.

*Detail of one of the flower beds constructed by Keeper Wheaton and his assistants.*

The duties of a Keeper at this point in time were still very similar to those of the earlier Keepers, the only difference being the light that was used. Where earlier Keepers had to change the oil in the light every two hours, later Keepers had only to turn a switch to turn the light on. However, in the event of an electrical failure, the old system was put back into place until the power was fixed. The following is a listing from the 1935
logbook for the month of May. It is interesting to note the number of similarities between this account and the 1905 account recalled earlier:

MAY 1935:

May 1: Attended to general duties of the station
May 2: Attended to general duties of the station
May 3: operated radio beacon and fog signal. Keeper left station at 10:30am. Attended to general duties of the station
May 4: Cleaned brass and washed fog-signal tower. Attended to general duties of the station
May 5: Attended to general duties of the station
May 6: Attended to general duties of the station. Painted work in signal building. Keeper returned 5:00pm from Cheboygan
May 7: Washing paint work in signal building. Painted service room in tower
May 9: operated radio and fog signal. Washed walls in fog signal building. Keeper left station at 11:00am
May 10: washed walls in fog-signal. Tencher passed station 6:00pm going South.
May 11: Attended to general duties of the station. Cleaned in signal and tower. Cleaned out fog-signal sewer pipe.
May 12: Attended to general duties of the station
May 13: Attended to general duties of the station
May 14: Attended to general duties of the station. Washed lead color in signal. Finished painting white inside tower.
May 15: started washing building outside. Painted upstairs in hall in Keepers quarters.
May 16: Attended to general duties of the station. Scrubbed outside of store room and barn. Painted lower hall in Keepers quarters.
May 17: Attended to general duties of the station. Washed the outside of the house.
May 18: Attended to general duties of the station. Cleaned in signal and

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66 This is the main difference in the duties of the Keeper in 1935 as opposed to in 1905: the fog signal and the radio beacon both had to be operated, in addition to the lighthouse.
67 "signal" and "signal building" both refer to the fog-signal and the fog-signal house.
68 The Synchronizer and Transmitter are parts of the radio beacon.
69 The Tencher was a steam-ship in the 1930s.
70 Note that in 1935 the outside of the building is simply washed, whereas in 1905 it had to be whitewashed every year.
May 19: Attended to general duties of the station
May 20: Attended to general duties of the station. Scrubbed garage outside and cleaned floor.
May 21: Attended to general duties of the station. Painted in house.
May 22: Attended to general duties of the station. Painted in house.
May 23: Attended to general duties of the station. Painted in house.
May 24: Attended to general duties of the station. Painted in house.
May 25: Attended to general duties of the station. Finished painting in house.
May 26: Attended to general duties of the station
May 27: signal in operation. Attended to general duties of the station
May 28: signal in operation. Attended to general duties of the station
May 29: Attended to general duties of the station. Put up screens, washed kitchen in 1st Assistants quarters, worked in 2nd assistants quarters
May 30: Attended to general duties of the station. Painted kitchen in 1st assistants quarters
May 31: Attended to general duties of the station. Put black dirt in flower bed. Touched up spots in signal with red paint.

As seen by this 1935 logbook record, the duties of a Keeper remained very similar over the thirty years catalogued here.71

February of 1936 provides an unusual look at the extreme weather conditions that were sometimes experienced on Lake Michigan. On Feb. 13, 1936, the logbook makes note that there is “no open water to be seen in the lake.” Considering that the visibility on the lake from the top of the lighthouse can be as much as 20 miles, the severity of the winter is seen here. February 19th notes that the highway is completely impassable due to snow, and that the road from the station to the highway is completely covered in snowdrifts. The Keeper had to walk to Frankfort (around 6 miles) on the beach. On

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71 The last complete account for the lighthouse is May of 1943. The duties and tasks of the Keepers are surprisingly similar to those of the 1935 and 1905. Some jobs have disappeared—such as hunting and berrying, but the Keepers still grew some foods at the lighthouse, and still performed the same general repairs on a regular basis.
February 21st, reports came in that the lake was completely frozen from the Michigan side to the Wisconsin side.

Open water was first sited again on March 13th, about one mile offshore. On March 20th, a gasoline fishing boat was caught in the ice about four miles north of the lighthouse. One of the two crewmen walked ashore on the ice, and then to the lighthouse where they drove him down to the Coast Guard station. The Coast Guard dispatched an ice-cutter, and freed the boat later that night. By the end of March most of the ice had melted.

In 1939 the Bureau of Lighthouses merged with the United States Coast Guard. It was though that costs could be reduced and efficiency increased by this merger. Edward Wheaton would become the last civilian to be a lighthouse Keeper at Point Betsie due to this. Immediately after this merger took place, the Coast Guard made a number of improvements to the interior of the Point Betsie lighthouse:

To Dwelling:
1. Concrete walls, basement floor, porch piers $400.00
2. lumber, framing, rear entrance porch, roof, sheathing, dormers, canopy side entrance $735.00
3. new asphalt shingles, repairs to gutter, downspout, ridge roll $750.00
4. hardwood floors, partitions, trim, plastering, new windows and doors $380.00
5. plumbing, three new kitchen sinks, piping to bathrooms, etc. $300.00
Interior alterations: partitions, closets, cabinets, doors $300.00
Electrical fixtures and wiring to kitchens, bathrooms $185.00
Labor for removing old assistant Keeper kitchen $150.00

Total: $3,200.00

These are the last documented changes to the Point Betsie Lighthouse.
The next known Keeper of the Point Betsie lighthouse was John Campbell, who became the last layman Keeper of the lighthouse, serving from 1958 until 1963 when he died. The names of the Keepers between Edward Wheaton and John Campbell are not known. Upon the death of John Campbell, Coast Guard personal became the Keepers of the lighthouse and various personnel served until the lighthouse was automated in 1983. Little documentation was available about the conditions of the lighthouse while under Coast Guard control. The last people to man the lighthouse before it was automated were two Coast Guard personnel - Neil Martinek and Scott Sandy. They were Keepers at Point Betsie at the time of its automation in 1983.

The Coast Guard continued to maintain the lighthouse as housing for personnel serving at the Frankfort Coast Guard station until the early 1990s, at which point the building was closed as a residence.

72 “Sanitary Improvements to Point Betsie Lightstation” United States Coast Guard. June 16, 1939
73 Thomas and Phyllis Tag. Lighthouse Keepers Database. (Columbus, Ohio: Great Lakes Lighthouse Research, 1999).
Chapter 5:

The Current Conditions of the Point Betsie Lighthouse
Chapter 5

The Current Conditions on the Point

Belize, Lighthouse
Current building conditions:

The main building on the plot of land is the keeper’s quarters with the attached light tower. (The light tower will be discussed later.) The keeper’s quarters is a heavily altered 19th century structure, made of brick with a red asphalt-shingled gambrel roof. The brick has traditionally been stuccoed, and the stucco is currently in good condition. An historic exterior brick chimney is located on the north façade. The chimney is supported in place by two metal beams leading from the chimney to the roof. There have been a number of porches added onto the main building, as well as modern doors and windows installed. The following is a detailed description of the building, including modern and historic details, as well as the current condition of the materials.

The south, or main façade, of the lighthouse and keepers quarters is four bays wide, with the light tower as a separate bay on the western end of the façade. The main entrance to the keepers quarters is the western most bay of the front façade, and contains the main door, which is a modern pane-and-panel door. There is a stone porch with concrete floor and concrete stairs that lead up to this entrance. The porch is constructed of fieldstone that was gathered along the beach. A slab roof with enclosed wood eaves and wood posts covers the porch. Next to the porch is a modern one-over-one double hung sash window. The blue stone sill and lintel are original to the structure and are inset into the brick. The second story of this bay contains a small dormer with a modern double window.

The next bay to the east contains a window that is identical to the first window on this façade. Located directly under the window is a set of cellar doors, the date of which is unknown. Above this window, and slightly to the east is another small dormer and
View of exterior of the south façade of the lighthouse (facing north). Note the breakwater in the front of the lighthouse, as well as the overgrown vegetation. The beachfront is open to the public up to the breakwater.

Figure 5.1

View of the porch along the south façade of the Keeper's Dwelling.

Figure 5.2
double window. The third bay is extended slightly from the house and consists of a double window with a brick column dividing the two windows. Both are modern one-over-one double hung sash windows. The sill and lintel are also original to the structure. Above these windows is a large roof dormer with two windows. Both are modern one-over-one sash. This dormer is slightly extended from the general roof-line.

*View of the eastern façade of the lighthouse. Note the missing window in the left bay and the additions on the north side of the façade.*

![Image of the eastern façade of the lighthouse.](image)

The final, or eastern bay of this façade, consists of a covered porch. The steps are wood and the paint is peeling. They lead up to a wood porch with wood floor. The sidewall of the porch is constructed of vertical wood siding. The eastern wall is solid brick with a window opening. A wood cornice extends over the porch. The door is a
View of the cutaway porch located in the eastern bay of the southern façade. Note the peeling paint on the stairs and the modern aluminum door.

Figure 5.4

Detail of the modern additions on the north side of the building. Note the two additions with modern siding. Also note the window into the basement, which is part of the original brick structure.

Figure 5.5
82
modern pane-and-panel aluminum door. Above this porch, on the second story is a small
dormer with a double window, identical to the two on the western side of the façade.

The eastern façade of the structure is two bays wide, with the porch creating a
third bay. The upper stories of both bays contain modern one-over-one double-hung sash
windows. The ground level southern bay consists of a small single pane window. The
northern bay contains a modern window similar to those on the second story. Also
located on this façade is a gas meter and a metal frame radio antenna, ending with a
receiver and a weather vane on the top. There are concrete stairs leading up to this
façade, and a path is located at the top of stairs that encircles the structure. At the
northern end of this façade is a modern porch addition to the structure, which houses a
door on the north side. This entrance was created when the keepers quarters were turned
into modern apartments. It is clad in modern aluminum siding and leads into a second
modern addition on the north side of the original structure. There is also a small window
on the eastern façade of this first addition, as well as concrete stairs leading to the door.
The roof of this addition is a shed roof and there is a metal handrail along the stairs.

The northern façade of the keepers quarters is also four bays wide, although many
of them have been heavily altered. The first two bays, on the eastern end of this façade
are covered by a modern addition. There are three windows in this addition, all of which
are modern one-over-one double hung sash windows. The addition is clad in aluminum
siding and the roof is covered in asphalt shingles. The western side of this addition also
contains a window.
Next to this addition is a small section of the original building, containing a window on the ground level as well as a small two-pane window leading into the basement of the building. Next to these is another small addition with aluminum siding and an additional door, which leads to another of the modern interior apartments. This door is reached by a set of wood stairs. There is a window on the northern façade of this addition as well. The addition contains a shed roof with asphalt shingles, and is supported by wood posts. The remainder of this façade is the original building, with two modern windows. There are also two addition windows leading into the basement of the structure. The second story of this façade consists of the chimney, on the eastern end of the roof, along with two small dormers. Each dormer contains a double window.

*View of the north façade of the lighthouse. Note the modern additions, with the modern siding.*
The west façade of the keepers quarters is where the light tower is attached to the structure. There are no exterior doors in the tower; it is accessed from the interior which made it more accessible to the keeper, especially in bad weather. The keepers quarters contain a small window on either side of the light tower. There is small “passage” between the tower and the keepers quarters, which is also brick. The tower is constructed of the same brick as the quarters and contains two windows on the western façade, looking out towards the lake. The tower itself stands 30 feet tall and contains the light room at the top, with a small walkway around the exterior of the light room. The door to the balcony is located on the north side of the light room. The balcony has a short metal rail around the exterior. The conical shaped roof on the top of the tower is clad in the same asphalt shingles as the keeper’s quarters. There is a small decorative finial on the

*View of the north façade of the lighthouse, with special attention to the light-tower.*

Figure 5.7
Detail of the light tower. Note the modern rotating light that is visible through the windows.

View of interior stairway in the light tower. Note the peeling paint and cracked walls. The stairs themselves are narrow and winding, leading up the three stories to the top of the light tower.
top, along with a small metal rod. There is also a metal ladder attached to the side of the roof, for an additional view of the lake.

There are a number of outbuildings, both historic and modern, that are part of the overall property. To the southeast of the lighthouse, along the drive is the modern four-car garage that was constructed by the Coast Guard in the late twentieth century. This modern structure is clad in white aluminum siding and has a red asphalt shingle side-gable roof. There is also a basketball hoop attached to the front of the structure. To the northeast of the lighthouse is a storage structure, which is also a modern aluminum clad building. This side gabled roof follows the pattern of red asphalt shingles, and also contains a concrete base, which has been painted red. There are three doors on the south façade of the building, with the surrounds painted the same blue/gray as the surrounds on the keepers quarters. The north façade of the building contains three small windows, with wood surrounds.

To the northwest of this storage shed is the historic building that housed the fog signal for the lighthouse. Unfortunately, it was not possible to gain access to this structure, as it is structurally unsound. It has a stone foundation and has been clad on the first story in modern aluminum siding. The roof is the traditional red asphalt shingles. The windows and door are original to the structure. The windows on the first floor are mainly historic six-over-six double hung sash wood windows. The door is a double wood pane-and-panel historic door with concrete stairs leading up to it. The side gable roof sports on side-gabled dormer on the southern end. It contains four pane historic windows. The dormer is constructed of vertical metal sheeting that has been painted white. The historic exterior brick chimney is on the northern end of the building.
View of the modern four car garage from the southeast.

Figure 5.10

View of the modern storage shed, which is located to the immediate east of the historic fog-signal building.

Figure 5.11
View of the historic fog-signal building. Note the stone flower garden in the front left (it was constructed at the same time as the front porch by Keeper Wheaton. The building is in need of structural repairs.

Figure 5.12

*View of the oil tank. It is currently located to the north of the fog-signal building, although it was originally closer to the lighthouse.*

Figure 5.13
To the north of this building is a small round concrete building that has been painted white. It has a conical red roof with a small finial on the top. This building was used as munitions storage during the first and second World Wars. The door to the building is on the south side. Access to this building is prohibited, and the interior could therefore not be photographed.

The general grounds of the lighthouse are in poor repair. Since the Coast Guard evacuated the living quarters of the building in 1993, there has been little done as far as upkeep. The paths are all overgrown with weeds and trash has been dumped within the area. Buildings are beginning to show signs of age and neglect as paint is peeling, windows are broken, and bushes are not trimmed. Access to the area is prohibited,

*View of the general property, from the entrance to the property. The fence is all the protection that the property has from curious tourists and vandals.*
however, it is easy to ignore the signs and walk the grounds. Surprisingly, few break-ins have occurred and no graffiti was found on any of the buildings. Nevertheless, it would not be hard for someone to gain entry into the buildings, as there is very little surveillance of them.

The interior of the keepers quarters, which contains three modern apartments, is slowly being taken over by wildlife. Numerous mice and birds have died on the interior, gaining access through broken windows. A family of badgers has taken up residence in the basement, preventing any exploration or photographs of that area. The tower has been stripped bare of any equipment, leaving only an empty round stairway with the tower room at the top, which contains the modern light.

A number of maintenance issues are faced by the buildings, particularly the keepers quarters. While it has been converted into modern apartments, many of the facilities are not up-to-date by modern standards. There is no natural gas supply for the property, so propane is used. The only source of water is from a well, which requires a water treatment and pumping facility on the property. Both the use of propane and the need for treated water substantially raise the monthly cost of upkeep for the building. Perhaps the most severe maintenance problem is the boiler. The bill for the current boiler runs an average of $800-$1000 monthly, due to its age and poor quality. An entire new heating system needs to be designed and implemented in the building.

The final issue that must be addressed in regards to the property is the weather. Located on a point overlooking Lake Michigan, the Point Betsie Lighthouse is at constant risk from the elements. Numerous attempts at breakwaters have been made to reduce the
loss of beach front that occurs continuously. The current solution is metal plates, which have been put into place in front of the lighthouse, in an attempt to prevent erosion of the beach. A second issue to be dealt with is the winter conditions of the area. Ice builds up on the lakeside of the lighthouse at a frightening rate. The remote location of the lighthouse requires its drive to be plowed at least twice a day for the majority of the winter. The upkeep of the lighthouse in the winter is immense and time consuming.
Chapter 6:

The Future of the Point Betsie Lighthouse
The future of the Point Betsie lighthouse is currently unknown. The process of returning the property from the United States Coast Guard to the Bureau of Land Management is a long and involved process that takes patience and a thorough understanding of the process. While this process is being followed, the deterioration of the lighthouse and the property will continue, leaving the future owners of the lighthouse with more work and more expenses than would originally have been involved. How this will affect the future ownership of the lighthouse is unknown. A number of possible owners exist, and the possibilities of the reuse of the lighthouse are numerous.

The following pages will attempt to do five things. First, an explanation of the process of returning Point Betsie from the Coast Guard to the Bureau of Land Management and then ultimately conveying the property to a public owner will be explored and explained. Second, the possible outcomes of the sale of the lighthouse will be discussed, with the pros and cons of the potential buyers examined. Third, a series of positive and negative case studies of leased lighthouse properties is presented in order to observe the pros and cons of a lease arrangement. Fourth, a discussion of the various partnerships that can be established to ensure the preservation of the Point Betsie Lighthouse will be considered. The fifth and final section will be devoted to the alternative types of reuse plans that can be considered for the Point Betsie lighthouse.

Section 1: The transfer of Michigan Lighthouse Properties

In 1997 the Bureau of Land Management (BLM) completed their study entitled the "Proposed Resource Management Plan Amendment and Environmental Assessment:"
the Disposal of U.S. Coast Guard Lighthouse Properties.” This document covers, in
general terms, the proposed dispensation of seven properties that include historically
significant lighthouses and their adjoining structures. In this study the BLM examines
three proposed alternatives for the proposed properties, highlighting their preferred
alternative, which involves transferring the properties to other, already identified, federal
agencies.

The general process of transferring properties begins with the identification of
which federal agency will receive and manage the property – either the Bureau of Land
Management (BLM) or the General Services Administration (GSA). Both departments
deal with properties that have been either surplussed or determined excess. The BLM
holds jurisdiction over properties which are determined excess by a federal agency and
which are still eligible to be relinquished into the public domain. GSA holds jurisdiction
over those properties which are unsuitable for returning to the public sector. Properties
which are held by the BLM can be

managed by the BLM, withdrawn for use by another Federal agency, transferred
to a State or local government agency, or sold to private individuals or not-for-
profit organizations.

1 While some lighthouses may eventually go to public auction, it is highly unlikely that Point Betsie will.
2 These properties include: Big Point Sable Lighthouse, Grand Traverse Lighthouse, Manitou Island
   Lighthouse, Passage Island Lighthouse, Point Betsie Lighthouse, Poverty Island Lighthouse, and Thunder
   Bay Lighthouse.
3 According to the United States Department of Interiors, excess property is any property which is under
   the control and management of a federal agency and is determined no longer necessary by that agency.
   Surplus property is any excess property that the General Services Administration (GSA) determines is no
   longer necessary to a specific federal agency.
   Amendment and Environmental Assessment: Disposal of U.S. Coast Guard Lighthouse Properties”.
   (Bureau of Land Management, 1997), 2.
A number of steps must be followed before the proposed land-use is announced by the BLM. Following the proposals of the BLM, there are again numerous steps which must be taken in order to properly dispose of the properties in question.

Before preparing the Michigan Lighthouse Planning Analysis/Environmental Assessment of the designated properties, the BLM published their Notice of Intent in the Federal Register. The Notice of Intent was also published in area newspapers, and letters were sent to a number of individuals and agencies to apprise them of the plan. The public was invited to comment on the procedures through letters and phone calls regarding the long-term disposition of the properties. Two main issues were raised through this scoping effort: 1) the need to protect the historic lighthouses and the surrounding lands; and 2) suggestions regarding who should receive the specified lands.

At this point in the process, the criteria for disposing of a property were identified. It is important to note that the BLM has acknowledged the need to establish specific protective measures for the properties:

...no parcel will leave BLM's administration without appropriate protective measures in the form of covenants or easements, or additional consultations and reviews required by Federal law. These measures will apply to lands transferred to Federal and non-Federal entities.\(^5\)

A number of disposal criteria were established in order to aid in the preservation of both the historic structures and the surrounding environments.\(^6\) The following is an excerpt from the U.S. Department of the Interior, Bureau of Land Management "Proposed Resource Management Plan Amendment and Environmental Assessment: Disposal of...

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U.S. Coast Guard Lighthouse Properties." This excerpt details the specific characteristics governing those properties that are to be sold, exchanged, or otherwise transferred in the public interest. These characteristics include lands that are of limited or no public value, as well as lands with high public value for management for other Federal agencies, or State or Local governments. Additional criteria specific to these lighthouse properties were created as well. These four criteria were set forth by the BLM for use in determining which entity will acquire the designated parcels of land (including the Point Betsie Lighthouse and surrounding lands).

1. Priority will be given to the primary public land owner adjacent to the parcels. Tracts adjacent to Federal land or needed for a specific Federal purpose may be re-withdrawn under FLPMA [Federal Land Policy and Management Act] Section 204. Tracts adjacent to state land may be transferred to the State of Michigan. Parcels transferred to the State or non-profit groups will be classified under the R+PP Act [Recreation and Public Purpose Act of 1926].

2. If no Federal, State, or local public agency or non-profit group is interested in acquiring the properties, the parcels may be offered for public sale under FLPMA Section 203... for Fair Market Value [FMV], based on the highest and best use of the land. An appraisal conducted by BLM will determine the FMV.

3. Where parcels have historic lighthouse structures and existing leases from lighthouse preservation groups to manage the buildings, BLM will encourage the proposed landowner to continue these management arrangements after the lands are transferred. Conveyance instruments for these sites will contain provisions that ensure that the historic buildings continue to receive protection under the National Historic Preservation Act, as amended of 1966 (NHPA).

4. All applicable Federal, State, and local laws, plans, and policies will be followed with respect to protection of threatened and endangered wildlife and plant species, historic preservation, Native American religious

\* Oftentimes the land surrounding lighthouses is a haven for coastal wildlife communities. Environmental studies of the proposed seven lighthouses show numerous plants and animals that are listed as state or national endangered species.
concerns, hazardous materials, and archaeological resource protection. Patents issued under the R+PP Act will contain specific language that maintains full protection under the NHPA. All consultations and reviews required by law will be conducted when the BLM prepares the site for specific environmental assessments.\(^7\)

These four qualifications were designed in order to ensure the continued safety of both the natural environment and the historic structures located within the properties.

The Bureau of Land Management has created three alternatives for the disposition of the lands in question. Their favored alternative would grant ownership of the lands in question to a designated Federal Agency. The following table highlights the proposed ownership of each tract of land:

<table>
<thead>
<tr>
<th>Parcel under consideration</th>
<th>Proposed Recipient</th>
<th>Existing/Proposed Lease Holders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Sable Point</td>
<td>Michigan DNR (Ludington State Park)</td>
<td>Big Sable Lighthouse Keepers Association</td>
</tr>
<tr>
<td>Grand Traverse</td>
<td>Michigan DNR (Leelanau State Park)</td>
<td>Grand Traverse Lighthouse Foundation</td>
</tr>
<tr>
<td>Manitou Island</td>
<td>Michigan DNR (Copper Country State Forest)</td>
<td>Lighthouse: North Woods Conservancy Land – none</td>
</tr>
<tr>
<td>Passage Island</td>
<td>NPS (Isle Royale National Park)</td>
<td>none</td>
</tr>
<tr>
<td>Point Betsie</td>
<td>County/Township Government</td>
<td>County/Township Government</td>
</tr>
<tr>
<td>Poverty Island</td>
<td>U.S. Fish and Wildlife Service/Michigan DNR</td>
<td>None</td>
</tr>
<tr>
<td>Thunder Bay</td>
<td>U.S. Fish and Wildlife Service (Michigan Islands NWR)</td>
<td>None</td>
</tr>
</tbody>
</table>

Figure 6.1

It is important to note that in the case of Point Betsie (and Manitou Island), the land is designated for ownership by a specified not for profit agency, but the actual buildings are not. This leaves the option to the specified agency of renting the buildings to an area non-profit organization, such as a Historical Society or Lighthouse Preservation Association. An environmental analysis will be conducted for each property prior to its disposal, in order to ascertain the potential effects of the transfer option and other reasonable alternatives.

Section 2: The Potential outcome of the land transfer of the Point Betsie Lighthouse

The proposed transfer of the Lighthouse Properties by the BLM is the current preferred outcome to the property disposal. The ownership of the property by the Nature Conservancy would be beneficial in regards to the environmental concerns of the property. However, there are advantages and disadvantages to any proposal. This section will focus on the pros and cons of the BLM proposal to transfer the Point Betsie Property to the control and ownership of the county of township government, as well as briefly identifying other potential owners.

The key issue in regards to transferring ownership of Point Betsie to any type of government agency is the stipulation that they would have the rights and ownership of the land only. This does not address to any degree the eventual fate of the lighthouse and its adjacent buildings, which are as important as the environment in which they were built. The lighthouse is in need of material conservation and repair, as are the outbuildings, and they will become more so if intervention does not occur in the near future. The longer the buildings are untenanted the longer the maintenance needs will be ignored.
The logical assumption would be to grant ownership to a local government with the stipulation that a long term lease be written up which would give control of the historic structures to a local non-profit who would maintain and restore the structures. This organization could be one of the currently existing local groups, such as the Benzie County Historical Society or the Northwest Michigan Maritime Museum, or it could be a larger organization such as the Great Lakes Lighthouse Keepers Association. Ideally, it would be a newly created not-for-profit organization whose only goal would be the preservation of the Point Betsie Lighthouse (similar to the Big Sable Lighthouse Keepers Association, which has worked for the past few years to restore and maintain the Big Point Sable Lighthouse in Ludington, Michigan). The formation of an organization dedicated to restoring and preserving the Point Betsie Lighthouse would have several advantages over other, pre-existing organizations.

Ownership of the property by a local government agency necessitates the creation of a non-profit organization dedicated to the lighthouse itself. Numerous uses are possible for the Point Betsie Lighthouse, but they all require careful study and planning. An organization dedicated solely to this purpose will be more effective in planning and carrying out a restoration and conservation plan, while allowing public enjoyment and involvement in the Point Betsie Lighthouse.

Section 3: Positive and negative case studies of leased properties

There are a variety of options for a non-profit group interested in obtaining a lease for the Point Betsie Lighthouse. Numerous Great Lakes lighthouses that are either owned or leased by non-profits (and in some cases by private ownership) have created settings
where the property is open to the public and which create enough revenue for the organization to continue their restoration and maintenance work on the lighthouses. The key to creating an organization is local public involvement and interest. The drive needs to be present in the community to operate an organization whose goal is to preserve and protect the Point Betsie Lighthouse.

In a paper written by Geoffrey L. Abbott, Commander of the United States Coast Guard, a number of leasing and privatization attempts are discussed in terms of their pros and cons. The paper goes on to make a number of suggestions regarding the potential of further leasing opportunities. Other information has been obtained from owners and leasees of lighthouses in an attempt to compile the various options that are available for implementation at the Point Betsie Lighthouse. It is important to remember however, that each lighthouse will vary in what will and will not work there – each community is different and the interest and goals of each will also be different.

At this point in time, the United State Coast Guard is responsible for all maintenance on the federally owned lighthouses, and for maintenance on the light in any privately owned but active lighthouse. As costs become more expensive, the Coast Guard is faced with the problem of providing more maintenance with less budget. This is a contributing reason to the Coast Guards’ decision to surplus some existing lighthouses. Another key reason is the introduction of new navigational technologies, such as GIS (Global Positioning Satellite), LORAN, and electronic charting, all of which contribute to

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the declining necessity for lighthouses. In order to deal with the increasing costs of Coast Guard owned lighthouses, many have been leased to outside agencies and organizations.\(^9\)

A number of cases exist that raise the issue of negative aspects of leasing properties.\(^10\) In the mid-1980s the Coast Guard transferred ownership of the Lorain Harbor Breakwater Light in Ohio to a local historic society (the Coast Guard would continue to maintain the actual light). In this instance the property was actually transferred, which left the Coast Guard with no legal options in regards to the conditions in which the historical society left the lighthouse. The lighthouse was practically abandoned, and when the Coast Guard was on location for routine maintenance of the light, the environmental conditions were so bad that they had to threaten to call environmental health officials. The Coast Guard has since moved the light outside the historic structure, and the historical society is free to do (or not do) whatever they like with the buildings.

This case of the Lorain Harbor Breakwater Light raises the issue of proper maintenance by a leasee, or in this case, a private not-for-profit owner. Stipulations must be made in any lease written for a property that includes terms and conditions of upkeep and maintenance.

The Presque Isle Lighthouse (in Michigan) was built in 1871 and was leased to the township for a period of five years in the 1980s. On an unexpected visit, Coast Guard

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\(^9\) It is important to note that the following information regarding leases is applicable to a lighthouse no matter who the owner is. If the Nature Conservancy acquires Point Betsie, the following information can be applied to their decision to lease the buildings to an outside not-for-profit.

\(^10\) All negative cases are taken from: Abbott, Geoffrey L. Commander, U.S. Coast Guard. "Leasing and Privatization of U.S. Lighthouses: Successes, non-successes, and Recommendations." (Cape May, NJ United States Coast Guard, n.d.)
personnel found the lightkeeper (that the township had hired) to be running a personal for-profit business out of the lighthouse, which was a direct violation of the terms of the lease. The lighthouse Keeper was also making changes to the historic structure, which were not in accordance with the State Historic Preservation Officer or the Secretary of the Interior’s Standards for Historic Preservation. The township was notified and took immediate steps to correct these problems. Based on their correction of the situation the lighthouse was legislatively transferred to the township government.

This case study brings up the issue of regular inspection of the leased property. The federal (or state or local) agency that obtains ownership of the lighthouse must arrange a regular schedule of visits to observe the work being done at the property — and these visits should include a number of unscheduled visits. Regular observation of the property is essential in order to ensure compliance with the terms of the lease.

Despite negative cases such as the two described above, there have been many positive experiences with leasing lighthouse properties to not-for-profit organizations, including the Door County Maritime Museum in Madison, Wisconsin, and the Charlotte-Genesee Lighthouse Historical Society in Rochester, New York.

The Cana Island Lighthouse is currently leased by the Door County Maritime Museum, who began leasing the lighthouse from the Coast Guard in 1971. The lighthouse is currently in the process of being returned to the Bureau of Land Management for eventual sale. While the Door County government has placed a bid for ownership, the future of this lighthouse is still undetermined.

The current lease for Cana Island has been in existence since 1995 and is an example of a typical Coast Guard lease. It is a term lease for ten years, and will expire in
buildings, a summary of physical conditions at the site, and the historic restrictions placed on the property. The Door County Maritime Museum has successfully restored the lighthouse and has run a successful not-for-profit operation in the lighthouse for over twenty-five years.\(^{11}\)

The Charlotte-Genesee Lighthouse was leased to the Charlotte-Genesee Lighthouse Historical Society in 1981. The historical society worked to restore the grounds and the tower. A new lantern was constructed by students at the local technical high school and a 4\(^{th}\) order Fresnel lens was loaned from the Coast Guard. In 1991 the property was transferred to the ownership of the Monroe County Government, who leased the lighthouse to the historical society for the next twenty years. The society is all volunteer operated and run.

The Charlotte-Genesee Historical Society works cooperatively with a number of local historic societies, schools, and researchers. They hold regularly scheduled events such as a January Wine and Cheese Party and an Annual Art Show in June. Donations and sales from their museum shop provide a great deal of the operating budget. Other partnerships include the National Trust for Historic Preservation, the Great Lakes Lighthouse Society, and the Landmark Society of Western New York.\(^{12}\)

Numerous other case studies exist, many of which are positive examples of leased properties. A number of historical societies operate lighthouses as museums. Some have begun a lighthouse keepers program, which allows members of the historic society to live at the lighthouse for a period of time each summer (a week or a weekend) in exchange for

\(^{11}\) United States Coast Guard. *Historic Property Lease to Cana Island Lighthouse.* (Wisconsin: n.p., 1995).

giving tours or doing routine maintenance work. Other, innovative programs have also
devloped at lighthouse properties. The Beaver Island lighthouse is run by the Charlevoix
Public Schools as an alternative high school for students who are trying to make a new
start. Located on an isolated island, accessible only by boat or plane, the students at the
school participate in maintenance and restoration work as part of the regular
curriculum.

While each lighthouse is a unique case, with specific maintenance and renovation
requirements, some general characteristics are discernible. The main issue is to ensure
that the lessee is a responsible party who will uphold the terms of the lease. A sound
financial plan is necessary, as is a pre approved restoration plan. Regular visits to the
property are necessary to ensure that conditions are being met, and a concisely written
lease is necessary, which clearly defines the responsibilities and conditions that must be
met by the lessee. Commander Abbott of the Coast Guard sums up the requirements in
his paper, by stating:

By actively promoting a practical lighthouse leasing program, Lighthouse
Authorities can accomplish the dual goals or reducing maintenance and repair
costs to their agencies and preserving these historical monuments to our maritime
heritage for all of our citizens.

Section 4: The Preservation of the Point Betsie Lighthouse

This section is being written with the assumption that a government agency will
acquire the property of the Point Betsie Lighthouse, whether state, county or township.

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“Fairport Marine Museum.” (Fairport, Ohio: Fairport Habor Historical Society, n.d.)
14 Charlevoix Public Schools. Informational packet on lighthouse history and the alternative education
program. December 2, 1999
The leasing of the property to a not-for-profit organization is the most logical and effective use of the property. Currently, one local not-for-profit organization has expressed interest, and that is the Northwest Michigan Maritime Museum which is currently based out of Benzonia, Michigan (about 15 miles inland from Frankfort and the Point Betsie Lighthouse). By leasing the property to the Maritime Museum, the agency owning the property is guaranteed a management that has already proven itself to be stable and solvent. A second organization, the Great Lakes Lighthouse Keepers Association (GLLKA) has also expressed an interest. The difference is that GLLKA is not a local organization, and would not have as close a tie to the community as the Maritime Museum.

In the case that the Northwest Maritime Museum decides against a lease for the Point Betsie Lighthouse, a not-for-profit Friends of the Lighthouse organization should be established. There is a great deal of local interest in preserving the lighthouse, and there are enough individuals willing to pledge their time that this is a very plausible alternative. In the event of the Maritime Museum acquiring the property, a division of the Museum should be established solely for the preservation of Point Betsie.

The lease that is established for the Point Betsie lighthouse should be similar in character to those devised and used by the United States Coast Guard for the leasing of maritime properties. Upon receipt of a lease, a number of viable alternatives exist for the continued preservation and restoration of the Point Betsie Lighthouse. By forming cooperative agreements with various institution and not-for-profit organizations, the

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Lessee of the property will be able to maintain and restore the property to its historic character.

The following section will describe partnership options available for the restoration and maintenance of the Point Betsie Lighthouse. Included in these options are:

The National Park Service (including consideration for National Historic Landmark Status for the Property)
   1) The National Trust for Historic Preservation
   2) The National Endowment for the Humanities
   3) The Nature Conservancy
   4) The United States Lighthouse Society
   5) Great Lakes Lighthouse Keepers Association
   6) The Michigan Coastal Management Program
   7) The Clean Michigan Initiative Waterfront Redevelopment Grant
   8) Michigan Lighthouse Assistance Program
   9) Boy Scouts and Girl Scouts of the United States
  10) Area High Schools and vocational schools
  11) Local and State Colleges and Universities

A description of the possible involvement of each of the above agencies and organizations follows.

1) National Park Service

   Cooperative agreements with the National Park Service can result in grants, technical assistance and professional advice regarding the preservation of the Point Betsie Lighthouse. The application for National Historic Landmark status would identify Point Betsie as a key aspect of our nation’s history and would afford it a higher level of assistance and access to additional resources.

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16 Appendix E contains a sample lease for the Point Betsie Lighthouse, which is based on the United States coast Guard lease of the Cana Island Lighthouse to the Door County Maritime Museum.

17 Contact information on the following agencies and institutions is located in Appendix F.
Obtaining National Historic Landmark Status is a long and drawn out process, but end results are well worth the efforts involved. Point Betsie has long been a key point in the shipping and trade routes of the Great Lakes, which have affected the overall economy of the United States, as well as the development of the Midwestern region in relation to the rest of the country. Establishing Point Betsie as the landmark that it is, would aid not only in the recognition of Point Betsie, but also in the overall recognition of the importance the Great Lakes and the role the Great Lakes Lighthouses have played in the development of the country.

Within the National Historic Landmarks Initiative are a number of options for assistance, such as the Challenge-Cost-Share Programs awards grants from the federal government that must be met with in kind money from the not-for-profit organization. Other resources include professional staff assigned to assist landmarks, as well as the newly formed National Historic Landmarks Stewards Association, whose goal is to provide a network of owners and to act as a clearinghouse on information.

2) The National Trust for Historic Preservation

In 1998 the National Trust for Historic Preservation included Michigan’s lighthouses on their yearly list of America’s Eleven Most Endangered Historic Properties. Chartered by Congress in 1949, the National Trust is a not for profit organization that sponsors numerous programs to aid and assist historic structures across the nation, including grants and technical information.
3) The National Endowment for the Humanities

The National Endowment for the Humanities (NEH) sponsors a number of grant opportunities for organizations across the country. Three of their grant programs could provide money for research and programs that the Point Betsie lighthouse would benefit from.

The first is the Division of Public Programs, which sponsors grants for television and radio program, as well as for exhibits and the interpretation of historical sites. Point Betsie Lighthouse would be an ideal site for exhibits not only on the lighthouse itself, but also for trade and transportation on the Great Lakes, including shipping, shipwrecks, and the lumber and mining industries. All of these came into play at Point Betsie, and interpretive exhibits could be designed to highlight these historical trends. The Division of Public Programs has also funded things such as interactive CD-ROMs, which could provide an alternative outlet for information on lighthouses, their functions, and the life of the keepers.

The other aspect of the Public Programs grant that would be an avenue for exploration is educational videos on the history of the Great Lakes Lighthouses. Tied into this (to draw in more of the public) could be details on the cargoes of the various ships and the shipwrecks that often resulted. Underwater archaeology is an important topic in Great Lakes research, and information and footage from these explorations would make a powerful counterpoint to the importance and significance of lighthouses.

The second division of the NEH that could provide grants for the Point Betsie Lighthouse is the Division of Education. Again, the development of educational videos would come into play, but also the development of curriculum relating to the lighthouse.
The Great Lakes Lighthouse Keepers Association has produced a curricula guide emphasizing subjects such as math in conjunction with lighthouses (i.e. calculating the lights focal plain or the towers height in relation to the focal plane). Other such guides could be developed emphasizing history, geography, and economics.

The final division of the NEH that should be explored is in the Office of Challenge Grants. Grants are issued with the not-for-profit agency pledging to raise three or four dollars for every federal dollar granted the program. These challenge grants are similar to the Challenge-Cost-Share Program offered by the National Historic Landmarks Initiative.

4) The Nature Conservancy (in the event that the conservancy does not obtain ownership of the property)

The Nature Conservancy, who currently owns the land adjacent to Point Betsie, should be invited to participate in the management of the property in regards to the natural environment which surrounds the Point Betsie Lighthouse. By including the Nature Conservancy in the management of the property, the organization ensures that all conditions and considerations for the environment will be met with little or no cost to them.

The Nature Conservancy funds programs nationwide to aid in protecting our disappearing environment. The area surrounding Point Betsie could be developed into a nature preserve as an example of a coastal lake environment. Home to many endangered and threatened species, this should be an important aspect of any preservation management plan carried out at the lighthouse.
5) The United States Lighthouse Society

The United States Lighthouse Society is based out of San Francisco, California. Maintaining a database of over 1,000 books, 2,000 photos, 9,000 color transparencies, and over 150 microfilm rolls, the Lighthouse Society provides a valuable resource for the dissemination of information on lighthouses. Their publication, The Keepers Log, is a quarterly publication which focuses on lighthouses of the United States and issues facing them as well as histories of various lighthouses.

Working with the United States Lighthouse Society to disseminate information on the Point Betsie Lighthouse would be a profitable and mutually beneficial means of advertising. By publicizing Point Betsie and the restoration of it, a greater audience would be given a chance to both appreciate the lighthouse and to assist in various ways with its restoration.

6) Great Lakes Lighthouse Keepers Association

The Great Lakes Lighthouse Keepers Association (GLLKA) is a non-profit organization based out of Greenfield Village in Dearborn, Michigan. Acting as a clearinghouse of information, GLLKA works to publicize and preserve the lighthouses on the Great Lakes. While GLLKA does not offer any type of financial support, their member listing is large, and their newsletter informative. A very good way to reach lighthouse enthusiasts is to advertise in the newsletter.

GLLKA manages the St. Helena lighthouse at Mackinac Island, Michigan, and conducts regular tours of the site. They have also formed a productive and beneficial alliance with the Boy Scouts for the continued maintenance and preservation of the St.
Helena Lighthouse. They sponsor yearly conferences for the various Great Lakes, as well as assisting with general publicity for the Great Lakes Lighthouses.

7) Michigan Coast Management Program

Founded in 1978, the Coastal Management Program is part of the Department of Environmental Quality. The program assists local communities and organizations in their efforts, by funding projects that aim to protect and enhance coastal areas. Grants are limited to a maximum amount of $50,000.00 and grantees must match at least fifty percent of their total grant amount in either donations, cash, or in-kind services.

Eligible parties include state agencies, school districts, not for profit organizations and local governments. Funding is provided for a wide range of projects, including, but not limited to: Site design and planning for recreational waterfronts, feasibility studies, historic preservation and restoration work, and coastal educational materials. All projects must be open to the general public and must be located on either public land or on land that is secured through a long-term lease (minimum of twenty years).

8) The Clean Michigan Initiative Waterfront Redevelopment Grant

This grant from the State of Michigan is specifically geared to Michigan Lighthouses. In 1998, Michigan approved a $675 million Clean Michigan Initiative, which had been spearheaded by Governor John Engler. In September 1999, Governor Engler earmarked $3 million of this fund for the preservation of and restoration of Michigan Lighthouses. The grants are administered through the Department of
Environmental Quality (DEQ) and are granted in consultation with the Michigan Economic Development Corporation.

Eligible applicants for this grant include local governments, such as township, county, village, or city. The government agency may partner with a not for profit organization, such as a local historical society for help in administrating the grant. The grantee must match a minimum twenty-five percent of the project costs. Funding is granted for a wide range of projects, including, but not limited to, restoration and preservation of a lighthouse, acquisition of waterfront property and environmental response activities on lighthouse properties.

9) Michigan Lighthouse Assistance Program

In 1999, $100,000 was earmarked for grants to Michigan lighthouses in light of the United States Coast Guard’s recent decision to begin surplusing more of its lighthouse holdings. Grants will be given in a maximum amount of $20,000. It is hoped that this grant program will be continued in future years.

Administered through the Michigan State Historic Preservation Office, the Lighthouse Assistance Program uses a scoring method in determining eligibility. This scoring method includes criteria such as interior work, accessibility to the public, the degree of threat that exists for the lighthouse, and the degree of community involvement. The grant must constitute no more than fifty percent of the total anticipated cost of the project. The remaining money must be raised by the applicant.
10) Girl Scouts (and Boy Scouts) of the United States

Based on the success of the Great Lakes Lighthouse Keepers Associations alliance with the Boy Scouts, Point Betsie Lighthouse should investigate the positive sides of working with the Girl Scouts (to balance GLLKAs work with the Boy Scouts). Both organizations work closely with public organizations doing public service, and the restoration of the lighthouse would provide a wonderful hands-on historical experience for the children, while also providing much needed labor for the lighthouse restoration.

Both Boy Scouts and Girl Scouts work year round to earn various merit badges, which require specific activities and actions. By creating an experience that not only fulfills the scout badge requirements (specific to each age level) but which also exposes the scouts to a new experience, could help to bring Point Betsie national renown in the scouting communities. Trips and new experiences are both keys to the Scouting movement, and the chance to experience and see a historic lighthouse and to help save it would be a new and wonderful opportunity for many children and their leaders.

11) Area schools

Another important community outlet for the Point Betsie Lighthouse is the inclusion of various schools in their programming. As evidenced in the description of the Charlevoix Public School’s alternative education program, lighthouses can provide unique learning experiences for students. Local communities should be encouraged to take field trips to the lighthouse, and curriculum should be developed to assist teachers in using the lighthouse as an education tool.¹⁸

¹⁸ See section of the National Endowment for the Humanities and their Division of Education Grants
Other lighthouses have used local schools for specific projects. Vocational schools have rebuilt lanterns for lighthouses.\textsuperscript{19} By using resources in the community, the lighthouse serves as a community monument and a source of pride. Students who have worked to save and restore a lighthouse are more likely to understand its significance, and are less likely to cause problems on the property such as vandalism and trespassing.

12) Local and State Colleges and Universities

College and university students provide an outlet of energy, enthusiasm and skill that is often overlooked when planning and coordinating projects such as the restoration of the Point Betsie Lighthouse. Located within driving distance of a number of higher educational institutions, Point Betsie could easily benefit from various classes and student run organizations.

One college organization that should be contacted is the National Service Fraternity, Alpha Phi Omega. The major goal of this coed fraternity is to provide community service to both their college and to their country. Chapters of this fraternity are found all over Michigan and would welcome the chance to provide labor for a lighthouse project. Point Betsie could organize a weekend event for the members of the fraternity, and in exchange for a day of work, could provide the students with free lodging somewhere in the area (perhaps a local hotel would donate or discount the rooms for a weekend). Other college organizations would most likely be willing to organize a similar arrangement. This would provide the work force (similar to working with the

\textsuperscript{19} Charlotte-Genesee Lighthouse
Girl Scouts) and the Point Betsie not-for-profit organization would provide the leadership and guidance for the project.

Summary:

There are many options available for the Point Betsie lighthouse in terms of partnerships and grant sources. The most important aspect, and the key to the entire process, is for a not-for-profit organization to obtain the lease to the property. After that occurs, community involvement and commitment will be the keys to the successful restoration and maintenance of the Lighthouse.

Section 5: Reuse of the Point Betsie Lighthouse

The goal of this final section is to provide alternatives that both protect the lighthouse and that allow for public education and involvement in the saving and restoration of the property. Various methods of preservation have been attempted at other lighthouses, with various degrees of success, and the following will merely outline some of the options available for use at Point Betsie.

Community involvement:

The most important factor to recall is that the involvement of the community is essential. Point Betsie is highly regarded as a local monument, especially in the town of Frankfort. Merchants sell a wide variety of products featuring the lighthouse, and the lighthouse is one of the main reasons that many people journey to the area (it is the most photographed lighthouse on the Great Lakes). By continuing to include the community in any plans made for the lighthouse, the entire undertaking will be done with the full
backing of the people. It also helps to preserve the community heritage and legacy, which was brought about in part by the construction of the lighthouse.

In order to produce this continued community involvement, regular public meetings need to be conducted. This will allow for the community to be updated on what is being planned for the lighthouse, as well as giving the planner an opportunity to talk to community members about their expectations of the restoration. This will also be an ideal time to recruit volunteers for work on the lighthouse. The formation of a “Friends of Point Betsie” organization would further include the community as well as lighthouse enthusiasts from all over the area.

While working with the community a number of fund-raisers also present themselves. Local businesses that sell Point Betsie merchandise may be convinced to donate a small percentage of their profits from these items to the not-for-profit that will restore the lighthouse. Others may be willing to design Point Betsie merchandise to sell where all the profits will benefit the lighthouse.

Other ways to involve the community are through cooperative programs with local schools and organizations (such as the Boy Scouts or college organizations). This promotes public involvement while providing a readily accessible work force.

**Physical conditions of the lighthouse:**

The lighthouse itself is in relatively stable condition. The tower and dwelling rest on a secure foundation, and they are both in good condition. The tower is in need of a new coat of paint on the interior, and the stairway up to the lantern needs reinforcing. The floor in the tower also needs a new coat of paint. The lantern itself appears to be in
good condition. The original fourth order Fresnel lens was removed by the Coast Guard after the light was automated, but it is in storage at Sleeping Bear Dunes National Park, ready to be returned to Point Betsie when ownership of the property is established.

The dwelling itself is in excellent condition on both the exterior and the interior. One or two windows have been broken and will need to be replaced, and the exterior would benefit from a new coat of paint, but overall it is in good shape. The interior is divided into three apartments, all of which contain modern amenities (refrigerator, stove, etc.). Assuming that the Coast Guard removes the remaining furnishings, the walls could easily be repainted and the carpets cleaned. The basement wasn’t examined, due to a family of badgers that has taken up residence there, necessitating animal control. It would also be advisable to fumigate the building for bugs and mice. The dwelling will be re-roofed in the summer of 2000.\(^{20}\)

Other buildings on the property are in relatively stable condition. The fog signal building is most in need of work. The foundation may have to be shored up, and the structure needs a new coat of paint on the interior and exterior.\(^{21}\) Establishing the correct historic colors of the fog signal building (and the lighthouse where necessary) could be conducted in conjunction with a Historic Preservation program.

\(^{20}\) The installation of the new roof was recently reviewed and approved by the Michigan State Historic Preservation Office.

\(^{21}\) Establishing the correct historic colors of the fog signal building (and the lighthouse where necessary) could be conducted in conjunction with a Historic Preservation program, such as the one at the University of Pennsylvania, perhaps as a class exercise for a conservation course.
Marked grave, located on the property of the Point Betsie Lighthouse. The name of the person buried here is unknown. The stone reads “Mother; 1857-1942.”

The four-stall garage (former boathouse) is in excellent condition, as is the storage shed. The remains of the old barn and privies should exist somewhere on the property, which may open the opportunity to work with archaeology programs at a local college or university. There is also one marked grave on the property, and at least sixteen unmarked graves, which also leaves open the possibility of archaeological research. However, it is important to bear in mind the strict regulations and laws regarding grave site archaeology and to consult with professionals in the field before pursuing this line of research.

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22 Archaeological digs are often summer activities which students are required to participate in. With the unmarked graves, the remains of the outbuildings, and the high concentration of Native American cultures, who used to live in the area, the Property of Point Betsie and the surrounding areas, may prove to be conducive to some type of archaeological dig.
The grounds are in reasonable conditions, although the weeds have taken over most of the yard and the paths. A general cleanup is necessary, as is a plan to replant the property with appropriate vegetation.

How to reuse the lighthouse:

Once the exteriors and interiors of the buildings have been cleaned up, a number of alternatives exist for their continued use. The ideal situation would be to turn two of the three apartments located in the dwelling into a museum. Restoring the interiors to the conditions that the early keepers would have experienced is impractical, and would detract from a comprehensive history of the lighthouse. However, numerous visual and interactive displays would allow the visitor to gain a feel for the life of a lighthouse keeper and his family.\(^{23}\)

The first floor of the entire dwelling would make an ideal museum. By keeping it all on the first floor, compliance with ADA requirements would be simpler to carry out. The second floor of the two-story apartment would be ideal for office space for the museum and associated Friends organization. The second story apartment on the other half of the dwelling could be rented out to a groundskeeper on a regular basis, or it could be rented on a weekly basis by members of the Friends organization, who would in turn provide general maintenance for the property. (Careful screening of any tenant would be required.) This would also act as an incentive to interested lighthouse enthusiasts who didn’t live in the area – they would be able to spend time at the lighthouse, for a very limited fee.
Examples of current Point Betsie merchandise available in area stores. The same examples are seen repeatedly throughout the area.

Figure 6.3

Examples of current Point Betsie merchandise available in area stores. The same examples are seen repeatedly throughout the area.

Figure 6.4

Many relatives of keepers from Point Betsie are still alive, some of whom lived in the lighthouse. Interviews with them would provide a great deal of context for the museum.
The general setting of the lighthouse is very conducive to multiple displays on both the Point Betsie lighthouse and on its importance in the overall history of the Great Lakes. The fog signal building, upon restoration, would convey another significant aspect of the life of the lighthouse keepers. Its generally intact condition lends itself to being a vital part of the overall museum as an additional display. The four-stall garage and the storage shed could also serve a number of purposes. One could be converted into a museum gift shop, which would allow more space in the dwelling for the actual museum, while the other could be used as general storage or for another museum, or for a meeting room.

Outside displays could also be instituted. Well thought out signage describing life at the lighthouse would be effective, as would sign boards describing the significance of Point Betsie to the shipping industry and overall development of the region. During summer months craftsmen of various types could set up displays and small outdoor booths for tourists to browse. Fees could be charged to display crafts at the lighthouse, or a commission could be charged on all sales. This would help to draw in more commercial business as well as providing additional funds for the maintenance of the Property.

A key factor in marketing Point Betsie would be a display on the evolution of lighthouses on the Great Lakes in general. Brochures from other maritime museums and lighthouses would help to build a network of sites. This would be mutually beneficial if the other sites could be persuaded to advertise for Point Betsie (and each other). A driving tour of the lighthouses could be established, with suggested routes, and favorite restaurants and shops contributing to the overall plan. While many smaller lighthouses
and museums struggle to publicize their existence, a cooperative agreement would reduce costs for everyone, while giving all the contributors a wider audience. One of the outbuildings could be devoted to this use.

The local visitors bureau would be another resource to coordinate and partner with in regards to publicity. Advertising other local historic sites and attractions would be an additional connection with the local community. This partnership would allow for the community to advertise itself as a whole, as well as allowing the Point Betsie Lighthouse to serve as a community icon.

The beachfront also offers a key incentive. While not set up as a swimming beach, the area is ideal for family picnics and walking on the beach. Provided that safety measures could be instituted in regards to the lake (and people trying to swim) this could be another good marketing plan. Careful monitoring of the beach conditions and erosion issues would have to be instituted. An environmental study is necessary before this option could be explored more fully, so that impacts on the wildlife could be studied beforehand.

**Summary:**

Overall, Point Betsie has a great deal to offer in terms of a maritime and lighthouse museum. The involvement of the community, in addition to the institutions discussed earlier, is a key to the success of the lighthouse. A governing not-for-profit organization, with the overall goal of restoration and maintenance, is also necessary, whether it is the Northwest Michigan Maritime Museum or a Friends of Point Betsie Lighthouse Association. It is hoped that the preceding study will aid in this goal.
The Point Betsie Lighthouse has reached a critical point in its existence. No longer necessary as an aid to navigation, the Coast Guard has relinquished its ownership, and the lighthouse hangs in limbo. No one is currently tenanting the property, which means that no one is providing the necessary maintenance and security. The lighthouse sits vacant while options are discussed and various plans explored. The bottom line remains the same, no matter what plan is being evaluated – it is absolutely necessary that a tenant be found for the Point Betsie lighthouse. Immediate restoration and continuous maintenance and preservation are necessary in order to ensure the continuation of the Point Betsie lighthouse.

The property is currently held by the Bureau of Land Management, who plans to turn the lighthouse over to a local government agency. At that point, it will be necessary for a private, not for profit organization to obtain a long term lease of the property from the local government. There are currently two organizations who are interested in Point Betsie: The Northwest Maritime Museum and the Great Lakes Lighthouse Keepers Association (GLLKA). A third option would be the creation of a separate not for profit Friends of Point Betsie organization dedicated to the preservation of the lighthouse.

Each of these three options has both positive and negative aspects. The Northwest Maritime Museum is a local organization with a substantial stake in the community. They are well established in the county and have contacts and connections throughout the area. However, they have existing facilities and would have to re-evaluate expansion plans and priorities. GLLKA is dedicated to the preservation of all Great Lakes lighthouses and would not be focused solely on Point Betsie. They also have fewer ties to the local community and would be less likely to draw on local public involvement and
interest. However, they have access to more facilities and resources, and they have a positive track record in lighthouse maintenance, as seen in their highly successful program at the St. Helena Lighthouse. Finally, the creation of a separate not for profit Friends of the Lighthouse organization would give Point Betsie the specialized attention that it needs and deserves. An organization dedicated only to the lighthouse would focus more on Point Betsie and less on other aspects of the organization. However, it would require the creation of a completely new organization, which would take time, money, and a dedicated group of volunteers.

This study has provided an analysis of these three options, as well as providing detailed historical information on Point Betsie, the local community, and the evolution of lighthouses on the Great Lakes. Based on this information, the acquisition of Point Betsie by the Northwest Maritime Museum is favored as the preferred solution for the disposal of the property. Already in place as a local organization, the museum has successfully operated in the community, attracting both local residents and numerous tourists to the area. By working in conjunction with other local, state, and federal organizations (as detailed in Chapter 6) the Northwest Maritime Museum is the most qualified to successfully restore and maintain the Point Betsie Lighthouse.

The local community is very interested in the preservation of the lighthouse, and many local residents (and tourists) would be willing to volunteer to help restore the lighthouse. The museum would be wise to organize a Friend of Lighthouse volunteer organization to be run through the museum in conjunction with their maintenance and restoration plans for Point Betsie. By incorporating such a group into their overall plan, the museum would ensure local support of the project.
The museum should also apply for many of the numerous grants listed in Chapter 6, including both state and federal programs. Also essential to successfully preserving Point Betsie is the involvement of local schools, colleges, and volunteer organizations such as the Girl Scouts. Many of these institutions will aid in fund raising, and will provide labor at little or no cost. Educational programs established through local schools and colleges can include those that will benefit the ongoing maintenance and education programs at the lighthouse.

The most obvious task for the new lessee of Point Betsie is the education of the public as to this history of Point Betsie. The men and women who worked and lived at the lighthouse over the years tell a story of the changing culture of the Great Lakes region which needs to be more fully explored. Point Betsie provides the ideal location for this type of educational and interpretive program. Other aspects which should be incorporated into exhibits and educational programs are the history of the Great Lakes as a key region in our country’s development, and an analysis of lighthouses on the Great Lakes as they contributed to the areas development.

Point Betsie provides the unique opportunity to create a setting for educational and recreational purposes that would serve both the local community and the numerous tourists who visit the region annually. Its preservation and maintenance are important issues which need to be resolved by all involved in a timely and efficient manner.

Lighthouses have served as aids to navigators on the Great Lakes for over two hundred years, but only recently have they been acknowledged for their contributions to history and society. Their continued preservation is essential in order for us to be able to more fully explore the impact they had on society and on the settlement of both the Great
Lakes region and our country in general. The preservation of the Point Betsie lighthouse provides the opportunity to explore these issues fully, and every opportunity should be made to allow for this to happen.
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Appendix A:

Lighthouses of the Great Lakes
Appendix A:

Lighthouse of the Great Lakes
## Lake Erie Lighthouses

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## Lake Huron Lighthouses

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# Lake Michigan Lighthouses

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<td>Marquette Harbor Light</td>
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<td>1961</td>
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<tr>
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<td>Point Iriquois</td>
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<td>1971</td>
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<td>1879</td>
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<td>1858</td>
<td>La Pointe</td>
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<td>type</td>
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<td>wood</td>
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<td>Two Harbors</td>
<td>square</td>
<td>brick</td>
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<td>1894</td>
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<td>brick</td>
<td>4th order</td>
<td>inactive (ruin)</td>
<td>1934</td>
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<td>Two Harbors East Breakwater</td>
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<td>1947</td>
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<td>Munising Range Front</td>
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<td>east iron</td>
<td>Adam &amp; Westlake</td>
<td>active</td>
<td></td>
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<td>Adam &amp; Westlake</td>
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<td>Rock of Ages</td>
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<td>n/a</td>
<td>Isle Royale National Park (?)</td>
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<td>east iron</td>
<td>5th order</td>
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<td>octagonal</td>
<td>brick</td>
<td>3rd order</td>
<td>inactive</td>
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<td>Minnesota Historical Society</td>
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<tr>
<td>1913</td>
<td>Wisconsin Point</td>
<td>round/integral</td>
<td>reinforced concrete</td>
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<td>active</td>
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<td>1915</td>
<td>Ashland Breakwater</td>
<td>hexagonal/pyramidal</td>
<td>reinforced concrete</td>
<td>4th order</td>
<td>active</td>
<td></td>
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<td>1919</td>
<td>Sand Hills</td>
<td>square</td>
<td></td>
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<td>inactive</td>
<td>1939</td>
<td>1954</td>
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<td>Bed &amp; Breakfast Inn</td>
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<td>status</td>
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<td>deactivate</td>
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<td>owner</td>
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<td>1929</td>
<td>Michigan Island</td>
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<td>1941</td>
<td>Presque Isle Harbor Breakwte</td>
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<td>steel and concrete</td>
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Appendix B:

Shipwrecks Off the Point Betsie
Appianus:

Shipwrecks Off the Point Besie
Shipwrecks Off the Point Betsie

<table>
<thead>
<tr>
<th>Name</th>
<th>type</th>
<th>built</th>
<th>date of loss</th>
<th>type of loss</th>
<th>loss of life</th>
<th>carrying</th>
<th>details</th>
</tr>
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<tbody>
<tr>
<td>Addie</td>
<td>wood schooner</td>
<td>1872</td>
<td>1897, Oct. 5</td>
<td>storm</td>
<td>?</td>
<td>household goods</td>
<td>no details</td>
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<tr>
<td>Aetna</td>
<td>wood schooner</td>
<td>1865</td>
<td>1890</td>
<td>founded</td>
<td>?</td>
<td>coal</td>
<td>no details</td>
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<tr>
<td>Arab</td>
<td>wood schooner</td>
<td>1854</td>
<td>1883, Nov. 11</td>
<td>storm</td>
<td>1</td>
<td>none</td>
<td>capsized</td>
</tr>
<tr>
<td>Arabian</td>
<td>wood bark 3-mast</td>
<td>1853</td>
<td>1856, Nov. 29</td>
<td>founded</td>
<td>0</td>
<td>empty</td>
<td>no details</td>
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<tr>
<td>B.A. Stannard</td>
<td>wood 3-mast</td>
<td>1856</td>
<td>1864</td>
<td>collision</td>
<td>?</td>
<td>?</td>
<td>collided and sank</td>
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<td>Black Hawk</td>
<td>wood brig</td>
<td>1854</td>
<td>1862, Nov. 1</td>
<td>storm</td>
<td>all</td>
<td>corn/stained glass</td>
<td>driven ashore/wrecked</td>
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<tr>
<td>Brenton</td>
<td>oil screw</td>
<td>n.d.</td>
<td>1937 Sept. 19</td>
<td>sink</td>
<td>?</td>
<td>?</td>
<td>no details</td>
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<tr>
<td>C.E. Redfern</td>
<td>propeller</td>
<td>1890</td>
<td>1937, Sept. 19</td>
<td>storm</td>
<td>0</td>
<td>pulpwood</td>
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<tr>
<td>City of Boston</td>
<td>propeller</td>
<td>1863</td>
<td>1873, Nov. 20</td>
<td>storm</td>
<td>?</td>
<td>?</td>
<td>no details</td>
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<tr>
<td>Columbia</td>
<td>steamer</td>
<td>1873</td>
<td>1881, Sept 17</td>
<td>storm</td>
<td>16</td>
<td>corn</td>
<td>founded</td>
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<tr>
<td>Comet</td>
<td>wood schooner</td>
<td>1857</td>
<td>1870, Nov.</td>
<td>storm</td>
<td>?</td>
<td>?</td>
<td>driven ashore/wrecked</td>
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<tr>
<td>Driver</td>
<td>wood schooner</td>
<td>1856</td>
<td>1908, Aug. 30</td>
<td>storm</td>
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<td>hardwood</td>
<td>capsized</td>
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<td>F. Fitch</td>
<td>wood schooner</td>
<td>1891</td>
<td>1898, Aug. 18</td>
<td>storm/collision</td>
<td>0</td>
<td>peaches</td>
<td>collided and driven as</td>
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<td>Flying mist</td>
<td>wood schooner</td>
<td>1861</td>
<td>1883, Nov. 15</td>
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<td>0</td>
<td>iron ore</td>
<td>dismasted in storm</td>
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<td>Gertrude</td>
<td>wood schooner</td>
<td>?</td>
<td>1880, Sept 26</td>
<td>storm</td>
<td>1</td>
<td>firewood</td>
<td>?</td>
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<tr>
<td>H.B. Steele</td>
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<td>1870, Nov.</td>
<td>storm</td>
<td>?</td>
<td>?</td>
<td>driven ashore</td>
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<td>Hope</td>
<td>wood schooner</td>
<td>1861</td>
<td>1861, Oct. 19</td>
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<td>provisions</td>
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<tr>
<td>Name</td>
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<td>type of loss</td>
<td>loss of life</td>
<td>carrying</td>
<td>details</td>
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<td>Ida</td>
<td>wood schooner</td>
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<td>1908, Sept 29</td>
<td>storm</td>
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<td>potatoes</td>
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<td>J. Hazard Hartzell</td>
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<td>1863</td>
<td>1880, Oct 16</td>
<td>storm</td>
<td>1 (of 8)</td>
<td>iron ore</td>
<td>driven ashore</td>
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<td>Java</td>
<td>propeller</td>
<td>1873</td>
<td>1878, Aug 18</td>
<td>mechanical failure</td>
<td>0</td>
<td>household goods</td>
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<td>L.M. Hubby</td>
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<td>1855</td>
<td>1855, Aug 8</td>
<td>storm</td>
<td>10 (of 11)</td>
<td>sand (ballast)</td>
<td>capsized</td>
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<td>Lady of the Lake</td>
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<td>1862, Oct 4</td>
<td>storm</td>
<td>0</td>
<td>grain</td>
<td>drove ashore</td>
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<tr>
<td>Lawrence</td>
<td>steamer</td>
<td>?</td>
<td>1898, Nov 4</td>
<td>storm</td>
<td>1</td>
<td>?</td>
<td>drove ashore</td>
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<tr>
<td>Len Highy</td>
<td>wood schooner</td>
<td>1865</td>
<td>1898, Oct</td>
<td>storm</td>
<td>0</td>
<td>?</td>
<td>founded</td>
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<tr>
<td>Marinette</td>
<td>wood schooner</td>
<td>1873</td>
<td>1886, Nov 19</td>
<td>storm</td>
<td>6 (of 7)</td>
<td>lumber</td>
<td>drove ashore</td>
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<tr>
<td>Menekaunee</td>
<td>wood schooner</td>
<td>1873</td>
<td>1886, Nov 19</td>
<td>storm</td>
<td>7 (all)</td>
<td>lumber</td>
<td>drove ashore</td>
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<td>storm</td>
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<td>?</td>
<td>?</td>
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<td>wood schooner</td>
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<td>1883, Nov 10</td>
<td>storm</td>
<td>0</td>
<td>lumber</td>
<td>grounded and wrecked</td>
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<td>Rhine</td>
<td>gas screw</td>
<td>1904</td>
<td>1908, Dec 26</td>
<td>storm</td>
<td>4</td>
<td>?</td>
<td>founded</td>
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<td>St Lawrence</td>
<td>propeller</td>
<td>1890</td>
<td>1898, Nov 25</td>
<td>storm</td>
<td>1</td>
<td>corn</td>
<td>driven ashore/wrecked</td>
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<td>Trinidad</td>
<td>wood schooner</td>
<td>1867</td>
<td>1881, May 11</td>
<td>storm</td>
<td>?</td>
<td>coal</td>
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<td>W.C. Kimball</td>
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<td>1888</td>
<td>1891, May 8</td>
<td>founded</td>
<td>4 (all)</td>
<td>shingles, salt</td>
<td>founded</td>
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<tr>
<td>Westmoreland</td>
<td>freight steamer</td>
<td>?</td>
<td>1854, Dec 7</td>
<td>storm</td>
<td>17</td>
<td>gold, liquor, supplies</td>
<td>?</td>
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<td>Zenobia</td>
<td>wood schooner</td>
<td>1857</td>
<td>1858, Oct 6</td>
<td>storm</td>
<td>0</td>
<td>corn</td>
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Appendix C:

Current Divisions of the United States Coast Guard
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<th>DISTRICT</th>
<th>HEADQUARTERS</th>
<th>STATES INCLUDED</th>
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<tbody>
<tr>
<td>First</td>
<td>Portland, ME</td>
<td>Maine, New Hampshire, Rhode Island</td>
</tr>
<tr>
<td>Second</td>
<td>Boston, MA</td>
<td>Massachusetts, Connecticut, New York, New Jersey</td>
</tr>
<tr>
<td>Third</td>
<td>Staten Island, NY</td>
<td>Delaware, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina</td>
</tr>
<tr>
<td>Fourth</td>
<td>Philadelphia, PA</td>
<td>New Jersey, Delaware</td>
</tr>
<tr>
<td>Fifth</td>
<td>Baltimore, MD</td>
<td>Delaware, Maryland, Virginia, North Carolina, South Carolina</td>
</tr>
<tr>
<td>Sixth</td>
<td>Charleston, SC</td>
<td>Georgia, Florida</td>
</tr>
<tr>
<td>Seventh</td>
<td>Key West, FL</td>
<td>Florida, Texas, Louisiana</td>
</tr>
<tr>
<td>Eighth</td>
<td>New Orleans, LA</td>
<td>Florida, Texas, Louisiana</td>
</tr>
<tr>
<td>Ninth</td>
<td>San Juan, Puerto Rico</td>
<td>Puerto Rico, Virgin Islands, West Indies, Other area islands</td>
</tr>
</tbody>
</table>

Includes:

- St. Croix River, ME to Hampton Harbor, NJ to Elisha Ledge, RI to Cape May, NJ to Fenwick Island, DE to New River Inlet, NC to Hillsboro Inlet, FL to Suwanee River, FL to southern boundary of Texas.
<table>
<thead>
<tr>
<th>Tenth</th>
<th>St. Regis River to mouth of Detroit River</th>
<th>Pennsylvania New York Ohio Michigan</th>
<th>Buffalo, NY</th>
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<tbody>
<tr>
<td>Eleventh</td>
<td>Detroit River to western end of Lake Superior (including all of Lake Huron and Lake Superior)</td>
<td>Michigan Minnesota</td>
<td>Detroit, MI</td>
</tr>
<tr>
<td>Twelfth</td>
<td>Lake Michigan, Green Bay and all tributaries</td>
<td>Michigan, Wisconsin</td>
<td>Milwaukee, WI</td>
</tr>
<tr>
<td>Thirteenth</td>
<td>Mississippi River from head of navigation to the mouth of the Missouri River</td>
<td></td>
<td>Rock Island, IL</td>
</tr>
<tr>
<td>Fourteenth</td>
<td>Ohio River from Pittsburgh to Cario, IL</td>
<td></td>
<td>Cincinnati, OH</td>
</tr>
<tr>
<td>Fifteenth</td>
<td>Mississippi River from mouth of the Missouri River to New Orleans, LA</td>
<td></td>
<td>St. Louis, MO</td>
</tr>
<tr>
<td>Sixteenth</td>
<td>Alaska</td>
<td></td>
<td>Alaska</td>
</tr>
<tr>
<td>Seventeenth</td>
<td>California/Oregon border to the U.S./Canada border</td>
<td>California Oregon Washington</td>
<td>Portland, OR</td>
</tr>
<tr>
<td>Eighteenth</td>
<td>California</td>
<td></td>
<td>California</td>
</tr>
<tr>
<td>Nineteenth</td>
<td>Hawaii, Guam, American Samoa</td>
<td>Hawaii Guam American Samoa</td>
<td>Honolulu, HI</td>
</tr>
</tbody>
</table>

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Appendix D:

Michigan Lighthouse Project Partners
Appendix D:

Microwave Imaging House Project Partners
(Michigan Lighthouse Project
c/o Michigan Historic Preservation Network
PO Box 720
Clarkston, Michigan, 48347-0720)

Congressman Bart Stupak
1120 E. Front Street, Suite D
Traverse City, MI 49686

Congressman Dale Kildee
432 N. Saginaw St., Suite 410
Flint, MI 48502

Great Lakes Lighthouse Keepers Association
C/o Henry Ford Foundation
4901 Evergreen Road
Dearborn, MI 48128-1491

Michigan Department of Environmental Quality, Land and Water Management Division
PO Box 30473
Lansing, MI 48909-7973

Michigan Department of Management and Budget
320 S. Walnut
Lansing, MI 48933

Michigan Department of Natural Resources
Box 30028
Lansing, MI 48909

Michigan Historic Preservation Network
P.O. Box 720
Clarkston, MI 48347-0398

Michigan Jobs Commission, Travel Michigan
201 N. Washing Square
Victor Office Center
1st Floor
Lansing, MI 48913

Michigan State Senator John Schwarz
PO Box 30036
Lansing, MI 48907-7536
National Trust for Historic Preservation  
1785 Massachusetts Avenue  
Washington, DC 20036

Nature Conservancy  
4245 North Fairfax Drive  
Suite 100  
Arlington, VA 22203-1606

State Historic Preservation Office  
Michigan Historical Center  
717 West Allegan  
Lansing, MI 48918-1800

United States Coast Guard  
9th Division  
1240 E. 9th Street  
Cleveland, OH 44199

United States Bureau of Land Management  
Office of Public Affairs  
1849 C Street Room 406-LS  
Washington, DC 20246

United States Department of the Interior  
National Park Service  
Historic Surplus Property Program  
Midwest Support Office  
1709 Jackson Street  
Omaha, NE 68102-2571

United States General Services Administration (GSA)  
Property Disposal Division, 1 PRM-5  
230 South Dearborn Street, Room 3756  
Mail Stop 37-13  
Chicago, IL 6060

United States Senator Carl Levin  
1810 Michigan National Tower  
124 W. Allegan  
Lansing, MI 48933
Appendix E:

Historic Property Lease
Appendix F

Historic Property Lease
HISTORIC PROPERTY LEASE (FIVE YEARS)

POINT BETSIE LIGHTHOUSE, MICHIGAN

This lease is between ______________________ and ______________________.

1. Leased Property.

   a. Under the terms and conditions of this lease, [the owner] leases to the Lessee the property described below, which is shown on Attachment (1), including all improvements and appurtenances that exist on the facility. The Leased Property consists of: Point Betsie Lighthouse, fog signal building, oil house, four stall garage, and storage shed and land located on the east side, northerly portion of Lake Michigan, described as follows: Township 28N, range 16W, Benzie County, State of Michigan, containing approximately 9.52 acres. Latitude: 44 degrees 41 feet 29 inches north; Longitude: 86 degrees 15 feet nine inches west.

   b. The phrase “Leased Property” also includes the following items of personal property. NONE

   c. This lease also provides the necessary rights of ingress and egress along the route(s) shown on the attached map [Attachment (1)].

2. Term.

This lease shall be for five years. The term of this lease shall begin on _______ and end on _______, unless terminated sooner under paragraph 33 or paragraph 34 of this lease. This lease may be renewed for additional five year periods by the mutual written consent of both parties (Note: the total term of this lease, and any renewal periods may not exceed 30 years.)

3. Authorized uses of the Leased Property.

   a. The Lessee may use the Leased Property for the following purposed:

   The buildings will be restored and maintained in compliance with the Advisory Council and the Local State Historical Preservation Office. The buildings will be used in conjunction with the surrounding area in a historical setting.

   b. The Lessee shall obtain written consent from the Local Government Representative before using the Leased Property for any other purposed.

4. No rent charged for not-for-profit use of the Leased Property

Since the Lessee is a not-for-profit organization, exempt from taxation by Section 501 of...
the Internal Revenue Code (26 U.S.C. 501) and because the Lessee will not use the Leased Property in an attempt to generate any profits, this lease is being provided without rent. However, if the Lessee desires or attempts to use the Leased Property for a for profit enterprise, then the Lessee rental rate will be the fair market rental for similar property, as determined by the Government. All rents must be paid in advance. Money generated from the Leased Property that is used exclusively to maintain the Leased Property is not considered profits for purposes of this lease.

5. Interest

a. Notwithstanding any other provisions of this lease, all amounts that become payable to the Lessee to the Government under this lease (net of any applicable tax credit under the Internal Revenue Code) shall bear interest from the date due until paid. Interest shall be subject to adjustments as provided by Park 32.614 of the Federal Acquisition Regulations (FAR), Interest (48 CFR Part 32.614), unless the money due is paid within 30 days.

b. The interest rate per annum shall be the interest rate established by the Secretary of the Treasury under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611), known as the “Renegotiation Board Interest Rate”, in effect on the date the amount becomes due in this lease.

c. Amounts shall be due upon the earliest of:

1. The date fixed pursuant to this lease.
2. The date of the first written demand for payment, consistent with this lease, including any demand resulting from a default termination.
3. The date of transmittal to the Lessee of a proposed supplemental agreement to confirm completed negotiations fixing the amount.
4. If this lease provides for revision of prices, the date of the written notice to the Lessee stating the amount of refund payable in connection with a pricing proposal or in connection with a negotiated pricing agreement not confirmed by lease agreement.

6. Admission fees

The Lessee may charge a fee to others in connection with the Lessee’s use of the Leased Property.

a. If the Lessee does so, the Lessee shall submit to [the property owner] a certified statement itemizing its operating expenses and the revenues derived from the use of the Leased Property. Money raised in excess of the operating costs of the Leased Property shall be placed in an Endowment Fund to further fund restoration and educational programs at the Leased Property. Upon termination of the Lease, excess funds in the Endowment shall revert to the owner of the property to aid in
maintaining the Property until a new Lessee is obtained.

b. If the Lessee charges an admission fee to the Leased Property, or any part of it, no person otherwise entitled to enter up on the Leased Property shall be required to pay such an admission fee.

7. Condition report

a. Attachment (2) is a report on the condition of the Leased Property, including improvements, appurtenances, and personal property located on the Leased Property, that was determined by a joint inspection of the Leased Property.

b. The Lessee acknowledges that the Lessee has examined, knows, and accepts the condition and state of repair of the Leased Property. The Lessee acknowledges that the [Owner] has made no other representations concerning the Leased Property’s condition and state of repair.

c. The Lessee also acknowledges that no agreements nor promised to alter, improve, adapt, repair or keep in repair the Leased Property, or any improvement appurtenance, or item of personal property on the Leased Property have been made and entered into between the [owner] and the Lessee, other than those included in the terms of this lease.

8. Notice of Potential Hazards

a. There are no known hazards associated with the use of the Leased Property.

9. Utilities and services.

a. Utilities or serves are provided by a supplier other than the [owner]. The Lessee shall pay such charges and the method of payment as determined by the appropriate supplier of the service, under applicable laws and regulations.

b. The Lessee is responsible for, and shall bear the costs of, the installation of adequate connecting and metering equipment.

c. It is expressly agreed and understood that the [owner] in no way warrants the continued maintenance or adequacy of any utilities or services furnished to the Lessee.

10. Potable water.

Lessee is aware of the fact that the Leased Property is leased without a potable water supply, and that it is the Lessee’s responsibility to ensure that any existing or installed water supply and treatment facility meets current health standards, including and applicable Federal, state, or local permitting requirements.
11. Historic Property Restrictions

a. Lessee shall ensure that all of its activities involving the Leased Property are in compliance with the National Historic Preservation Act (including but not limited to Section 106 of that act) and with the requirements of Part 800 of Title 36 of the Code of Federal Regulations.

b. Lessee agrees to restore, rehabilitate, maintain, and preserve, at its own expense, and to the stands of the recommended treatments of "The Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (revised 1990) and the Department of the Interiors Historic Preservation Briefs for structures considered historically significant those features identified as the Lessee’s responsibility. This property is known as the Point Betsie Lighthouse (including all extant outbuildings)

c. The Lessee agrees that no work of any nature will be done on any part of the Leased Property if it affects the identified historical aspects of the Leased Property, unless the Lessee has that written approval of the [owner] and the Michigan State Historic Preservation Officer (SHPO).

d. Once the Leased Property has been restored, the [owner] and the Michigan SHPO will conduct an inspection to verify that any rehabilitation work completed was done as agreed upon. The SHPO may arrange additional compliance inspections with the Lessee.

12. Environmental Protection

a. The Lessee shall ensure that all of its activities involving the Leased Property are in compliance with all existing, and any future, applicable environmental, historical, and cultural protection statues and regulations, including, but not limited to:
   (2) The Safe Drinking Water Act, 42 U.S.C. 300f et est.
   (3) The Clean Air Act, 42 W.S.C. 7401 et seq
   (6) The Coastal Zone Management Act, 16 U.S.C. 1451 et seq.
   (10) As well as any applicable State of local laws or regulations.

b. The Lessee is solely responsible for obtaining any state of local permits or licenses necessary for its proposed use of the Leased Property.
c. The Lessee may not unlawfully pollute the air, ground, or water, nor create a public nuisance. The Lessee shall, at no cost to the [owner], promptly comply with all applicable Federal, state, or local laws, regulations, or directives regulating the quality of the environment. This does not affect the Lessee’s right to contest the validity of such laws, regulations, or directives, or to try to enjoin their applicability.

d. The Lessee shall use all required means to protect the environment and natural resources from any damage arising from the Lessee’s use of the Leased Property and activities incident to its use. If any damage results to the environment or natural resources, the Lessee shall be solely responsible for all environmental clean up costs and any claims for damage done to any natural resources, resulting from the Lessee’s use of the leased property and activities incident to such use. The Lessee shall indemnify and hold harmless the [owner] from any claims for environmental clean up of natural resource damage that may be made against the [owner] as a result of the Lessee’s use of the Leased Property and activities incident to such use.

e. The [owner] may be liable for the costs of any environmental cleanup required for contamination which may have existed prior to the executions of the agreement, or which it may cause after the execution of this document. "Environmental clean up" is used hereafter to mean the remediation of any environmental damage required by any Federal, state, or local regulatory agency having jurisdiction over the area.

13. Rules and regulations

a. The Lessee shall comply with all rules and regulations regarding the Leased Property’s security, ingress, egress, and safety, and sanitation as may be prescribed from to time by the [owner].

b. The Lessee is aware of the fact that the lease property is leased without a valid overboard discharge permit, and that it is the Lessee’s responsibility to ensure that all current health standards, including applicable Federal, state, or local permitting requirements are met prior to allowing any such discharge to take place.

14. State and local permits and licenses

The Lessee is solely responsible for obtaining any state of local permits of licenses necessary for its proposed use of the Leased Property.

15. State and Local taxes.

a. The Lessee is solely responsible for the payment of any state or local taxes generated by its activities. If any future Act of Congress subjects the [owner] of the property to taxation, the Lessee shall pay any taxes, assessments, or similar charges imposed by the state or local authorities upon the Leased Properties (other than upon Lessee’s possessory interest in the Leased Property), when the taxes are due and payable.
16. Damage to property

The Lessee is responsible for any damage to or destruction of any property belonging to [owner], which results from the Lessee’s use of the Leased Property. The Lessee shall promptly repair or replace any damage or destroyed property to the satisfaction of the [owner]. In lieu of repairs of replacement, at the [owners] discretion the Lessee may pay the [owner] money in an amount sufficient to compensate for the [owners] for the loss sustained as a result of the damage to or destruction of the property.

17. Repairs and alterations of the Leased Property

No additions to or alterations of the Leased Property may be made without the prior written consent of the [owner]. Any repairs or alterations approved must be carried out in compliance with the requirements of paragraph 11 of this lease. Upon revocation, expiration, or surrender of the lease the Lessee shall, to the extent directed by the [owner] remove all alterations, additions, betterments, or improvements made or installed, and restore the premises subject to reasonable wear and tear to the same or in as good a conditions as existed on the effective date of this lease.

18. Surrender

a. On or before the expiration, upon termination of this lease, or upon relinquishment of the Leased Property by the Lessee, the Lessee shall vacate the Leased Property and remove all property brought onto the Leased Property by the Lessee, its officers, employees, contractors, agents, and guests and the participants in its activities. If the Lessee fails to remove any property brought on the Leased Property, the Lessee shall pay any costs incurred by the [owner] for its removal.

b. If the Lessee fails to remove property brought onto the Leased Property within 30 days the property shall be considered abandoned property. At the option of the [owner] the abandoned property may either become the property of the [owner] or the [owner] may have the property removed from the Leased Property

c. The [owner] is not liable for any expenses incurred by the Lessee for the removal of the property.

d. The Lessee agrees that the [owner] has no obligation to safeguard or care for the abandoned property.

19. Restoration of Leased Property

a. Before the expiration or upon the termination of this lease, the Lessee shall restore the Leased Property to the condition it was received in, as shown in the Condition Report, or to the improved condition if the [owner] or Lessee made any improvement to the Leased Property during the terms of this lease.
b. The Lessee is not responsible for damage due to ordinary wear and tear.

c. If the [owner] terminates this lease with less than 30 days notice, the Lessee has 30 days from receipt of notice of termination to restore the Leased Property.

d. If the Lessee fails to restore the Leased Property as required by this lease, the Lessee shall pay any costs incurred by the [owner] in restoring it.

20. Liens

Lessee shall promptly discharge or cause to be discharged any valid lien, right in rem, claim, or demand of any kind, except one in favor of the [owner], which at any time may arise or exist with respect to the Leased Property or materials or equipment furnished to the Leased Property. If the Lessee does not promptly discharge the lien, et cetera, the [owner] may discharge, or cause to be discharge, the lien, et cetera, at the expense of the Lessee.

21. Indemnification

a. Lessee shall indemnify and hold harmless the [owner] from any and all liability they may be liable for under Federal Tort Claims Act (28 U.S.C. 2671 et. Seq.) Any applicable environmental law or other laws, including the death or injury to any person or loss or damage to the property of any persons resulting from the use of the Leased Property by the Lessee.

b. Lessee shall indemnify and hold harmless the [owner] against all actions, claims, demands, liabilities, and damages that may result of an act, default, or omission of the Lessee, its officers, employees, contractors, agents, or guests or the participants in its activities in connection with the Lessee’s use of the Leased Property or for any injuries sustained by any individual’s who has come on the Leased Property as a result of the Lessee’s use of the Leased Property and may be injured in the course of participating in an inherently hazardous activity, an athletic activity, or another recreational activity while on the installation, whether or not the activity is sanctioned part of the Lessee’s use of the Leased Property.

c. If alcoholic beverages are served during the Lessee’s use of the Leased Property, the Lessee shall indemnify and hold harmless the [owner] against all action, claims, demands, liabilities, and damages that may in any manner be imposed on or incurred by the [owner] as a result of any act of omission, no matter whether that act of omission occurs on or off the installation, following the consumption of alcohol at the Leased Property by the Lessee, its officers, employees, contractors, agents, or guests, or the participants in its activities.

d. Lessee shall indemnify and hold harmless the [owner] against all actions, claims, demands, liabilities, and damages that may in any manner be imposed on or incurred
by the [owner] as a result of any act, default, or omission of the Lessee, its officers, employees, contractors, agents, or guests, or the participants in its activities in connection with the use of the Leased Property under this lease.

22. Insurance

a. The initial minimum amounts and types of insurance which the Lessee shall maintain on the Leased Property are:

   (1) Fire and Extended Coverage: $50,000.00 per incident
   (2) Liability for Bodily Injury: $1,000,000.00 per person
      $1,000,000.00 per incident
   (3) Liability for Property Damage: $1,000,000.00 per incident

b. The Lessee shall bear all risk of damage to the Leased Property arising from any cause whatsoever, with or without fault by Lessee. However, the Lessee’s liability for any loss of damage may not exceed the greater of the amount of insurance so required by paragraph 22.a. or the amount actually maintained on the Leased Property.

c. However, the limitation on Lessee’s liability based on amount of insurance maintained is not applicable to the Lessee’s liability for any damage or loss resulting form the Lessee’s willful misconduct, lack of good faith, or the negligence or gross negligence of the Lessee or any of its officers, agents, servants, employees, subtenants, licensees, or invitees.

d. The Lessee shall provide, maintain, change, or discontinue such insurance as the [owner] may from time to time require and direct. If there is any change in the insurance requirements, the Lessee’s liability for the loss or damage to the Leased Property shall be modified accordingly.

e. All insurance shall be in such form, for such amounts, for such periods of time, and with such insurers, as the [owner] may from time to time require or approve.

f. Each policy of insurance shall contain provisions requiring 30 days notice to the [owner] before any material change is made to the policy or the policy is canceled. The Lessee shall deliver promptly to the [owner] the certificates of insurance or a certified copy of each policy of insurance required by this lease. The Lessee shall also deliver to the [owner] 30 days before the expiration of any policy, evidence of the issuance of a new policy covering the same risks.

g. All insurance required or carried by the Lessee on any of the Leased Property shall be for the protection of the [owner] and the Lessee against their respective risks and liabilities in connection with the Leased Property. Each policy of insurance shall name both Lessee and the [owner] as the insured.
h. Each policy of insurance against loss of or damage to the Leased Property shall contain a loss payable clause.

i. In the event that any item or part of the Leased Property requires repair, rebuilding, or replacement resulting from loss or damage, the Lessee shall promptly give notice of the loss of damage to the [owner] and, to the extent of its liability, shall, upon demand, either compensate the [owner] for such loss or damage, or rebuild, replace, or repairs the lost or damaged item or part of the Leased Property as the [owner] elects.

j. In the event that that [owner] directs the Lessee to effect any repair, rebuilding, or replacement, the [owner] shall direct the payment to Lessee of so much of the proceeds of any insurance carried by the Lessee and made available to the [owner] as a result of its loss of or damage to any item or part of the Leased Property as may be necessary to enable Lessee to effect such repair, rebuilding, or replacement.

k. In the event the [owner] elects not to require Lessee to repair, rebuild, or replace any item or part of the Leased Property lost or damaged, the Lessee shall promptly pay to the [owner] out of any insurance proceeds collected by the Lessee such portion of the proceeds as may be allocable to the loss or damage to the Leased Property.

l. When compliance with a [owner] request to effect any repair, rebuilding, or replacement of any lost or damaged item or part of the property would involve incurring of costs in excess of Lessee’s liability for such loss of damage under this paragraph, the Lessee shall be under no obligation to effect same until after a satisfactory agreement has been reached between the [owner] and the Lessee with regard to [owner] reimbursement of the excess costs to Lessee.

23. Labor provision

During the terms of this lease, the Lessee agrees to abide by and follow all Federal Government policies in regard to equal opportunity employment, and shall not discriminate on the basis of race, color, religion, sex, age, national origin, or sexual orientation.

24. Nondiscrimination

Lessee shall use the Leased Property in compliance with the regulations in 49 CFR parts 21 and 27, “Nondiscrimination in Federally Assisted Programs of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964”, and “Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance” respectively. Lessee understands that persons or organizations which are allowed the use of Federal property without having to pay the full fair market rental consideration are treated as having received Federal Financial Assistance. This lease is not valid unless prior to the execution of the lease, the
Lessee has signed the Standards Department of Transportation Title VI Assurance form, and the Nondiscrimination of the Basis of Handicap Assurances.

25. Lease subject to easements, licenses, and rights of way.

a. This lease is subject to any outstanding easements, licenses, and rights of way applicable to the Leased Property.

b. The [owner] raised the right to grant additional easements, licensees, and rights of way on or across the Leased Property required for the construction, installation, maintenance, operation, repairs, or replacement of the utilities or other facilities that are the subject of easements, licenses, or rights of way. Access to the Leased Property shall also be provided to any Federal, State, or local officials engaged in the official inspection of the utilities or other facilities that are subject of the easements, license, and rights of way.

26. Assignment or subletting

The Lessee may not transfer or assign this lease or any part or interest in it, nor sublet or otherwise make available to any third party or parties any portion of the Leased Property, without the prior written consent of the [owner]. If any assignment is made, with or without consent, the Assignee shall be deemed to have assumed all the obligations of the Lessee. However, an assignment does not relieve the Lessee of any of the Lessee’s obligations under the lease.

27. Covenant against contingent fees.

The Lessee warrants that no person or agency has been employed or retained to solicit or secure this lease upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except for bona fide employees of the Lessee for the purpose of securing business. The Lessee shall pay the full amount of any such commission, percentage, brokerage, or contingent fee.

28. Officials not to benefit

No members of or delegate to Congress, or resident commissioner, may share in this lease, or benefit from this lease. This provision does not extend to a lease made with a corporation for its generally benefit.

29. Administration

The [owner] is responsible for the administration of this lease.
30. Notices

All required notices, approvals, and changes under this lease must be in writing. All notices from the Lessee shall be addressed to the [owner]. All notices to the Lessee shall be sent to the address listed on this lease, unless the Lessee sends written notice of a new mailing address.

31. Access

The [owner] shall have access to the Leased Property at all reasonable times for any purpose not inconsistent with the quiet use and enjoyment thereof by the Lessee, including, the inspection of the Leased Property.

32. Termination by [owner]

a. The [owner] may terminate this lease and re-enter and take possession of the Leased Property:

(1) If the Lessee does not cure any violations of the terms of this lease within 10 days of the receipt of notice of the violations from the [owner].
(2) If any of the information provided to the [owner] by the Lessee in its application for this lease or at any time during the course of the lease is discovered to be false, fraudulent, or materially incorrect

b. Notwithstanding paragraph 32.a., the [owner] may terminate this lease, at any time, without prior notice.

c. In the event that the [owner] elects to terminate this lease under the terms of paragraph 32.a.(1), the [owner] shall be entitled to recover and the Lessee required to pay to the [owner]:

(1) the costs incurred by the [owner] to retake possession of the Leased Property
(2) the costs incurred to perform any of the Lessee’s obligations

33. Termination by Lessee

a. Lessee may terminate this Lease with 30 days written notice to the [owner] if:

(1) all the improvements on the Leased Property are damaged or destroyed, or if as a result of damage or destruction to some of the improvements on the Leased Property a substantial portion of the Leased Property is incapable to use for the purpose for which the Leased Property is leased
(2) the [owner] has not authorized or directed the repair, rebuilding, or replacement of the improvements or made provision for the payment of the costs of repair, rebuilding, or replacement by the insurance proceeds of the required insurance, and
(3) The damage or destruction was not caused by the fault of negligence of Lessee or any of its officers, agents, servants, employees, subtenants, licenses, or invites, or by any failure or refusal on the part of the Lessee to fully perform its obligations under this lease.

34. Failure of [owner] to insist on compliance

The failure of the [owner] to insist, in any one or more instance, upon performance of any term of this lease may not be construed as a waiver or relinquishment of the [owners] right to the future performance of the term. The Lessee’s obligations to comply with all terms of the lease remains in full force and effect.

35. Liability of the owner

The [owners] liability to the Lessee is limited to the terms of the lease and any claims that may be brought under the Federal Tort Claims Act, as amended (28 U.S.C. 2671 et seq.)

36. Architectural barriers act responsibilities

The Lessee hereby accepts any and all responsibility as the Lessor may have under the Architectural Barriers Act of 1968, as amended, 42 U.S.C. 41451, et seq. (hereafter referred to as the Act), regarding the lapsed property. Specifically, any alterations done to any buildings encompassed by this lease shall be done according to the accessibility standards set by the General Services Administration in accordance with the Act.

37. Entire Agreement.

The lease constitutes the only agreement between the [owner] and the Lessee. Any prior understanding or representation of any kind, which proceeded the date of this lease, are not binding on either part, except to the extent the understandings are incorporated into this lease.
Appendix F:

Partnership Information
Appendix E

Pedestrian Information
Area Schools:

Frankfort-Elberta Area Schools
613 Leelanau Avenue
Frankfort, MI 49635
231-352-4641

Frankfort Elementary School (K-8)
613 Leelanau Avenue
Frankfort, MI 49635
231-352-7601

Frankfort High School
534 11th Street
Frankfort, MI 49635
231-352-4781

Colleges and Universities:

Central Michigan University
Mount Pleasant, MI 48859
517-774-4000

Ferris State College
905 S. State St.
Big Rapids, MI 49307
231-592-2000

Michigan State University
East Lansing, MI 48824
517-355-1855

Northern Michigan University
601 Chestnut Street
Cadillac, MI 49601
231-775-8611

Northwest Michigan College
1701 E Front Street
Traverse City, MI 49684
231-922-1000
University of Michigan
Ann Arbor, MI 48107
734-764-1817

West Shore Community College
3000 N. Stiles Rd.
Scottsville, MI 49454
231-845-6211

Clean Michigan Initiative
Waterfront Redevelopment Grant
Environmental Response Division
PO Box 30426
Lansing, MI 48909-7926

Girl Scouts
Girl Scouts of the United States
420 5th Avenue
New York, NY 10018-2798
1-800-GSUSA-4-U

Crooked Tree Council (Traverse City, Michigan)
231-947-7354

Great Lakes Lighthouse Keepers Association
C/o Henry Ford Foundation
4901 Evergreen Road
Dearborn, MI 48128-1491

Michigan Coastal Management Program
Land and Water Management Division
Michigan Department of Environmental Quality
PO Box 30458
Lansing, MI 48909-7958
517-335-3456

Michigan Humanities Council (State Branch of the NEH)
119 Pere Marquette Drive Ste 3B
Lansing, MI 48912-1270
517-372-7770
Michigan Lighthouse Assistance Program
Grant Section, Budget Division
Michigan Department of State
717 West Allegan Street
Lansing, MI 48918-1800

National Endowment for the Humanities (NEH)
1100 Pennsylvania Avenue NW
Washington, DC 20506
202-606-8400

National Historic Landmarks Initiative
Heritage Preservation Services
National Park Service
1849 C Street NW
Washington, DC 20240
Attn: Susan Escherich
202-343-9591

National Park Service
Midwest Region
1709 Jackson St.
Omaha, NE 68102
402-221-3431

National Trust for Historic Preservation
1785 Massachusetts Avenue
Washington, DC 20036

Nature Conservancy
4245 North Fairfax Drive
Suite 100
Arlington, VA 22203-1606
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