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## CHAPTER 1: INTRODUCTION

### ORGANIZATION OF THE VOLUME

This volume presents the overall Light Station History, the Cultural Landscape Report (CLR), and the Historic Structure Report (HSR) for the Sand Island Light Station. This document is one of six volumes that present the comprehensive CLR/HSR for five of the six light stations in Apostle Islands National Lakeshore (park or APIS). The five light stations are Michigan Island, Outer Island, Devils Island, Long Island, and Sand Island. The light station at Raspberry Island was previously addressed separately.

This volume presents detailed documentation of the light station's physical evolution and historical development; an evaluation of existing condition of its associated buildings, structures, features and vegetation; an analysis of the cultural landscape and historic structures; and the recommended treatment for the Sand Island Light Station. Supplemental information applicable to all of the light stations, including Sand Island, is presented in Volume I, Introduction and Overall Development History.

The island history is presented first, followed by the CLR and finally the HSR. Together, the combined CLR/HSR will guide the treatment of the significant resources associated with the Sand Island Light Station and provide guidance for the continued management of these resources consistent with the park's General Management Plan (GMP).

### STUDY AREA

Sand Island is one of seven islands within the park, the six light stations and Gull Island, that provide aids to navigation for Lake Superior. The study area encompasses the Sand Island Light Station Reservation, light station grounds and Boathouse site. Sand Island is 2.8 miles long, 2.8 miles wide, 2,949 acres, and is located at the western edge of the park, approximately 19 miles from Bayfield, Wisconsin and 6 miles from Little Sand Bay. The Sand Island Light Station Reservation is on the northern tip of the island and originally occupied 110 acres.<sup>1</sup> In 1936, the reservation was reduced to two smaller areas; one area for the light station, and one area of two acres for the boathouse site.<sup>2</sup> The remainder of the island, outside the light station reservation, is a part of APIS. Sand Island along with Long Island and Basswood Island, is not included in the Gaylord Nelson Wilderness that was designated in 2004.

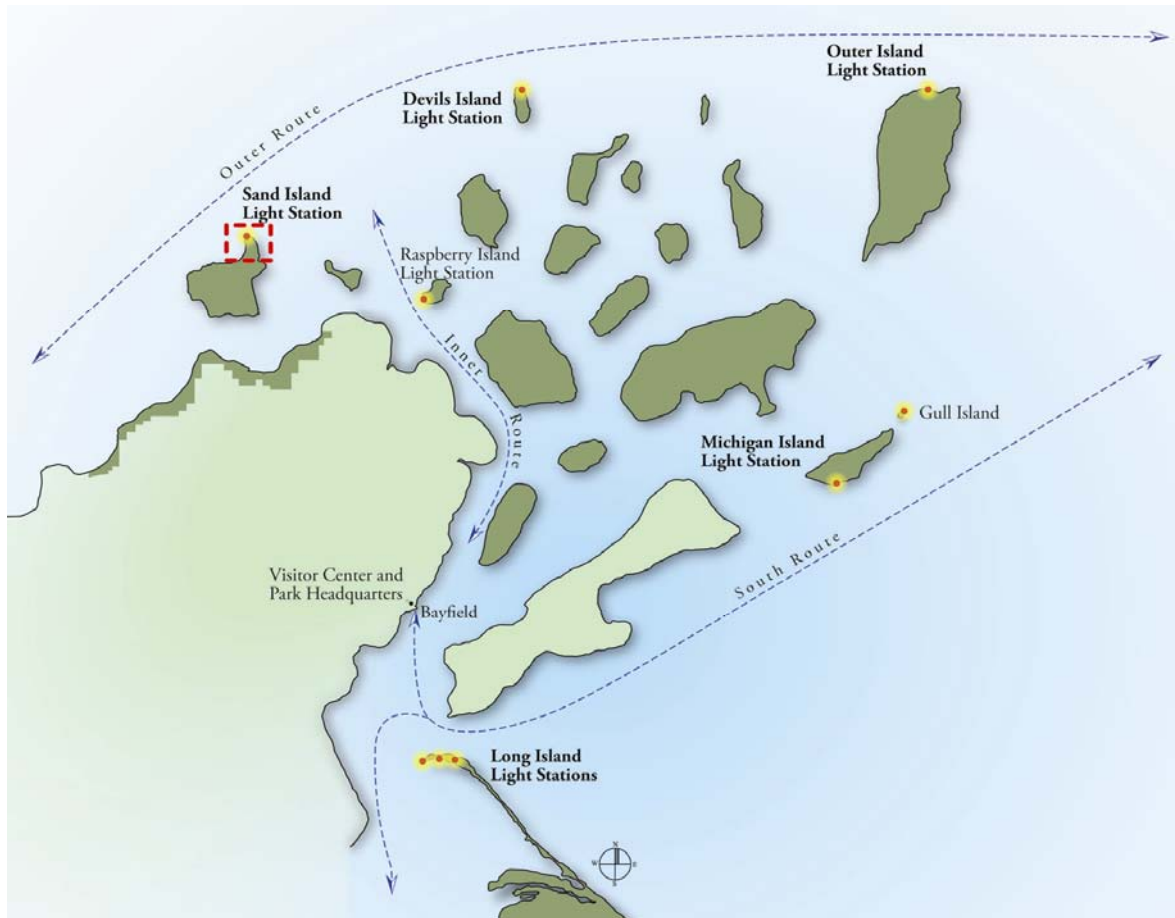
The Sand Island Light Station Quarters is the first navigational aide encountered on the outer route when traveling east from western Lake Superior and Duluth. The light station is located on a bluff above Lake Superior and is surrounded by maturing second-growth northern hardwood forest. The light station grounds consist of historic clearings, buildings, structures, features and vegetation. Three structures are on the List of Classified Structures (LCS), the Light Station Quarters, Oil Building, and Privy.

Today, the island's land use is as the Apostle Islands National Lakeshore under the jurisdiction of the National Park Service (NPS). The light station continues to serve as an aid to navigation with the automated light operated and maintained by the United States Coast Guard (USCG). The NPS maintains the site and buildings, and the light station is open to visitation and is frequented by visitors and park staff for its cultural and natural resources.

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<sup>1</sup> Wisner Drawing

<sup>2</sup> USCG Drawing, 1936



*Sand Island Light Station Context Map (Source: MBD 2010)*

## SIGNIFICANCE OF SAND ISLAND

The Sand Island Light Station is the first automated light station within the archipelago (1921). The period of significance is 1881 to 1921, beginning with the initial development of the light station and continuing until automation of the Light Station Quarters. The entire original 110 acres of the Sand Island Light Station Reservation comprises its cultural landscape. The majority of its contributing features occur on a core area of 1.5 acres associated with the light station grounds on the northern tip of the island.

Contributing buildings include the Light Station Quarters, Oil Building, and Privy. Contributing features include the historic clearings, vegetation, organization of buildings and structures, concrete walks, small scale features, and the bluff.

With many of its original features intact and in good condition, the Sand Island Light Station Reservation portrays the history of the light station as an aid to navigation. It continues to convey the development of navigational technology, the story of the people who resided at the light station, and the management of the station.

## **TREATMENT RECOMMENDATIONS SUMMARY**

The treatment recommendations for the Sand Island Light Station reveal the role that the light station had in the navigational history of the Apostle Islands, and in conveying the historical significance of the light station's cultural landscape and structures.

Restoration has been identified as the general treatment approach for the Sand Island Light Station, as it is a holistic approach that addresses the island's extant cultural resources and the relationships between those resources.<sup>3</sup> This approach protects those characteristics and features that convey the island's full historical and cultural significance, while allowing for those repairs, alterations, and additions necessary for the compatible use of the light station.<sup>4</sup>

Restoration also allows for noncontributing, compatible features to remain, and for the removal or relocation of noncontributing, noncompatible features. While the overall treatment intent of the cultural landscape is one of rehabilitation many individual treatment recommendations focus on preservation of extant features. Specific treatment recommendations include the following.

- 1) Reestablish a portion of the historic cleared area of the light station;
- 2) Maintain views from Lake Superior to the light station;
- 3) Repair circulation features including the concrete walks;
- 4) Reestablish missing landscape plantings;
- 5) Remove noncompatible features;
- 6) Restore the Light Station Quarters;
- 7) Preserve the Oil Building and Privy.

The recommendations for treatment are comprehensive and are intended to address all aspects of the cultural landscape and historic structures. To achieve full implementation of these recommendations a phased approach for construction activities will be required. Initial actions may include basic preservation measures to protect and stabilize contributing features followed by more detailed repair measures as park resources allow.

In addition to treatment recommendations for physical improvements, actions are proposed for improved visitor access; improved efficiency of park operational and maintenance activities; and improved protection of the light station's natural systems.

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<sup>3</sup> Page et al 1998

<sup>4</sup> A glossary of terms used to describe treatment recommendations is included in the appendix of this volume.





## CHAPTER 2: LIGHT STATION HISTORY

### LIGHT STATION HISTORY

In the 1870s, as more and more ships entered Chequamegon Bay, concerns mounted over the safety of the route around Sand Island. In 1871 Major Orlando Poe, the Lighthouse Board's District Engineer, formally initiated the movement for a lighthouse on Sand Island. Poe requested and obtained a survey of the proposed reservation. An executive order designated the lighthouse reservation in 1871.<sup>5</sup> Major Poe also requested \$18,000 to fund lighthouse construction in 1871, but was turned down.

Following Poe's 1871 request, the Lighthouse Board repeatedly petitioned Congress for funding for the new light. The Board's 1877 Annual Report stated that the lack of a navigational aid on the island "...causes much distress and danger to the increasing commerce of the west end of Lake Superior."<sup>6</sup> After nine years of requests, Congress finally acquiesced in 1880.

The new lighthouse design would replicate an attractive and popular design already in place in many other locations on the Great Lakes. The design had been executed in brick at the following locations:

McGulpin's Point, Mackinac Straits	1869
Eagle Harbor, Lake Superior	1871
Chambers Island, Lake Michigan	1868
Eagle Bluff, Lake Michigan	1868
White River, Lake Michigan	1875

Unlike all of its brick predecessors, Sand Island's lighthouse was constructed of locally available brownstone, which is a quartzite sandstone containing iron oxide, calcite and silica. The material was popular between 1870 and 1900, and was used on many prominent buildings. The Cincinnati City Hall and the Chicago Tribune building are built of Lake Superior brownstone. The local stone, which was quarried on the island, added distinction to the Sand Island lighthouse.<sup>7</sup> It also cost substantially less money than imported bricks.

The Passage Island Light at Isle Royale, an identical design to Sand Island, was constructed of brownstone a year after Sand Island. Passage Island had been originally approved in 1874 with an \$18,000 appropriation, but Congress set a condition that this northernmost United States lighthouse could not be built until Canada completed a station on Colchester Reef near the mouth of the Detroit River. The conditional approval delayed the construction, resulting in Sand Island's designation as the first to be built with the brownstone.

Work on Sand Island began on June 6, 1881.<sup>8</sup> Louis Charles Lederle supervised construction, as he had done previously at Outer Island. Lederle's crew members installed an 8 x 80 foot timber crib to protect the boat landing site. The crew cleared about eight acres of land and constructed the Lighthouse (LCS ID

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<sup>5</sup> Map of an 1884 survey of the Sand Island Reservation on file at the Apostle Islands National Lakeshore Administrative Offices indicates July 21, 1871 reservation date. Snyder, David L. "A Compendium of Written Communication of the Lighthouse Board for the Twelve Light Stations of the Midwest Region, the National Park Service, 1839-1881." Pages 128-133.

<sup>6</sup> Transcribed reports of the Lighthouse Board; available at the Apostle Islands National Lakeshore Administrative Offices.

<sup>7</sup> Personal communication from Jane Busch on December 20, 2009.

<sup>8</sup> Some historical summaries suggest this work was done in 1880 but the 11<sup>th</sup> District Engineers status report dated July 9, 1881 clearly indicates the June 6, 1881 date. See Snyder, David L. "A Compendium of Written Communication of the Lighthouse Board for the Twelve Light Stations of the Midwest Region, the National Park Service, 1839-1881."

6381), a Privy (LCS ID 6383) and a woodshed. The 44-foot tall Lighthouse Tower contained a fourth order Fresnel fixed lens casting a white light that could be seen for 15 miles. The light was lit on September 25, 1881.

Although the lighthouse district engineers recommended a fog signal at Sand Island, the request was never approved. The keeper's life settled into a fairly routine existence at Sand, focusing solely on the light, without the distractions of operating a fog signal. The single-purpose work routine (without the complications of operating a fog signal) may be why there were only two keepers between 1881 and 1921, and why an assistant keeper position was not created until 1902. Lederle, who had first arrived as the construction superintendent, worked as the keeper until he transferred to another station. Emmanuel Luick replaced Lederle. He arrived with his wife Ella in 1892. Luick remained on the job until the station was automated, partly because of the extraordinary efforts of Ella while he was extremely sick and incapacitated in 1901, and partly with the support of his second wife, Oramill.

Minor changes and repairs characterize the work at Sand Island. A boathouse was built in 1886. Plank walks were replaced, probably with concrete, in 1893. John A. Jaffray oversaw a work crew in 1901 that replaced the boat landing cribs, built a 16-foot long walkway from the landing and constructed a brick Oil House (LCS ID 6382) with a capacity of 360 gallons. Historic photographs indicate a barn building was located behind the privy but written records related to the barn's construction could not be found.

The keeper had chickens and ducks. One incident in the keeper's log described how the keeper had to kill a hawk that was killing his ducks. The log entries also note the work done in the garden and reference the potatoes and onions that were planted in the garden. Since other people lived on the island, the trail leading from the light station to the rest of the island was well maintained. It is clear from the keeper's logs that a number of people visited the station on a regular basis. Unlike the other Apostle Islands light stations, the Sand Island Station seemed to function as part of a community, albeit a remote element of the Sand Island populace.

In 1921 Sand Island became the first automated light station in the Apostle Islands, when a new acetylene gas fueling apparatus was installed. Since the gas tank had an automatic valve to turn the gas off and on, the light no longer required an on-site keeper. The keepers at nearby Raspberry Island monitored the Light and made periodic visits to check on the equipment. In 1933 a 48-foot tall steel skeletal tower was installed in front of the Lighthouse.

With no need for a keeper, the Lighthouse Board decided to lease the property. Minnesota school teacher Gertrude Wellisch rented the lighthouse for a summer home from 1925 to 1942.<sup>9</sup> John B. Chapple, editor of the Ashland Daily Press, was a tenant after Wellisch moved out. The Sand Island lighthouse was also leased by A.D. Hulings from 1953 to 1975. A 1972 letter from a U.S. Forest Service official to an Apostle Islands official noted, "...the interior of the building had thoroughly deteriorated or been destroyed by vandals at the time a permit was issued to Mr. Hulings... He installed new floor joists, new floors, plasterboard on walls and ceilings, painted..."<sup>10</sup>

The United States Coast Guard (USCG) assumed responsibility for America's lighthouses in 1939. Since the Sand Island Light had already been automated, the USCG never took residence at the Light Station and consequently did not alter the interior of the lighthouse.

In 1985, the USCG removed the steel tower and returned the light to the original Tower. The light in the Tower is now a DCB-224 aero beacon.

<sup>9</sup> Personal communication from Jane Busch in December of 2009 provided the information on tenants.

<sup>10</sup> Information about this letter provided by Susan MacKreth of Apostle Islands National Lakeshore staff in February, 2010.

## HISTORIC EVIDENCE

The historic photos date back to 1890 and show the no longer extant well, boathouse and dock, wood shed, and metal tower. For more detailed descriptions of the photos, see the CLR and each building's Chronology of Alterations and Use in the HSR.

The 1880 construction drawings for the Light Station Quarters illustrate much the same structure that exists today, other than the Kitchen Vestibule, which appears in historic photos and is extant but was not in the original plans. (HSR Historic Drawing SI-01) An undated drawing notes that the "Tank House" was installed August 1931. It appears to be located at the foundation level off of the tower's south wall, made with a concrete foundation. A 1910 site plan that was used at an unknown date to mark the changes in the site, states that the tank house was moved to under the steel tower. The steel tower was installed to the northwest of the Light Station in 1933 and is labeled on the plan, "40 Ft Steel Tower." The site plan also shows a wood shed and tool shed with a garden plot in-between located behind the existing Privy and Oil Building. These images appear to be original to the plan, so it can be assumed they existed in 1910 until at least 1933. (HSR Historic Drawing SI-02) A boathouse, dock, and sea wall were located to the south of the complex and there are extant ruins of a dock in the same or nearby location.

## OVERVIEW OF DEVELOPMENT AND USE

Date	Work Described
Annual Report of 1871	" <i>Sand Island, Lake Superior.</i> – The through commerce to and from the western end of Lake Superior, increasing so rapidly as the railroads having their termini at Du Luth are extended to the westward, all passes outside the Apostle Islands, and is greatly in need of a Light-house on the northern end of Outer Island. This should be respectfully recommended to be appropriated. For reasons given in the preceding case, a Light (of a lower order, however) is demanded on the northern end of Sand Island, the most westerly of the group, for which purpose an appropriation of \$18,000 is recommended." (Four more requests were made until 1881; "1871 Annual Report of the Lighthouse Board," Sand Island Light in annual reports 1870-1910)
Annual Report of 1881	" <i>Sand Island, Lake Superior, Wisconsin.</i> – Work was commenced on June 6, and at the close of the year all the materials had been landed at the site of the work; the shanties for the workmen were erected, and protection-cribs, 80 ' long and 8 ' wide, sunk in 8 ' of water and raised 4 ' above water, were constructed. The cribs also form a good harbor for the light-keeper's boats. About 8 acres of thickly wooded land, around the site, were cleared, and the excavation for the cellar begun. All of the dimension-stones for the station were quarried, and on June 27 the work of cutting them was commenced." ("1881 Annual Report of the Lighthouse Board," Sand Island Light in annual reports 1870-1910)
1899, Oct 5	"These new lampes [kerosene lamps] are just a nuisance and a lot of trouble and a lamp that can not be trusted." (E. Luick, SI Log, Oct1, 1898 - Nov 17, 1907 and June 1, 1914- July 31, 1920)
1899-1920	Documented whitewashed buildings five times; including at times the following buildings: Tower and Quarters (specifically mentioned the kitchen) (E. Luick, SI Log, Oct 1, 1898 - Nov 17, 1907 and June 1, 1914- July 31, 1920)
1899-1920	Documented painting of the interior of buildings three times; including at times the following buildings: Quarters (specifically mentioned the bedroom and kitchen floors) and the Privy (specifically mentioned the floor) (E. Luick, SI Log, Oct 1, 1898 - Nov 17, 1907 and June 1, 1914- July 31, 1920)
1899-1920	Documented painting of the exterior of buildings four times; including at times the following buildings: Tower Lantern, Tower railing, Privy, and Quarters (specifically mentioned the "blinds," aka shutters, painted green) (E. Luick, SI Log, Oct 1, 1898 - Nov 17, 1907 and June 1, 1914- July 31, 1920)
1901	Oil Building built (LCS, 2009) Sept 11: "At 11:30 AM Raspberry Island Light Keeper C. Hendrickson brought the work men over to build the Oil House."

Date	Work Described
	Sept 21: "There are 600 brick left of the Oil house." (E. Luick, SI Log, Oct1, 1898 - Nov 17, 1907 and June 1, 1914- July 31, 1920)
1904, July 27	"At 4:00 PM the Str <u>Bon Mia</u> came down from Duluth and landed Mr. Anderson Bennett and four workmen to repair the Breakwater & Boat house & house." (E. Luick, SI Log, Oct1, 1898 - Nov 17, 1907 and June 1, 1914- July 31, 1920)
1905, Sept 11	"Keeper repaired the roof, replaced the tin shingles that the wind tore off Sept. 2 <sup>nd</sup> ." (E. Luick, SI Log, Oct1, 1898 - Nov 17, 1907 and June 1, 1914- July 31, 1920)
1916, Sept 2	"The mason got through with the chimney ..." Brick chimney extended on Quarters. (E. Luick, SI Log, Oct 1, 1898 - Nov 17, 1907 and June 1, 1914- July 31, 1920)
1916-1919	Documented painting of the roofs of buildings three times; mentioned roofs in general and Quarters specifically (E. Luick, SI Log, Oct 1, 1898 - Nov 17, 1907 and June 1, 1914- July 31, 1920)
1920	Documented varnishing of floors one time; mentioned Quarters (specifically kitchen floor) (E. Luick, SI Log, Oct 1, 1898 - Nov 17, 1907 and June 1, 1914- July 31, 1920)
1921	Acetylene gas burner installed in the Light Station tower (LCS, 2009)
1925-1942	Light Station Quarters leased by Gertrude Wellisch (APIS Records)
1933	New steel tower built, Fresnel lens removed from the Light Station tower (J. Busch, 2008)
1953-1975	Light Station Quarters leased by A.D. Hulings; in 1953, the interior of the building was in poor condition due to vandals and Mr. Hulings "installed new floor joists, new floors, plasterboard on walls and ceilings, painted..." (1972 letter from U.S. Forest Service official to the APIS superintendent, from S. Mackreth)
1970	Apostle Islands National Lakeshore authorized
1977	Stabilization of Light Station Quarters and Privy (NPS/APIS Business Office Records D3423 for Sand Island)
1978	Repoint brick, basement, foundation, and tower and paint buildings; installed drainage rain gutters (NPS/APIS Business Office Records D3423 for Sand Island)
1979	Paint and repair metal roof of Light Station Quarters (NPS/APIS Business Office Records D3423 for Sand Island)
1981	Retuckpoint stonework and paint trim on Light Station Quarters and Privy (NPS/APIS Business Office Records D3423 for Sand Island)
1985	Steel tower removed (S. Mackreth, 2010)
1988	Light Station Quarters reroofed with metal shingles; main gable of Quarters roof replaced (HSPT Reports, 2009; NPS/APIS Business Office Records D3423 and photos for Sand Island)
2008-2009	Replaced all window shutters with newly fabricated copies of the removed green shutters. Only one shutter, which is on the tower, not the housing unit, is not new material. New shutters painted white. New hardware installed to replicate old fasteners. Black buttress caps on tower painted white. (S. Mackreth, 2010)

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# CHAPTER 3: CULTURAL LANDSCAPE REPORT

## SAND ISLAND EXISTING CONDITION

### Introduction

The cultural landscape of the Sand Island Light Station is a composition of features that remain from its development over the last 128 years as a light station and aid to navigation. As one of six light stations in the Apostle Islands, the Sand Island Light Station played an important role in the development of the system. The intent of the Cultural Landscape Report (CLR), in conjunction with the Historic Structures Report (HSR) is to guide the treatment and use of the aboveground resources associated with the light station. The CLR provides park managers with a comprehensive understanding of the physical evolution of the cultural landscape and provides guidance for its management.

The CLR was conducted at a limited level of research, investigation and documentation. This level of research uses select documentation of known and presumed relevance, including primary and secondary sources that are readily available. The periods of landscape change are described using narrative text, historic photographs and annotated historic drawings and maps. Archeological investigations are not included.<sup>11</sup> A more detailed description of the CLR methodology is included in Volume I, Chapter 2: Methodology.

The CLR begins with a description of the site development of the Sand Island Light Station that documents the physical changes that have occurred on the light station reservation and light station grounds. The light station reservation is the land initially set aside for the development of the light station. The portion of the reservation that contains structures and buildings is referred to as the grounds in the CLR. These in total are referred to as a light station. The site development is presented by the five periods of landscape change.

The second section presents the existing condition and analysis of the cultural landscape. This section is organized by cultural landscape characteristics. In September 2009, field investigations were conducted to document the existing condition of the cultural landscape characteristics: spatial organization, topography, views and vistas, circulation, buildings, structures, small scale features and vegetation. The documentation of the island's existing condition is illustrated with existing condition plans, diagrams and photographs that document its cultural landscape.

The analysis compares the island's history with its existing condition, and identifies those landscape characteristics that retain integrity and contribute to the significance and integrity of the Sand Island Light Station.

The existing condition plans were created in AutoCAD using a variety of sources including: historic and current maps and photographs provided by the NPS APIS Archives; field work conducted in September 2009; and additional information was provided by park staff.

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<sup>11</sup> Page et al. 1998.

## 1 SITE DEVELOPMENT

2 A period of significance of 1852 to 1972 is recommended for the light stations of the Apostle Islands as a  
 3 whole to recognize the role of the light at each island and as a connected system of navigational aids for  
 4 Lake Superior. The beginning date is the first act of Congress authorizing construction of the first  
 5 lighthouse in the Apostle Islands in 1852. The period of significance for the Sand Island Light Station  
 6 begins with the construction of the Light Station Quarters in 1881, and ends when the light tower was  
 7 automated in 1921. Five periods of landscape change document the evolution of the light station's cultural  
 8 landscape. Of these, one period is within the Sand Island Light Station's period of significance, this period  
 9 is noted by italics.

- 10 • Pre-Lighthouse (1852 – 1880)
- 11 • *Light Station (1881 – 1921)*
- 12 • Summer Home (1922 – 1975)
- 13 • Coast Guard (1939-1969)
- 14 • National Park Service (1970 to present)

15  
 16 The beginning and end of each period of landscape change corresponds to major physical changes related  
 17 to either the site's use, technological advances, and/or governmental control of the island. The periods  
 18 consider the social history of the island, however there are instances where the social history differs since  
 19 physical change in the cultural landscape is the primary rationale in defining the beginning and end of each  
 20 period.

21  
 22 Brief narrative text, a graphic illustrations (where applicable), and historic maps and photographs where  
 23 available, describe each period of landscape change. Additional information regarding the period of  
 24 significance for the Apostle Islands light stations is presented in Volume I, Chapter 3: Context, Current  
 25 Designations, and Park Significance.

### 26 27 28 **Pre-Lighthouse (1852 – 1880)**

29 In 1852 Congress authorized the construction of the first lighthouse in the Apostle Islands, to be built at La  
 30 Pointe Harbor on Madeline Island. The location was later revised to Long Island and ultimately the  
 31 lighthouse was built on Michigan Island in 1856.<sup>12</sup> At the recommendation of Major Orlando Poe, the  
 32 District Engineer of the Lighthouse Board at the time, a lighthouse reservation was established for Sand  
 33 Island in 1871.<sup>13</sup> No physical improvements related to the light station were built on Sand Island during  
 34 this period.

### 35 36 37 **Light Station (1881 – 1921)**

38 Construction of the Light Station Quarters began in June 1881. A large area of the northern tip of Sand  
 39 Island, approximately eight acres, was cleared of forest vegetation to build the light station grounds, its  
 40 associated buildings and structures and to maintain an open view towards the light from Lake Superior.  
 41 The Light Tower, located in the Light Station Quarters, was placed into service in September 1881.<sup>14</sup> The  
 42 Light Station Quarters was built of local brownstone from stone quarried on the island. The building  
 43 included the 44' tower and keeper's residence. On the grounds, a Privy and Wood Shed were built in the  
 44 cleared area just south of the Light Station Quarters.

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<sup>12</sup> Busch, Jane C. "People and Places: A Human History of the Apostle Islands; Historic Resource Study of Apostle Islands National Lakeshore" Bayfield: Apostle Islands National Lakeshore. 2008. Page 127.

<sup>13</sup> Ibid, page 128.

<sup>14</sup> Ibid, page 128.

A boat landing was also built in 1881 during the same construction, at this time, located about one-half mile south of the light station at the north end of Lighthouse Bay, a sheltered area on the west side of the northernmost tip of the island. Work began in 1880 with the construction of an 80-foot long timber and rubble crib to protect the landing site. In 1886, a Boathouse and dock were built at the landing site.<sup>15</sup> In 1901, the landing crib was modified and expanded. Two other natural rock boat landings were also used. Historic documents note a wooden boat hauling ramp that was located east of the Light Station Quarters. The rock ledge just to the north of the Light Station Quarters was historically used as a boat landing and is still in use today.

A footpath was cleared through the thickly wooded forest to connect the boathouse with the light station. The footpath was well travelled as it was used by the light keepers and other Sand Island residents.

In 1881, along with the construction of the Light Station Quarters, a brick Privy was built and connected to the Light Station Quarters with a wooden plank walk. In 1901, the brick Oil Building was built on the Light Station grounds, and also connected to the Light Station Quarters by a wooden plank walk.<sup>16</sup> Wooden plank walks were built as the initial circulation for the light station grounds. Historic photographs indicate these were replaced by concrete walks by 1913. Many of the concrete walks remain today.

Emmanuel Luick was the keeper at Sand Island from 1892 to 1921. Emmanuel and his first wife Ella annually planted and harvested crops on the light station grounds.<sup>17</sup> They were known for their tomatoes, corn, lettuce, peas, and potatoes. The Luicks also raised chickens and ducks. Historic drawings indicate that by 1910 a garden was established south of the Light Station Quarters.<sup>18</sup> The to the south of the building included a fenced garden, Wood Shed, Tool Shed and a walk connecting the Tool Shed with the Light Station Quarters.

The Sand Island Light Station was not as isolated as some of the other light stations in the Apostle Islands. The island had a community of year round residents, who primarily farmed on the island and fished the waters of Lake Superior. During this period, the year-round population of the island reached approximately 70 people. Sand Island supported a school, post office, cooperative store, and briefly a telephone service to the mainland.<sup>19</sup> A tourist resort, Camp Stella, was also opened on the Island in 1886 and operated until 1915.<sup>20</sup> Keeper's logs indicate that regular visitors were common at the light station.

This period of landscape change ends in 1921 with the automation of the light at the Sand Island Light Station. The Sand Island Light Station Quarters was the first automated light in the Apostle Islands.

<sup>15</sup> Annual Report of the Lighthouse Board, 1880, 1896

<sup>16</sup> Lighthouse Log

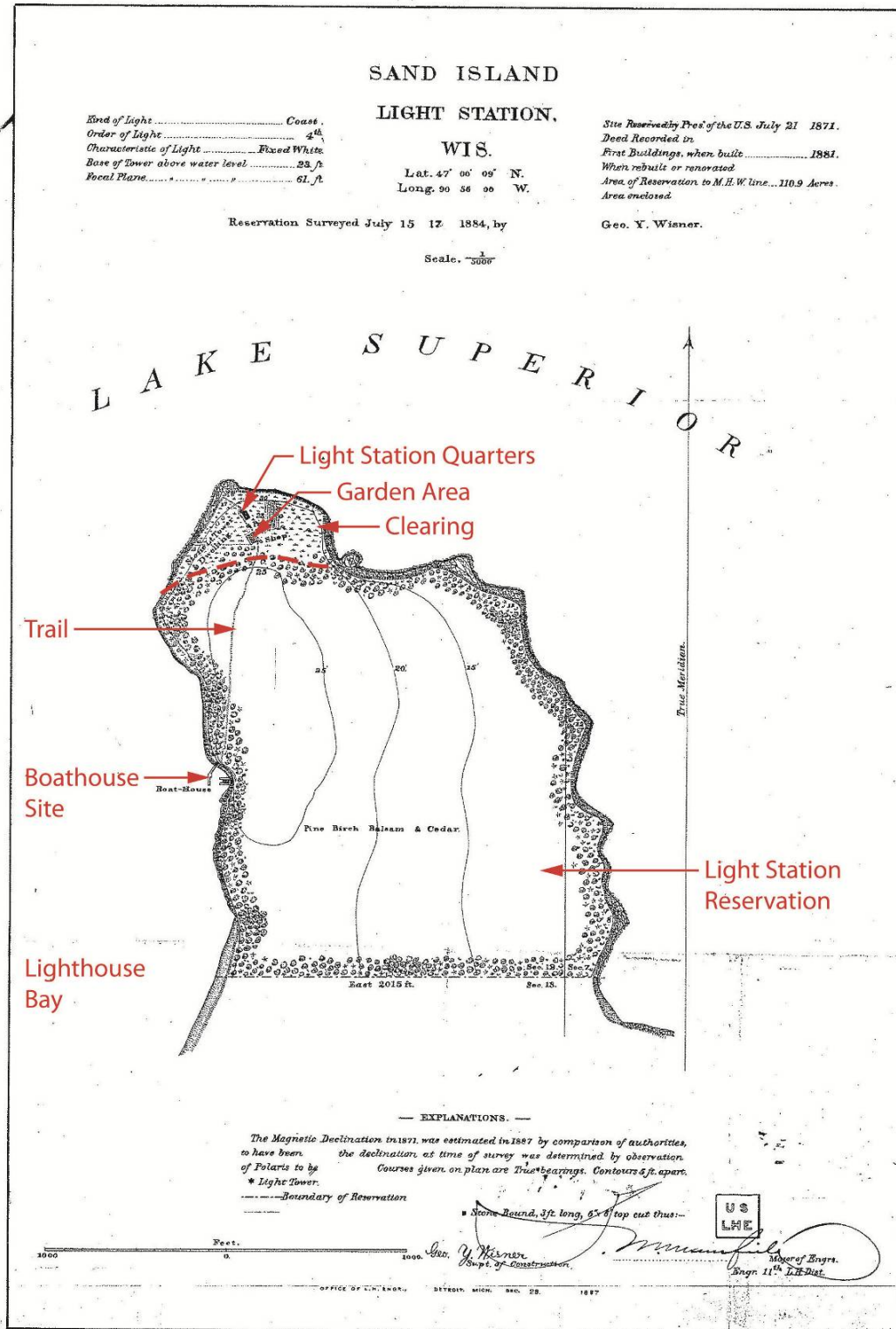
<sup>17</sup> Lighthouse Log

<sup>18</sup> (Drawing Reference, OG Brown. Sand Island Light Station, Wisconsin Location of Buildings and Walks, Drawing No. RHL 1005610, 1910)

<sup>19</sup> (People and Places: A Human History of the Apostle Islands; Historic Resource Study of Apostle Islands National Lakeshore, page 24).

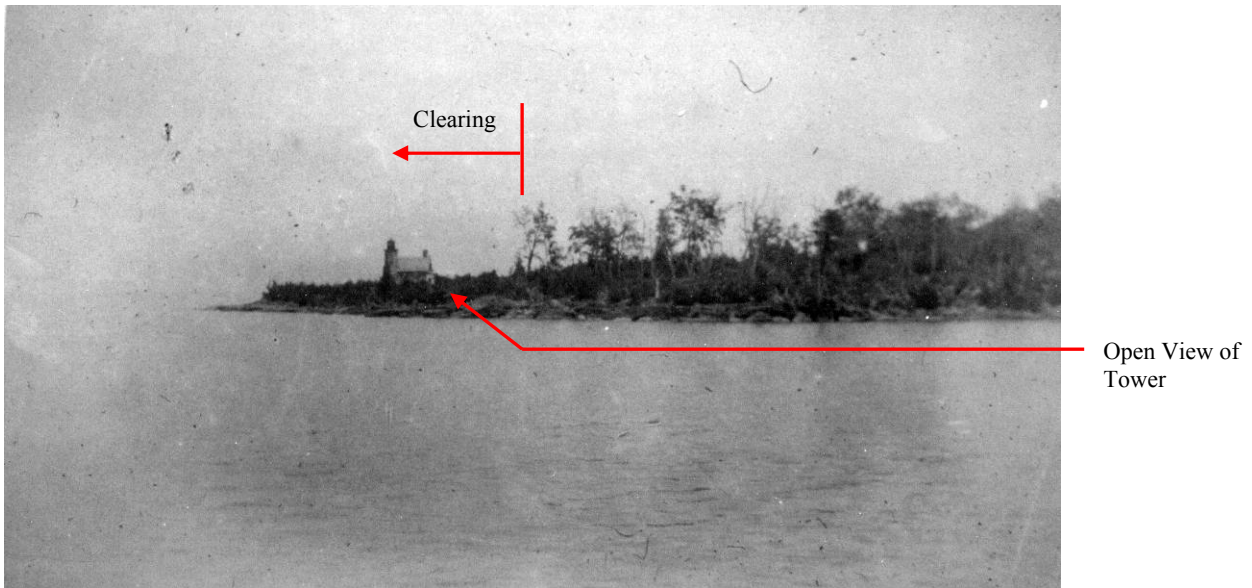
<sup>20</sup> (ibid)

1 **Pre-Lighthouse and Light Station Historic Survey and Photographs**

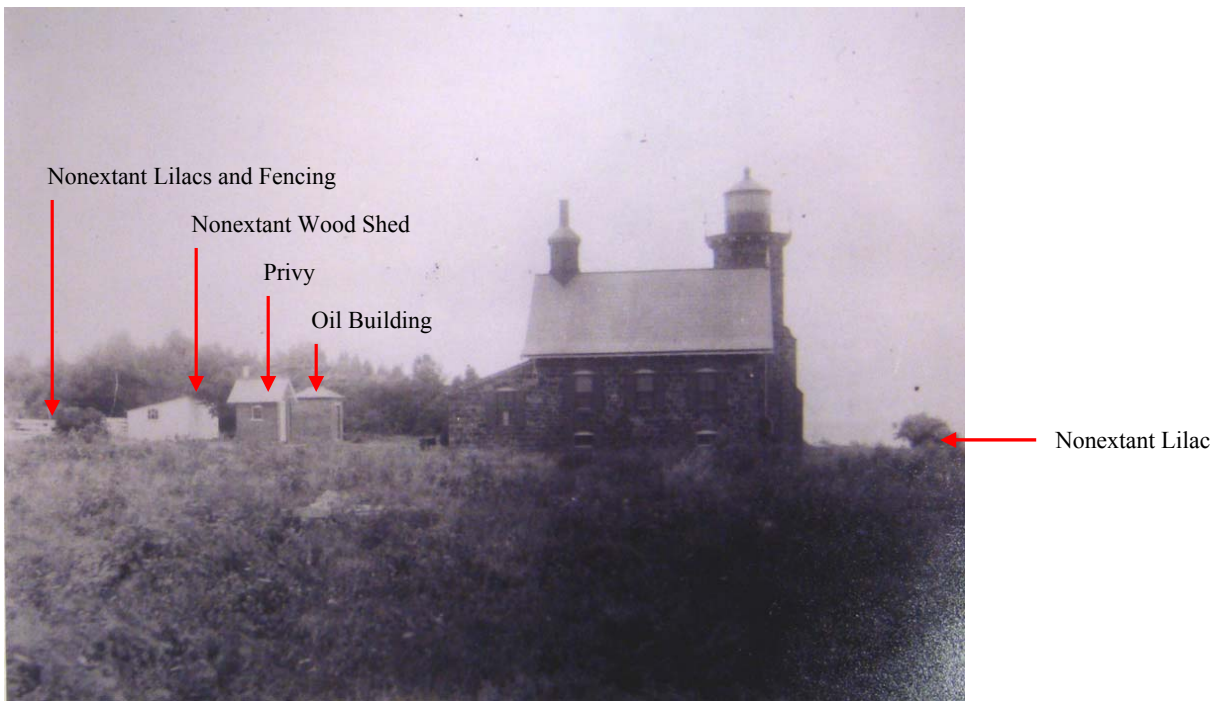


2  
3 Site Image SI-01: Survey of Sand Island Light Station Reservation, c. 1887 (Source: NPS APIS Archives)





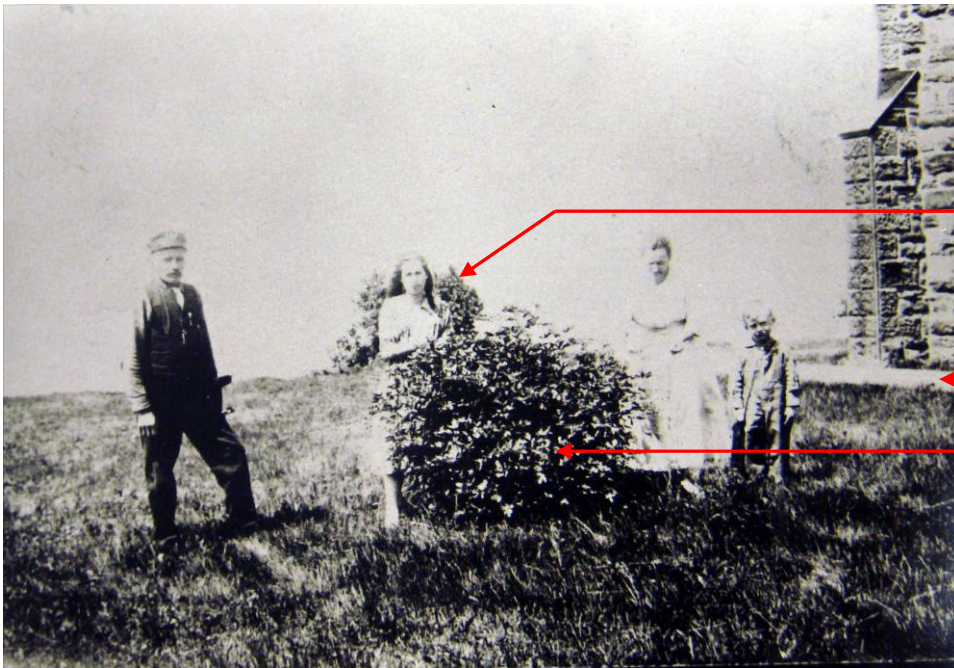
Site Image SI-02: Sand Island Light Station from Lake Superior, c. 1891 (Source: NPS APIS Archives)



Site Image SI-03: Sand Island Light Station showing, from left, the fenced garden, Shed, Privy, Oil Building and Light Station Quarters. Note the extent of the clearing, c. 1913 (Source: NPS APIS Archives)



Site Image SI-04: Sand Island Light Station Quarters showing north entry steps and wooden plank walk, c. 1905-1909 (Source: NPS APIS Archives)



Nonextant Lilac

Concrete Walk

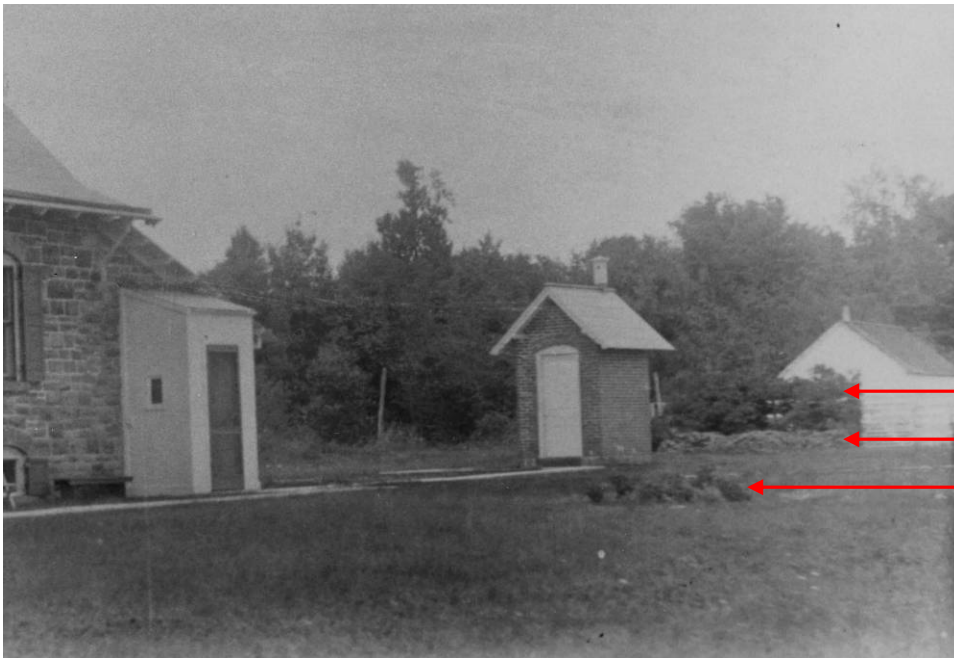
Nonextant Lilac

Site Image SI-05: Sand Island Light Station showing from right, northwest corner of Light Station Quarters, concrete walk, and two lilac bushes, one in the foreground, and one in the background along shoreline, c. 1913 (Source: NPS APIS Archives)



Privy  
Nonextant  
Tool Shed

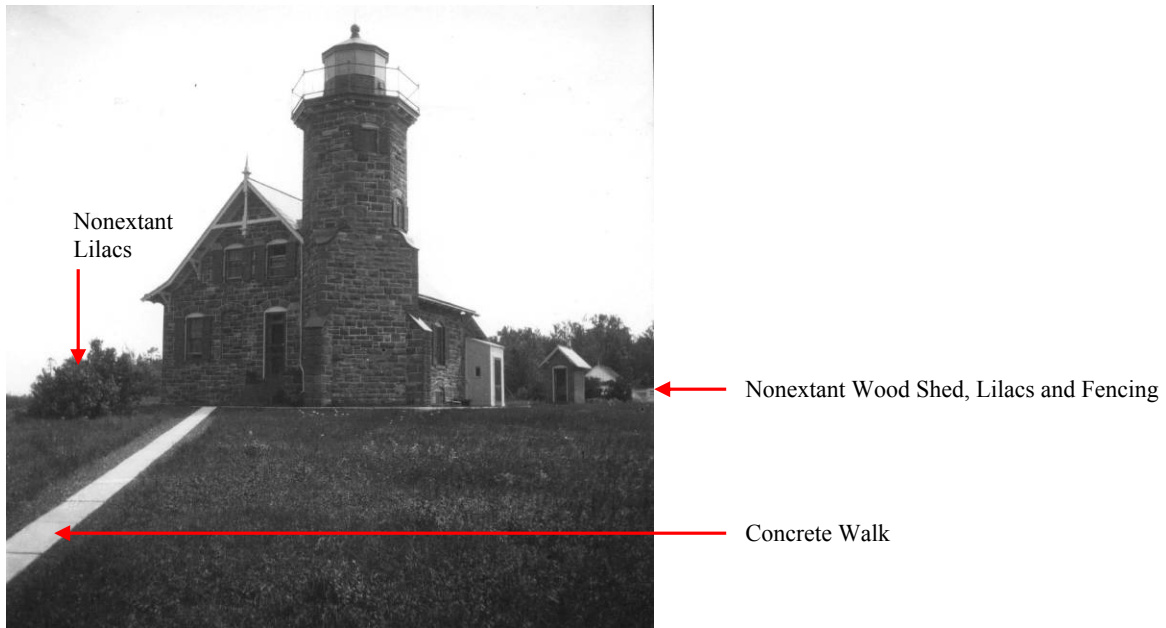
Site Image SI-06: Sand Island Light Station viewed from the northwest, c. 1913 (Source: NPS APIS Archives)



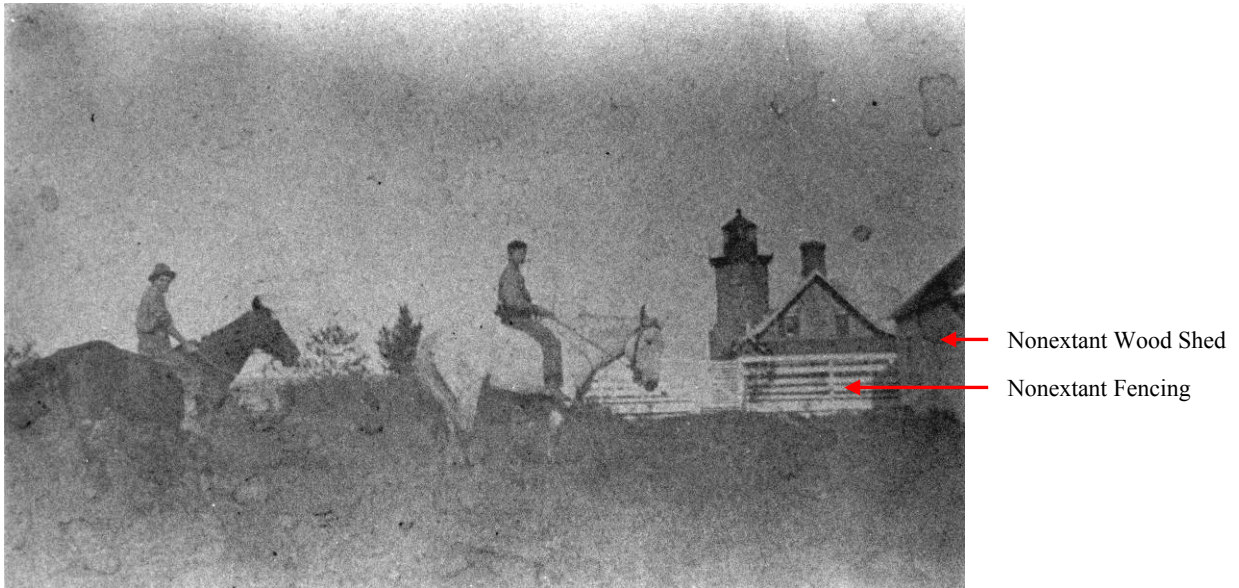
Lilacs  
Vinca  
Small Planting  
Bed

Site Image SI-07: Enlargement of SI-06, above; Sand Island Light Station viewed from the northwest, c. 1913 (Source: NPS APIS Archives)

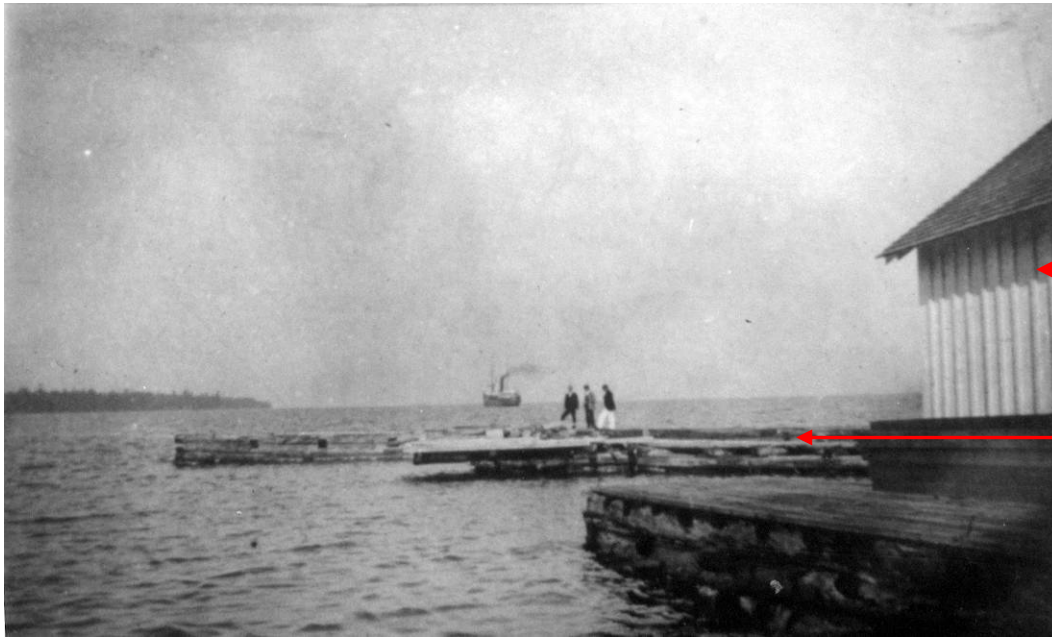




Site Image SI-08: Sand Island Light Quarters from the north, date unknown (Source: NPS APIS Archives)



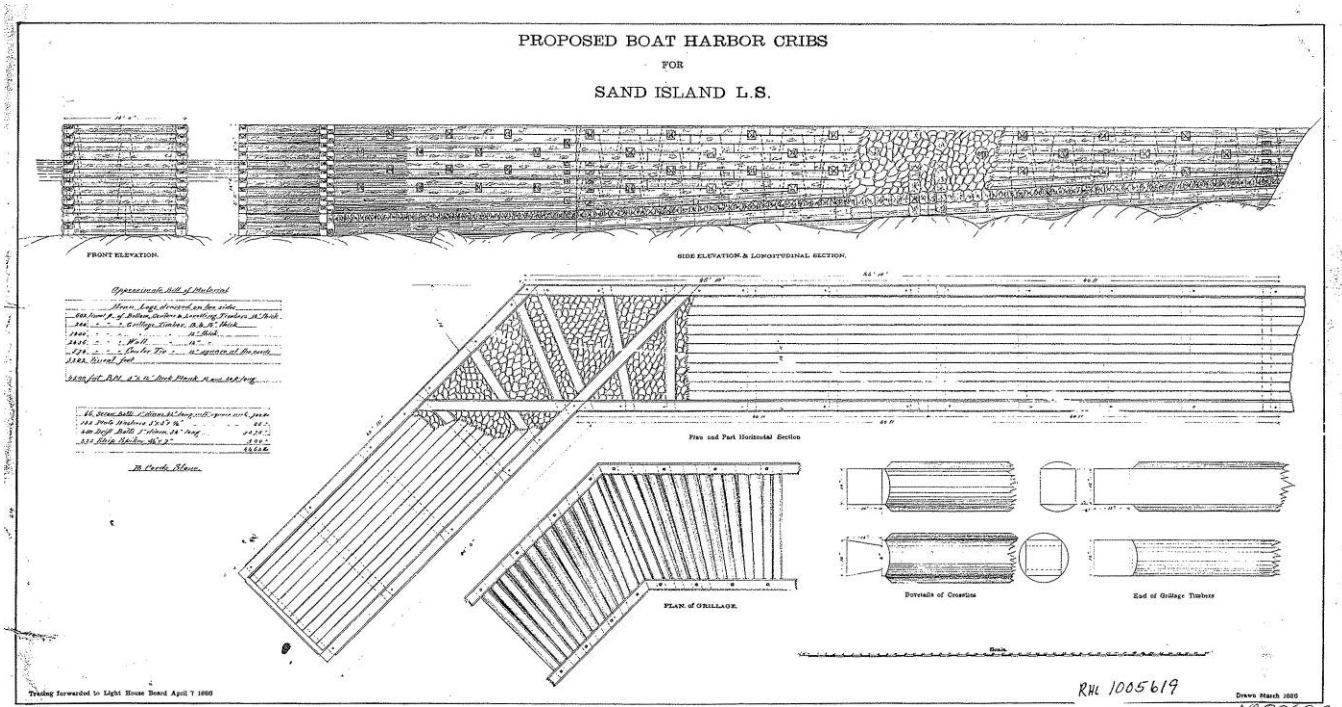
Site Image SI-09: Clearing south of Light Station Quarters, note fencing and Tool Shed to right, date unknown (Source: NPS APIS Archives)



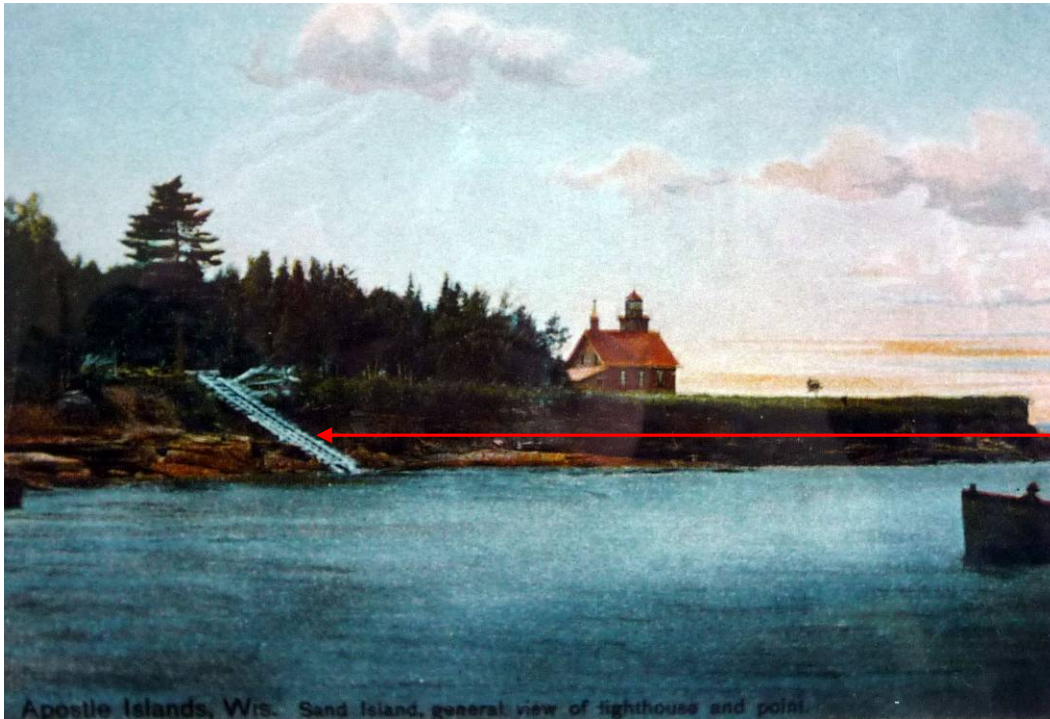
Nonextant  
Boathouse

Nonextant  
Boat Dock

Site Image SI-10: Boat harbor showing the Boathouse and Dock, c. 1904 (Source: NPS APIS Archives)



Site Image SI-11: Proposed Boat Harbor Cribs and Dock (pictured above in Site Image SI-10), 1886 (Source: NPS APIS Archives)



Nonextant  
Wooden Boat Ramp

Apostle Islands, Wis. Sand Island, general view of lighthouse and point.

Site Image SI-12: Illustration showing wooden boat ramp landing southeast of Light Station Quarters, date unknown  
(Source: NPS APIS Archives)



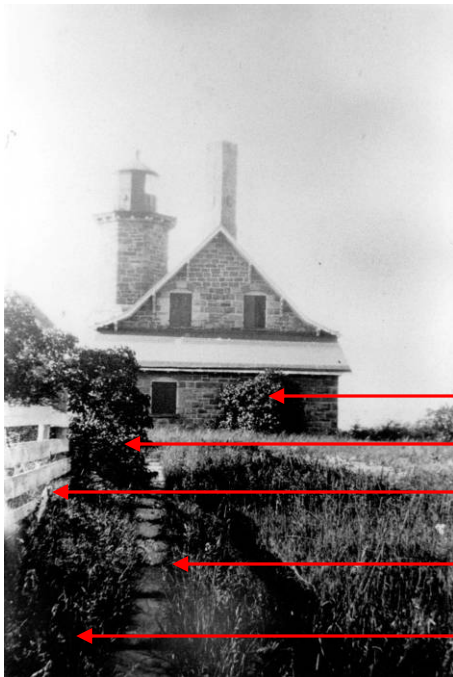
## Summer Home Period (1922-1975)

After automation of the light (1921), the need for a full time keeper on the Island was eliminated and the keeper was transferred to another light station.<sup>21</sup> The light station at Sand Island was monitored and periodically serviced by the Raspberry Island light keeper. However, the light station was not left vacant. After a few years, the Light Station Quarters was annually leased as a summer residence until 1975.<sup>22</sup> Between 1925 and 1945, the property was leased by Gertrude Wellisch as a summer home.

During this period, the primary physical changes were deterioration of the boathouse site and garden area of the light station as well as the encroachment of the forest into formerly cleared areas of the light station grounds. Drawings from c. 1936 note that the Boathouse and breakwater were considered 'ruins,' as was the garden area, Wood Shed and Tool Shed.<sup>23</sup> The garden area remained somewhat clear of forest vegetation during this period as noted in a 1938 aerial photograph. Historic photographs indicate that the initial clearing of the light station grounds began to fill in as forest vegetation encroached beginning after automation of the light in 1921.

The most notable physical change was the addition in 1933 of a 40 foot tall steel frame light tower in the front of the Light Station Quarters. The light was removed from the original tower in the Light Station Quarters, and a new light was placed onto the steel frame tower (Sand Island Light Tower).

## Summer Home Photographs



Lilac

Lilac

Nonextant Fencing

Concrete Walk, Note Encroaching Vegetation

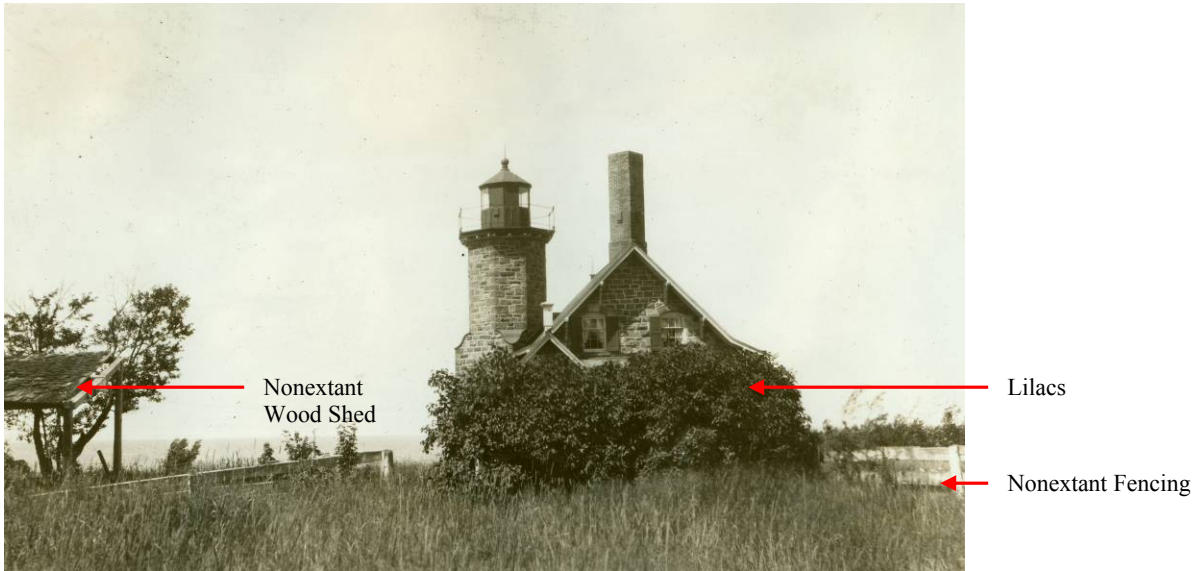
Vinca

Site Image SI-13: Sand Island Light Quarters from the south, c. 1921 (Source: NPS APIS Archives)

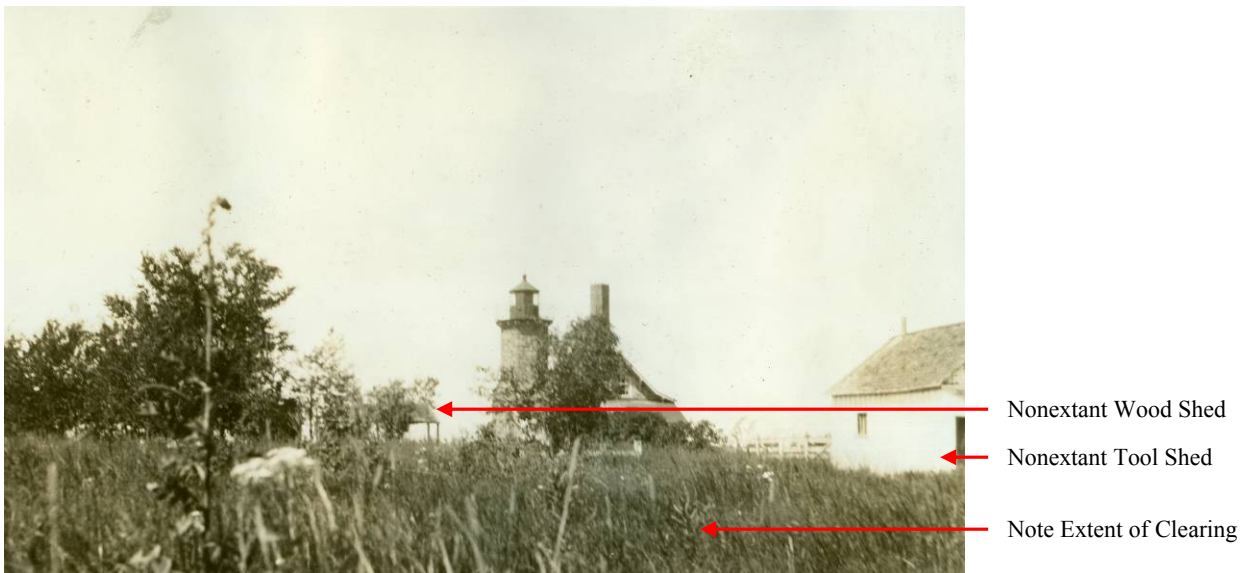
<sup>21</sup> (ibid, page 132)

<sup>22</sup> (ibid, page 25)

<sup>23</sup> (Drawing Reference, USCG, Sand Island Light Station Plot Plan, c. 1936)

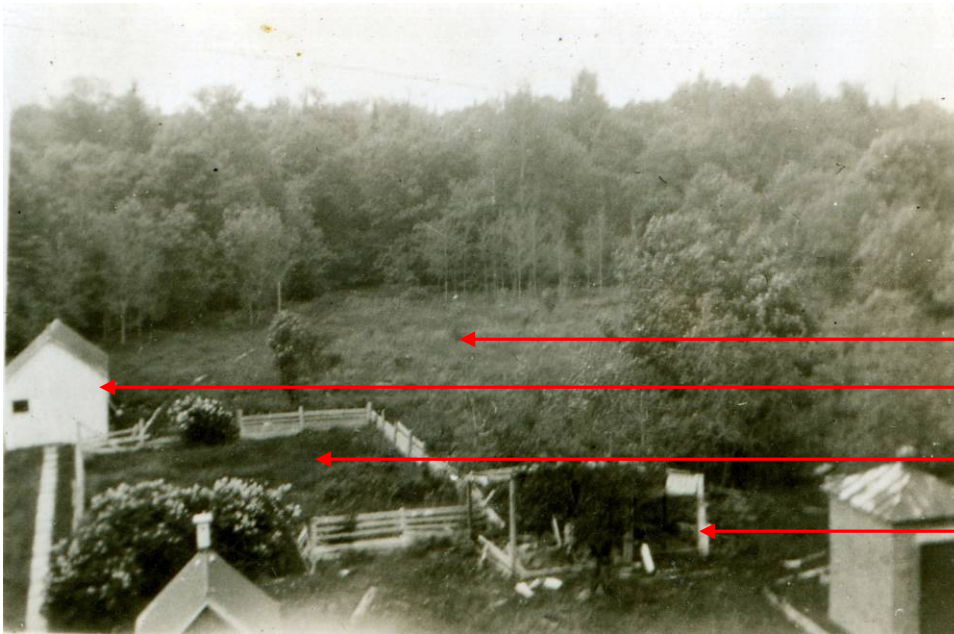


Site Image SI-14: Sand Island Light Quarters from the south. Note lilacs, fencing and Wood Shed (remnant by this period), c. 1925-1939 (Source: Gertrude Wellisch Collection)



Site Image SI-15: Sand Island Light Quarters from the south. Note clearing and Tool Shed at right, and Wood Shed (remnant by this period), c. 1925-1939 (Source: Gertrude Wellisch Collection)





Note Extent of Clearing

Nonextant Tool Shed

Note Garden Area

Nonextant Wood Shed

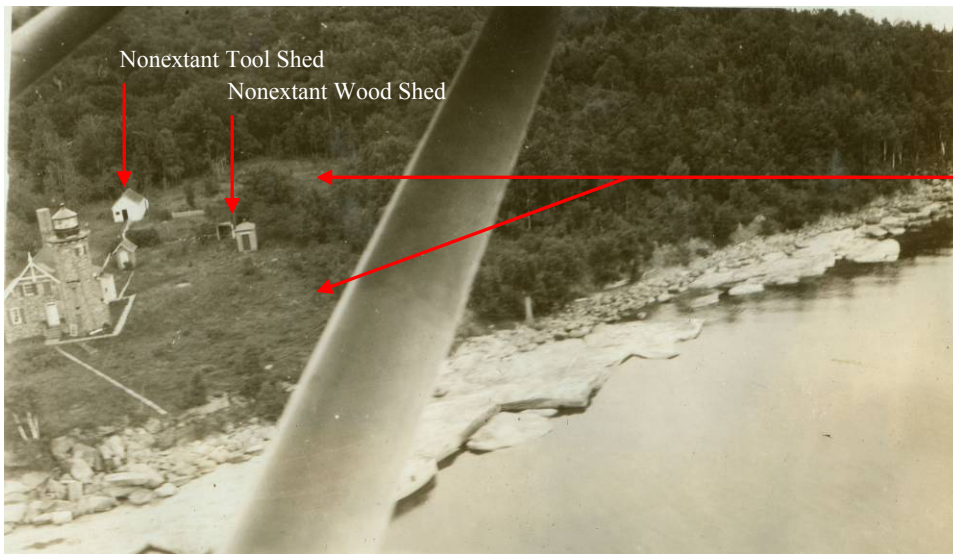
Site Image SI-16: Sand Island Light Quarters from the Light Station Quarters Tower. Note clearing, Tool Shed, Garden Area, Lilacs, Fencing and Wood Shed (remnant by this period), c. 1925-1939 (Source: Robert Wellisch Collection)



Note Ladder from North Landing

Site Image SI-17: North Landing, c. 1925-1939 (Source: Gertrude Wellisch Collection)

1



Note Extent of Clearing

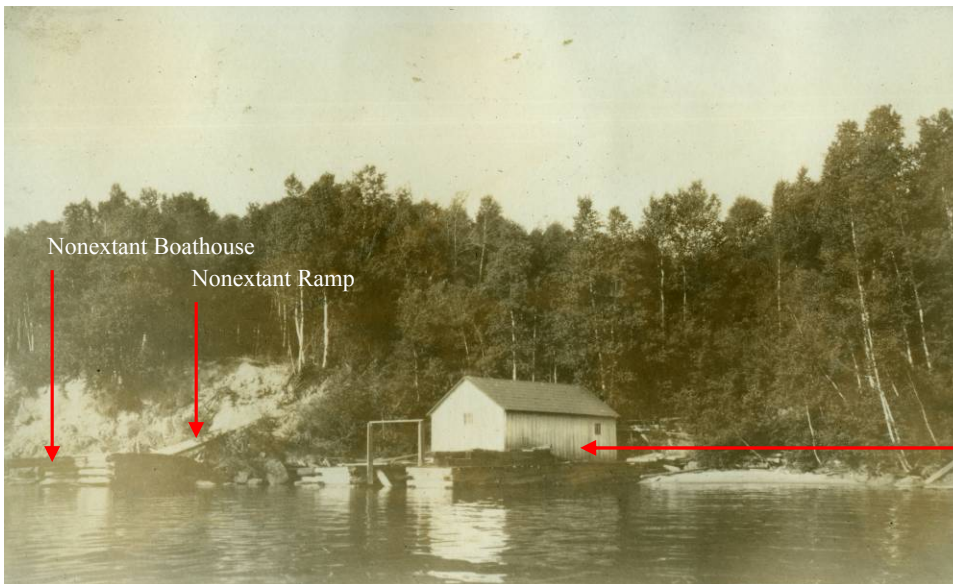
2

3

4

*Site Image SI-18: Sand Island Light Quarters from north. Note clearing to the south, Tool Shed, and Wood Shed, c. 1925-1939 (Source: Robert Wellisch Collection)*

5



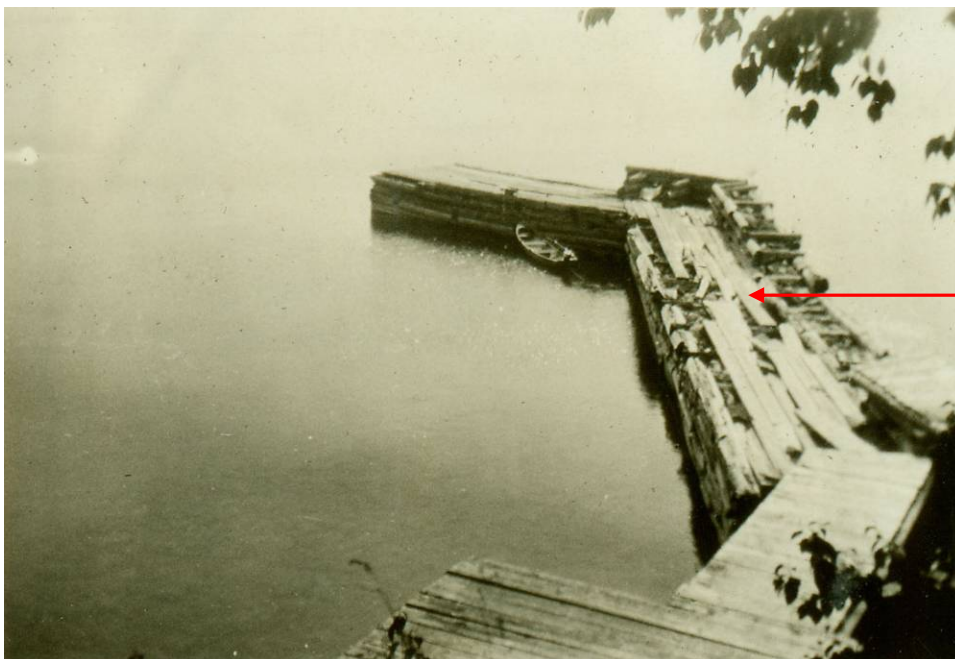
Nonextant Boathouse

6

7

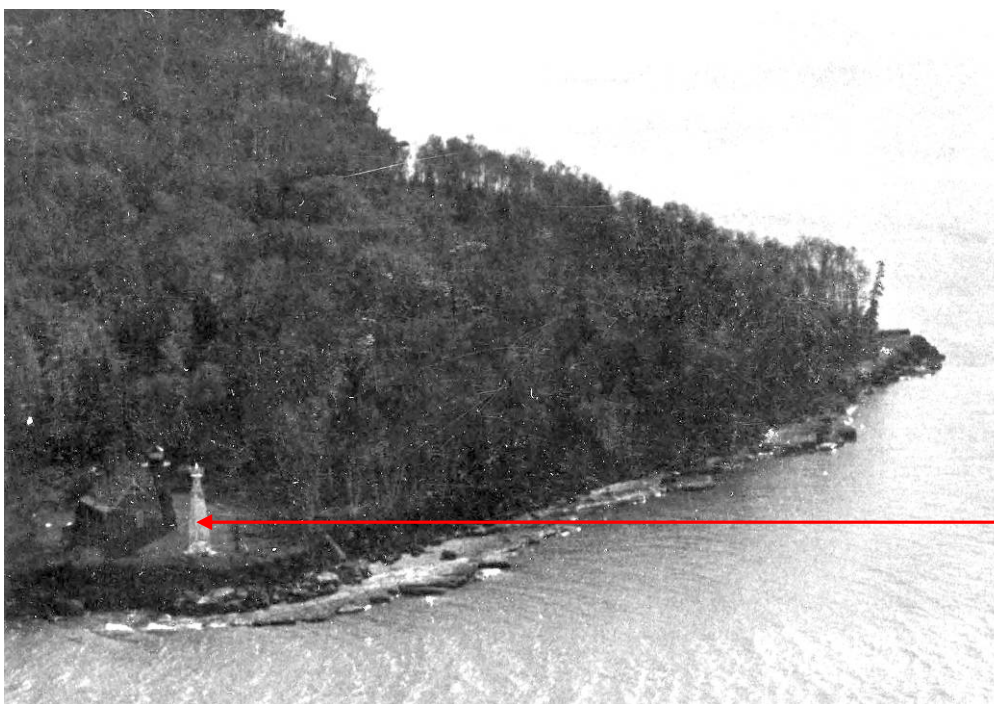
*Site Image SI-19: Boathouse site from west, 1925-1939 (Source: Gertrude Wellisch Collection)*

8



Nonextant Boat Dock

Site Image SI-20: Boat dock at Boathouse site from east, 1925-1939 (Source: Robert Wellisch Collection)



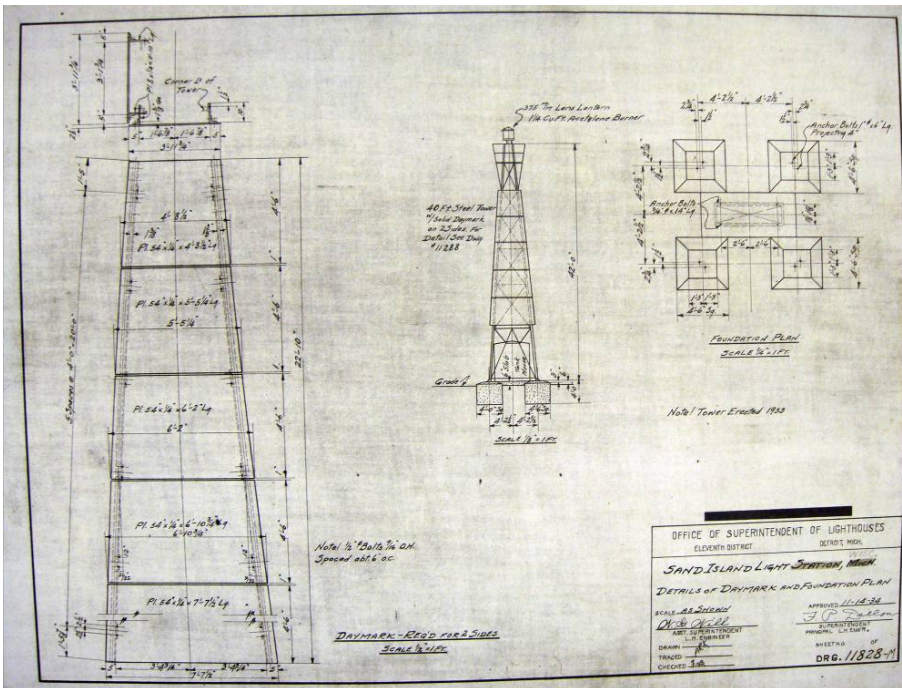
Nonextant Sand Island  
Light Tower

Site Image SI-21: Sand Island Light Station showing, from left, Light Station Quarters, and Sand Island Light Tower, date unknown (Source: NPS APIS Archives)





Site Image SI-22: Sand Island Light Tower, date unknown (Source: NPS APIS Archives)



Site Image SI-23: Sand Island Light Tower drawings, 1934 (Source: NPS APIS Archives)

## **Coast Guard (1939 – 1969)**

In 1939, the United States Bureau of Lighthouses was eliminated and the United States Coast Guard (USCG) assumed responsibility for navigation management of the light stations. The Sand Island Light Station had been automated in 1921, and its management stayed consistent with the station remaining unmanned during this period. Leasing of the Light Station Quarters as a summer residence continued through this period. Between 1953 and 1975, the property was once again leased by a single entity, A.D. Hulings.

Limited additions occurred on the light station grounds during this period. The primary physical changes were associated with the loss or deterioration of features including garden fences, and the Wood and Tool Sheds, which were remnant structures by this time. The light station grounds, which were previously open clearings of brush and mown lawn, began to infill with encroaching forest vegetation. This began when the station was automated in 1921. Historic photographs show that in 1939 forest encroachment had occurred, but the garden area south behind the Light Station Quarters remained generally clear.<sup>24</sup>

The population of Sand Island changed during this period. Farming on the island became less profitable and more difficult in the 1940s. By 1944, the last year-round residents left Sand Island, and it was occupied only in the summer by fishermen and vacationers.<sup>25</sup>

## **National Park Service (1970 to present)**

In 1970, the Apostle Islands National Lakeshore was established. This is the beginning of the NPS period that continues to present day. This period opened the island to additional visitors and brought about changes that primarily related to island access, recreation and visitor use. Leasing of the Light Station Quarters as a summer residence was discontinued in 1975.

Changes during this period include the construction of the wooden staircase from the light station grounds down to the rocky ledge of the North Landing. The steel frame tower was removed in 1985; the footprint of its concrete footings can be seen today. The NPS cleared a portion of the areas west and east of the Light Station Quarters in 1992, removing the trees that obscured the vistas towards the light station grounds. The vegetation removal was repeated to a lesser extent in 2005. The lawn adjacent to the Light Station Quarters was regraded to prevent flooding. Additions included park signage, a solar panel, an NPS vault toilet and minor maintenance on the buildings and structures. The NPS continues installation of and improvements to the footpath that begins at the south edge of the extant historic concrete walk and extends to a point overlooking the boathouse site, and continuing to the East Bay Landing.

<sup>24</sup> 1938 Aerial Photographs, APIS Archives

<sup>25</sup> (People and Places: A Human History of the Apostle Islands; Historic Resource Study of Apostle Islands National Lakeshore, page 27).

## 1 ENVIRONMENTAL CONTEXT

2 Sand Island is 2.8 miles long and 2.8 miles wide and is 2,949 acres. The maximum elevation above the lake  
 3 is 58 feet.<sup>26</sup> The presettlement forest on Sand Island was balsam fir, birch, sugar maple, white pine, white  
 4 cedar, spruce, and hemlock.<sup>27</sup> Presently, the most common trees are yellow birch, balsam fir, white birch,  
 5 white cedar, and red maple. Canada yew and mountain maple are abundant in the understory. The  
 6 lighthouse reservation on Sand Island escaped commercial logging, and is one of several old growth forests  
 7 in the park. The old growth remnant at the northern tip of Sand Island is notable for its extremely large  
 8 white pine trees. The elements of boreal forest also occur on Sand Island. Wetlands are associated with  
 9 bogs in the interior of the island. Sand Island did not have a resident deer population until recent years.  
 10 Deer browse on Sand Island is now threatening the Canada yew plant community on the island. The  
 11 lighthouse grounds have been maintained for decades, and several exotic species are present including  
 12 common periwinkle and gill-over-the-ground (*Glechoma hederacea*).<sup>28</sup> A lawn is still present, but most  
 13 vegetation clearing activities around the light station were last conducted in the early 1990s, and the area  
 14 has revegetated with balsam fir.<sup>29</sup> A number of uncommon plants are found on the Orienta formation  
 15 brownstone ledges southeast of the lighthouse, including bird's eye primrose, harebell, ninebark, red osier  
 16 dogwood, and long-beaked willow (*Salix bebbiana*).<sup>30</sup>

17  
 18  
 19 As with the other islands, wildlife on Sand Island is not as diverse or abundant as that on the mainland.<sup>31</sup>  
 20 Common mammal species include red squirrel (*Tamiasciurus vulgaris*), snowshoe hare (*Lepus*  
 21 *americanus*), deer mouse (*Peromyscus maniculatus*), masked shrew (*Sorex cinereus*), beaver (*Castor*  
 22 *canadensis*), and boreal redback vole (*Clethrionomys gapperi*). White tailed deer have become common  
 23 following the recent establishment of the population on Sand Island. River otter is a less common species  
 24 found on Sand Island.<sup>32</sup> Sand Island is also one of three islands with reproducing populations of black  
 25 bear.<sup>33</sup> A variety of migratory birds use the island for foraging, nesting, and as a stop-over during  
 26 migration.  
 27

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<sup>26</sup> National Park Service (NPS). 2006. Apostle Islands National Lakeshore Website. Island Statistics. Last updated August 23, 2006. Available at <http://www.nps.gov/apis/parkmgmt/upload/island%20statistics.PDF>. Accessed December 7, 2009.

<sup>27</sup> Judziewicz and Koch 1993

<sup>28</sup> Judziewicz and Koch 1993

<sup>29</sup> NPS 2009

<sup>30</sup> Judziewicz and Koch 1993

<sup>31</sup> *ibid*

<sup>32</sup> *ibid*

<sup>33</sup> *ibid*