Lights of the Apostles

Lighting the Lanes

Apostle Islands National Lakeshore's six light stations have been guiding ships on their passage through the area since the second half of the nineteenth century. These lighthouses have played a significant role in Great Lakes shipping and in the development of the region's quarrying, lumber, and ore industries.

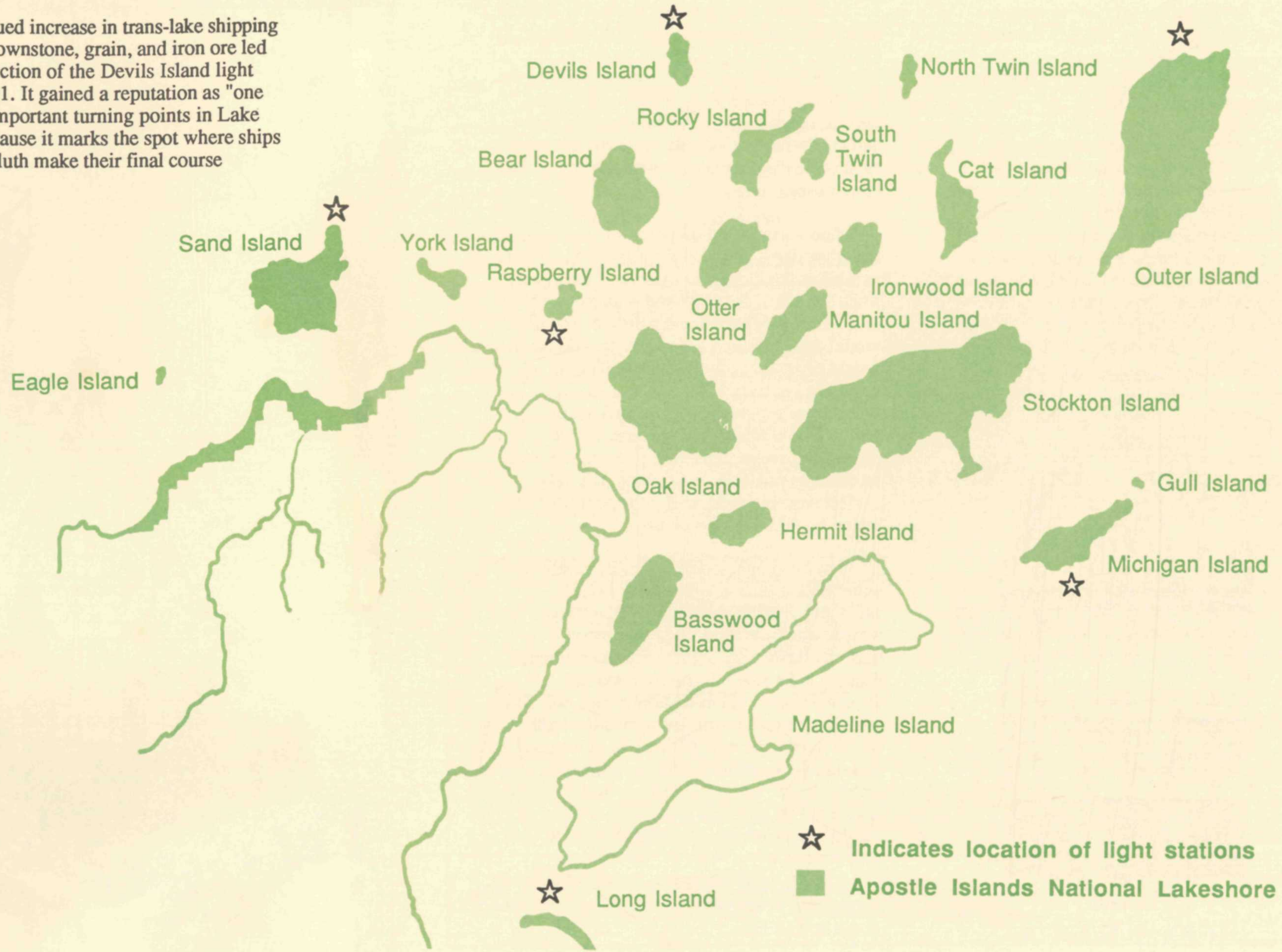
Before 1855, Lake Superior shipping was almost entirely local. The treacherous rapids at Sault Ste. Marie prevented all boats, except those that could be portaged, from entering into inter-lake commerce. But with the opening of the "Soo" canals in 1855, Lake Superior became the western end of a one thousand mile long water highway.

The Apostle Islands' first light station was authorized in 1852. It was to be placed on Long Island to mark the south channel for boats approaching from the east. This light was mistakenly constructed on Michigan Island, however, in 1857. The La Pointe light, a "frame dwelling surmounted by a wooden tower", was built on Long Island the next year after the mistake was discovered. In 1863, the Raspberry Island light began guiding vessels through the west channel to the harbors at La Pointe and Bayfield.

The arrival of the railroad in Duluth and Superior increased their importance as shipping points for grain and lumber. More ships began passing to the north of the islands en route to the head of the lake. A light station was built on Outer Island in 1874 to help guide this traffic. Meanwhile, ships bound from Duluth for the west channel through the Apostle Islands were having difficulty seeing Raspberry Island light before they were abreast of Sand Island. To solve this problem a light station was added on Sand Island in 1881.

A continued increase in trans-lake shipping of lumber, brownstone, grain, and iron ore led to the construction of the Devils Island light station in 1891. It gained a reputation as "one of the most important turning points in Lake Superior" because it marks the spot where ships bound for Duluth make their final course change.

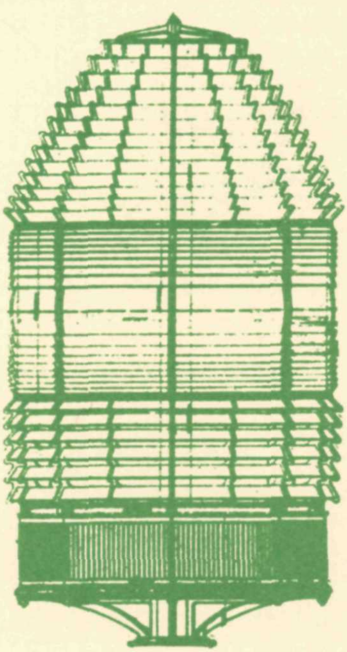
Light Stations of Apostle Islands National Lakeshore



Keeping the Light

A light station exists for one primary purpose: to provide a brightly burning light for mariners to see. Consequently, the lightkeepers' work and their lives centered on maintaining the light.

The most important element of the light was the lens. All Apostle Islands lights used Fresnel lenses manufactured in France. Designed by Augustin Fresnel, the lens uses prisms to concentrate and magnify the light rays from a flame, producing a bright light visible over a great distance. There were seven different orders of lens, varying in size and magnification. The large lenses (first or second order) were used as coast lights while the smaller ones were used for harbors or shipping lanes. Apostle Islands lenses varied from third to fifth order in size.



A first order Fresnel Lens.

A Fresnel lens was illuminated by a single lamp having from one to four concentric wicks, the larger lenses requiring the greater number of wicks. Kerosene was the most commonly used fuel. It was hauled laboriously up the tower steps as needed. Later, incandescent oil vapor lamps (similar to Coleman lanterns) became the most sophisticated flame source developed for lighthouses.

The various fuel oils used in the lamps produced smoke that would dirty and cloud the lens as well as the lantern (windows of the tower). Each day all of the glass and brass parts of the lens would be cleaned and polished. The lamp would need cleaning and, every two weeks, it would be replaced by another so it could be boiled in lye to remove all the soot. Daily, the wicks were trimmed, checked, and adjusted perfectly. The windows were washed, the stairwell dusted and swept, the entire light station made as clean as possible. Everything had to be in perfect working order and the light ready to be tested by 10:00 a.m. each day.

The head lightkeeper generally shared the duties of the station with one or more assistants. During the night shift, a keeper would watch the light, time the interval between flashes (on lights with intermittent signals) to be sure the pattern remained consistent, and relight it should it go out. The clockwork mechanism that turned the light would have to be wound every three hours. This was much like adjusting the weights on a cuckoo clock, but the weights were 100 pounds or more. The light had to be kept burning from one-half hour before sunset until one-half hour after sunrise.

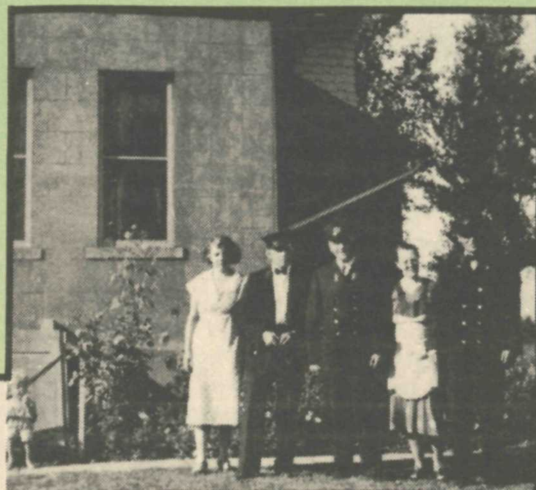
For this hard and tedious work, a lightkeeper was paid an average of $600.00 per year in the late 1800's.

Lightkeepers' Lives

The Apostle Islands light stations were favored duty stations for lightkeepers and their families for a number of reasons. The seasonal nature of the jobs meant moving back to town in the winter for a more normal life with family, friends, neighbors, church, and school. Lightkeepers on the ocean were not so fortunate; they worked all year. The islands had a good bit of land for the keeper and his family to explore, hunt, and use for gardens and the lake supplied fish to eat and sell. Salt water was not something the Great Lakes lightkeepers had to battle in their efforts to keep the brass polished and the iron rust-free.

Life at the light stations was not always lonely. Fishermen would come by, other keepers might row over for a visit, or loggers might have camps on the island (as at Michigan and Outer). Light tenders, such as the U.S.L.H.S. Marigold, frequently delivered supplies, and occasionally lighthouse inspectors, to the various Apostle Islands light stations.

Gardening provided a favorite pastime at Raspberry and Michigan Islands. The Lighthouse Service provided the stations with rotating libraries. Some of the stations had phonographs; other keepers made their own music. Berry picking, croquet, hunting, exploring, or making a trip into town were all ways to use leisure time.



(above) Devils Island lightkeepers, 1939. (left) Tending the gardens at Raspberry Island in 1922.

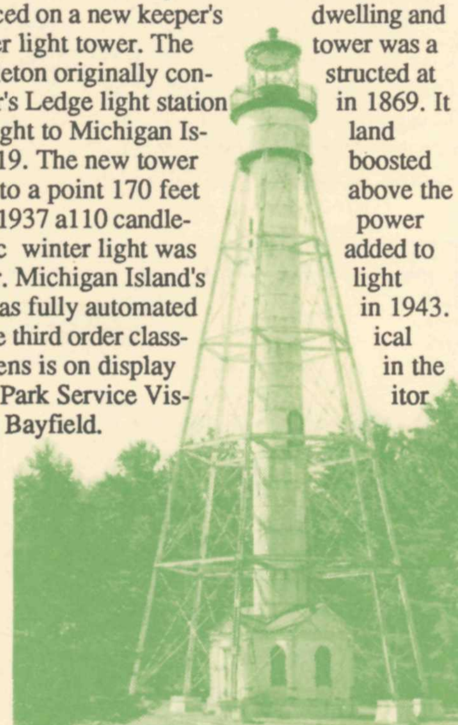
Michigan Island Light

Bayfield Heritage Association photo

The Michigan Island light is surrounded by mystery. There is no record of authorization for the light station that was completed on the island in 1857. Michigan Island's stuccoed stone tower and attached dwelling fits the description of the structure supposedly built on Long Island at that time. It is now assumed that the light originally intended for Long Island was, through some misunderstanding, built instead on Michigan Island. After one year of operation, the light was extinguished in 1858 when Long Island's La Pointe light went into service. In 1869 the Lighthouse Board was petitioned to re-establish the light on Michigan Island to help illuminate the eastern approach to the Apostles.

The Michigan Island light station is reminiscent of the simple, unornamented lighthouses of the Atlantic Coast. The small, one and a half story keeper's dwelling is constructed of rough stone. Attached to the south end of the dwelling is the conical light tower, also made of stone. The exterior walls of both buildings have been stuccoed and whitewashed. The roof on the keeper's dwelling is a single gable with one dormer on each side and is covered with wooden shingles. Inside the light tower is a circular stairway with three windows, and at the top is a railed exterior walkway.

Michigan Island light station was originally equipped with a third order Fresnel lens. The stone tower placed the light 129 feet above water level. An incandescent oil vapor lamp illuminated the lens from 1914 until an electric generator was installed on the island in 1928. The new electric lamp had a candlepower of 24,000. The generator also powered a radio beacon which was introduced in 1929. This was also the year when construc-tion commenced on a new keeper's dwelling and on a taller light tower. The tower was a steel skeleton originally constructed at Schooner's Ledge light station in 1869. It was brought to Michigan Island about 1919. The new tower boosted the light to a point 170 feet above the lake. By 1937 a110 candlepower automatic winter light was added to the tower. Michigan Island's light station was fully automated in 1943. Today the third order classical Fresnel lens is on display in the National Park Service Visitor Center in Bayfield.



La Pointe Light

Congress authorized the placement of a lighthouse at La Pointe on Madeline Island in 1852. At that time most ships were approaching La Pointe from the east, using the south channel between Madeline and Long Island. It was suggested that a location on Long Island would be a much better position from which to illuminate the south channel. A contract to build the La Pointe lighthouse on Long Island was signed in July, 1854. For unknown reasons it appears that this lighthouse was mistakenly built on Michigan Island. The problem was noted in 1857 and, since there is no record of expenditures to cover another lighthouse, it is quite possible that the contractor was required to build the new La Pointe light at his own expense. A "wood tower on a wood dwelling" was constructed on Long island and ready for operation in 1858.

The original La Pointe light was built about one quarter mile east of the island's tip. It was a small clapboard house on a foundation of squared timbers located a considerable distance from the shore.

A fog signal was added in 1892 several thousand feet east of the original dwelling. In 1895 the La Pointe light's fourth order lens was moved to a seventy foot skeleton tower located near the fog signal. At the same time the light station's dwelling was enlarged by raising it up and building a new brick first floor beneath it. 1895 was also the year that a forty foot light tower and a striking bell fog signal were established at the western tip of Long Island. This beacon, known as the Chequamagon Point light, was also under the control of the La Pointe keeper.

There were numerous changes at the La Pointe light station in the 1920's and 1930's. By 1924 the station had a radio fog beacon. Batteries, then generators, supplied power for the radio beacon and the keepers' dwelling. In 1938, a large new dwelling was constructed near the light tower east of the original quarters as a Works Progress Administration project. Finally, in 1964, the La Pointe light station became fully automated.

La Pointe light tower and keepers' dwelling.

Raspberry Island Light

The City of Bayfield was founded in 1856. It's natural deep water harbor helped it to quickly become an important port when the canal at Sault Ste. Marie opened Lake Superior to trans-lake shipping. About this same time, the twin ports of Superior and Duluth were founded at the west end of the Lake. As increasing numbers of ships navigated the waters of western Lake Superior it became important to mark the West Channel through the Apostle Islands to Bayfield. A request was made in 1859 to place a light on Raspberry Island for this purpose.

Construction of the light station was completed in 1863. The lighthouse was built at the top of a clay bank, forty feet above Lake Superior. It was a rectangular frame structure, sided with white clapboards and surmounted by the square tower that placed the light forty feet above the ground. A walkway surrounding the lantern was cantilevered on brackets from the exterior of the tower.

The light at Raspberry Island was supplied with a fifth order Fresnel lens. In 1891 flash panels were installed on the lens to produce a bright flash every ninety seconds. Construction began on a fog signal building for Raspberry Island in 1902. The red brick structure housed a ten inch steam whistle and a hoisting engine for the recently completed tramway. When additional personnel were assigned to the light station to operate the new equipment, additional housing became necessary. Workers transformed the original lighthouse to its present-day configuration in 1906-07. The converted structure is a duplex which housed the keeper and his family in the east half while the two assistants shared the west half.

In 1928, a 23 kilowatt diesel driven electric generator was installed at the station. Two diesel engines and two air compressors were installed in the fog signal building in 1933 to convert the steam whistle to a diaphone. The Raspberry light was fully automated in 1947. The fog signal was discontinued in 1952. Also, about this time, the Coast Guard removed the light from the tower and replaced it with a smaller light in front of the fog signal building.

Bayfield Heritage Association photo

Original design of the Raspberry Island Light.

The lighthouse was redesigned in 1906.

Outer Island Light

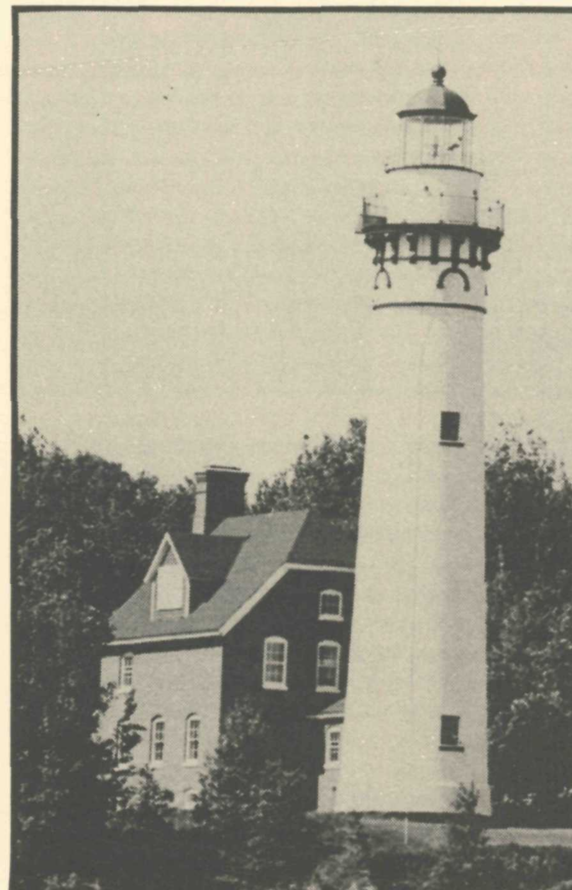
The growth of Duluth and Superior in the 1870's and 80's greatly increased the volume of lumber, grain, and later, iron ore being shipped on Lake Superior. As traffic between Duluth-Superior and the lower lakes grew, so did the demand for a lighthouse to guide lake-bound ships around the Apostle Islands. Recommendations were made in 1868 for a light station to be built on Outer Island. Although it took several years to be approved, the light station was in operation by the end of October, 1874.

The house and tower were made of brick; the tower reflected the bracketed Italianate style which was fashionable in the mid-19th century. The whitewashed tower was built with a circular iron staircase leading to a watchroom and outside walkway below the lantern.

The Outer Island light had a third order lens with six bullseye panels which produced a flashing white light. The focal plane was 130 feet above Lake Superior and 86 feet above the ground. The station's fog signal was a locomotive whistle,with coal fired boilers used to build up steam pressure.

The light station on Outer Island is exposed to the full fury of Lake Superior. Northeast gales are particularly fierce causing the tower to sway and spawning waves that eat away at the clay banks below the lighthouse. Such storms forced the Lighthouse Board to move the original fog signal from the base of the cliff up onto the bank in July of 1875. A duplicate fog signal in a separate building was added in 1878. The steep bank at the lighthouse also made it difficult to haul goods up from the boat landing. A tramway that had washed away during the light's first year of operation was relaid in 1884. In 1900 both fog signals were consolidated into a single building and their boilers were replaced.

Modernization of the Outer Island light station began in 1913 when an incandescent oil vapor lamp was installed. In 1925 the steam fog whistle was converted to an air diaphone run by air compressors and diesel engines. Outer Island light was electrified in the late 1930's so it could operate automatically through the winter. The station was fully automated in 1961.



Sand Island Light

(far left) Sand Island Lighthouse.
(inset) Emmanuel Luick, his wife, and child. Luick was the keeper at Sand Island for 29 years.

Increased shipping between Duluth, Bayfield and Sault Ste. Marie created a need for additional aids to navigation in western Lake Superior. Mariners complained of the lack of lights between Duluth and Raspberry Island. Also, the Raspberry light was not readily seen from shipping lanes north of the islands. Congress recognized the necessity of a light on the western end of the Apostle Islands when it appropriated money for the Sand Island light in 1879.

The light station was finished late in the summer of 1881. Of all the Apostle Islands' lighthouses, Sand Island's is the only one constructed of locally quarried brownstone. The light tower is an octagon rising from the northwest corner of the dwelling. This lighthouse is an example of the Norman Gothic style; a style frequently associated with churches and town houses of the late 1800's.

A fourth order polygonal Fresnel lens with ten sides was placed in the tower on Sand Island. It produced a fixed white light with a focal plane fifty-six feet above Lake Superior. A boathouse and breakwater were built 1500 feet south of the lighthouse in a small cove off Lighthouse Bay. The Sand Island light had only two keepers during its period of manned operation: Charles Lederle from 1881-1891 and Emmanuel Luick from 1892-1921. When an acetylene light operated by an automatic clock was installed in 1921, keepers were no longer needed at the station.

In 1925, the Sand Island lighthouse was leased to private individuals for use as a summer home. This was an early example of the government's willingness to rent out unmanned lighthouses. These lease arrangements often helped preserve the dwellings, since renters would help maintain the buildings and grounds.

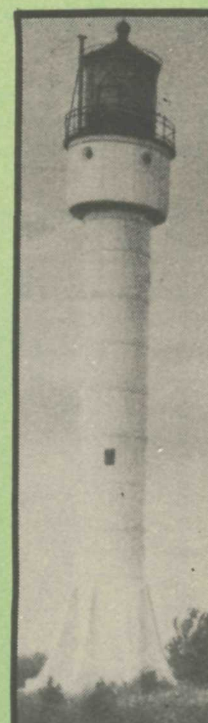
Devils Island Light

The final jewel was placed in the necklace of lights around the Apostle Islands when the beacon on Devils Island was lit in 1891. The light station was approved in 1888, but Congress did not appropriate sufficient funds for the entire project. A two-story, red brick, Queen Anne-style keeper's dwelling and a building for the steam fog signal were completed, but the light was placed in a temporary tower. The tower, made of wooden timbers, held a fourth order, nonflashing red light 87 feet above lake level.

A two-story, brick and shingle house similar in design to the keeper's dwelling was built for the assistant keepers in 1897. Work began on the permanent tower that same year. It was an 80 foot tall steel cylinder fabricated in Cleveland, Ohio. Although the tower was ready in the fall of 1898, there was a three year delay in supplying it with a lens. Finally, in April of 1901, a third order lens was acquired from the Paris firm of H. Lepaute.

The steam fog signal was replaced in 1925 with a compressed air diaphone and a radio fog beacon. Ships on the lake could use the time delay between the radio and audible signals to determine their distance to the station. In the early 1930's, the Devils Island light station became the first in the area to get a radio communications station.

Devils Island remained manned while the other Apostle Islands light stations were being automated. Upgrading the plumbing and heating systems in the keepers' houses were among the



Bayfield Heritage Association photo

(left) A temporary wooden tower housed the Devils Island light in 1891. The permanent tower (right) was not operational until 1901.

many improvements installed by the Coast Guard when they assumed responsibility for the light station. The crew at Devils Island was increased to five men and was given responsibility for monitoring the other island light stations.

When the Coast Guard automated Devils Island light station in 1978, it marked the end of over a century of lightkeepers tending lights in the Apostle Islands. Reliable automatic machinery provided a relatively inexpensive means of operating the lights. Technological advances (i.e. radar) decreased the importance of lights as navigational tools. These lighthouses, however, have acquired a significance beyond their importance to mariners. They represent a fascinating period in the historic development of the region. They also remind us of the brave men and women who tended these remote outposts to make life safer for sailors navigating the waters of the Apostle Islands.

Lighthouse Preservation

All six Apostle Islands light stations are listed on the National Register of Historic Places. The National Park Service has made a commitment to stabilize and preserve these light stations. Buildings at the various stations have been repaired, painted and are now being maintained. Efforts have been undertaken to stabilize eroding shorelines that threaten buildings at several of the stations. Historic photographs, drawings, and oral history materials are all being utilitized to restore the buildings, gardens, and grounds at the Raspberry Island light station to their early 20th century appearance. During the visitor season members of the ranger staff or volunteers may carry on the lighthouse keeping tradition at the various light stations. They conduct lighthouse tours, help maintain the buildings and grounds, and provide protection from vandalism.

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