

Au Sable Light Station



1920

Welcome to the Au Sable Light Station within Pictured Rocks National Lakeshore. We hope your visit is a pleasant one. Take a few minutes while you are at the light to read this brochure. Linger on the beach and listen to the waves pounding the beach. Think about the people who have lived here, and the stories they have told. Return on stormy days when the surf is up. Imagine ships rolling in the turbulent sweetwater sea of Lake Superior with the Au Sable beacon glowing in the night...

Coasting

Wild and unforgiving, Lake Superior has always filled sailors with dread. Howling storms, hull-smashing reefs, and deathly-cold water awaited unlucky mariners. Those that survived a wreck often found only bitter solace in their landfall.

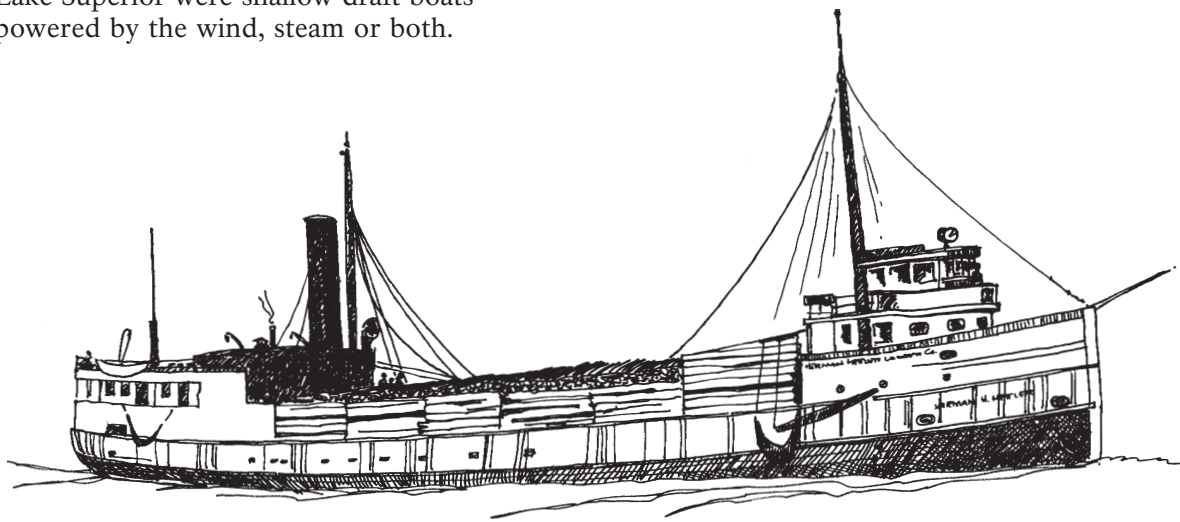
The portion of Lake Superior's coast within Pictured Rocks National Lakeshore typifies the wildness of the shoreline in the 1800s. Unsettled, with sheer cliffs, unbroken forests, dangerous reefs, mariners referred to the area as the "shipwreck coast."

With the discoveries in the 1840s of copper in the Keweenaw Peninsula and iron near Marquette, migration to the region increased dramatically. Lake traffic carrying raw materials to industrial centers downlake and immigrants uplake grew from a trickle to a flood with the opening of the Soo Canal in 1855.

The vessels that plied the blue waters of Lake Superior were shallow draft boats powered by the wind, steam or both.

Equipped only with compasses and a sailor's dead reckoning, ships' masters navigated by keeping land in sight. This practice was referred to as "coasting" and was common for ships bound from the "Soo" to Munising or Marquette. For steamers, both those with paddle wheels and propellers, frequent stops were necessary to pick up the cordwood needed to fire their boilers.

"Coasting" only added to the dangers of sailing Lake Superior. The interplay of land and water frequently produced intense fog along the coast. Dangerous reefs and looming headlands could place a ship in jeopardy in a matter of moments—hazards of sailing too close to the shoreline. Coasting also reduced a ship's maneuvering room. If a strong northerly blow came up, a ship under sail or steaming with an underpowered engine could be forced by wind and wave onto a shoal or beach, often resulting in the ship being battered to pieces.



Steamer Herman Hettler

Ship Trap

As early as 1622, when Pierre Esprit Radisson called it “most dangerous when there is any storms,” Au Sable Point was recognized as a hazard to Lake Superior mariners. The Point is actually a shallow reef of sandstone of the Jacobsville Formation which extends nearly a mile into Lake Superior. This reef, which in places lies only six feet below the surface of Lake Superior, was one of the greatest dangers a captain faced when coasting the south shore.

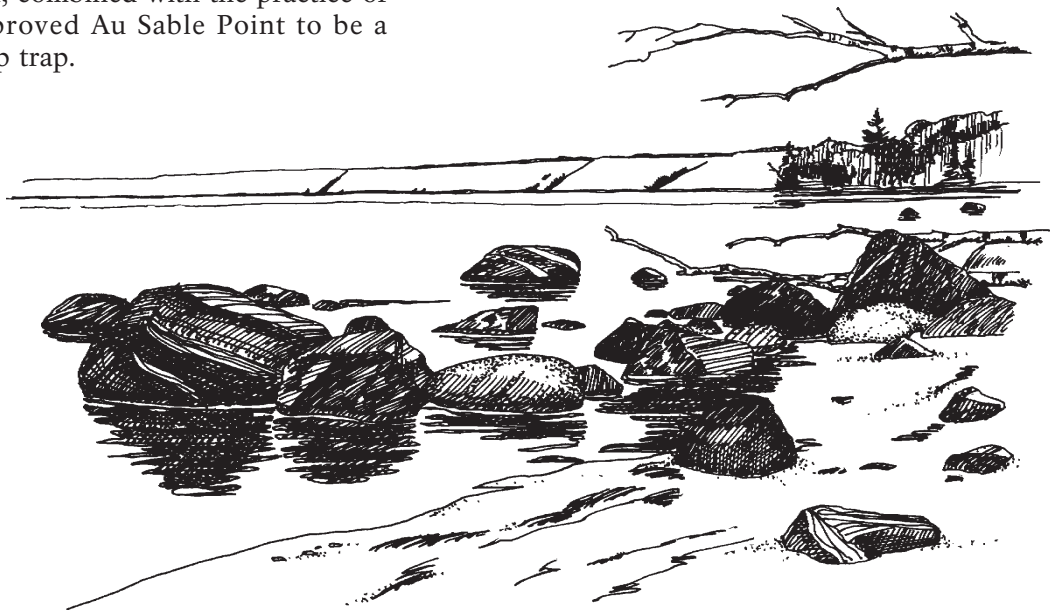
Besides the offshore sandstone reef, the area was infamous for thick fog caused by the interaction of cool lake air with warmer air rising from nearby Grand Sable Dunes. The resulting fog could completely obscure the shoreline, hiding the landmarks that lake captains of the 1800s used for navigation.

These factors of reef and fog, snow and north wind, combined with the practice of coasting, proved Au Sable Point to be a natural ship trap.

Shipwrecks and You

*Along the beach west of the Au Sable Light Station are the remains of three lake vessels trapped by the sandstone reef of Au Sable Point. These wrecks—from west to east the **Mary Jarecki**, **Sitka**, and **Gale Staples**—tell a poignant story of trial and loss and the dangers faced by those who sailed the Great Lakes.*

These pieces of shipwreck are a part of our nation’s heritage. Please do not deface or remove any of the wreckage as it is protected by law. Any person causing harm to these artifacts will be subject to a fine and possible imprisonment.



Grand Sable Banks and Dunes

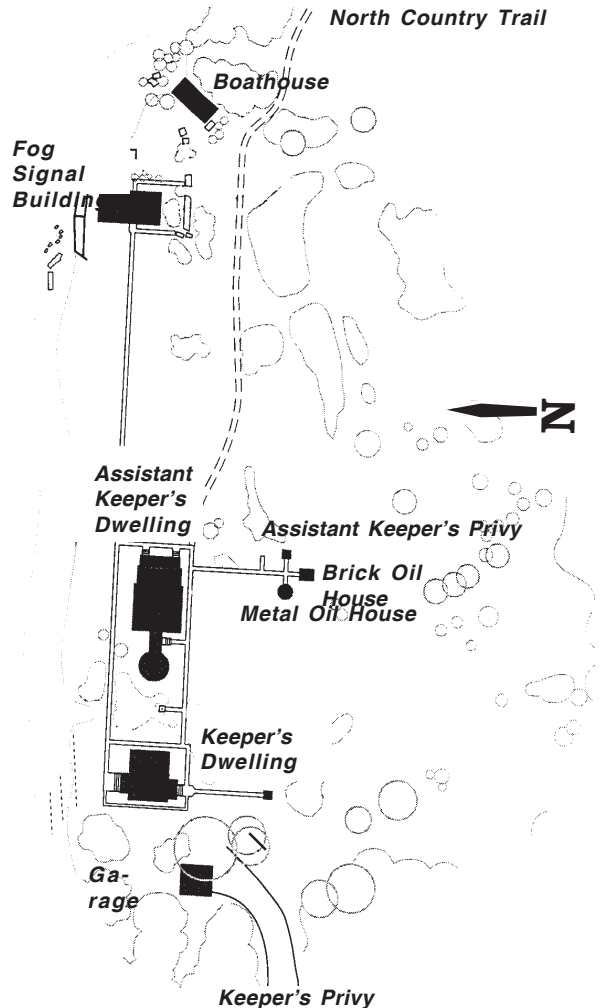
Station Layout

The Au Sable Light Station possesses a landscape that is a significant representation of a late-nineteenth and early twentieth-century Great Lakes light station. Layout of the Au Sable Light Station followed a utilitarian design based on organizational mandates of the time. Major buildings were connected by a network of sidewalks, linking not only the structures but the duties of the keepers.

As you stroll the grounds remember that the site has seen numerous changes over the years. Buildings have come and gone, and the nearby vegetation has changed. Keepers worked to maintain an opening near the structures so wildfire would not spread to the buildings. The National Park Service hopes to restore the vegetation to an early 1900s appearance in the next few years.

"It will be seen that Mr. Beedon states that he has made improvements in the nature of clearing the land around the lighthouse structures at the station where he has been employed, thus saving the public property from destruction when the surrounding forests have been on fire, for which service he thinks he is entitled to compensation."

Official response to a request for compensation by Keeper Beedon, 1879



North Country Trail

A Keeper's Life

Life for the keepers of Au Sable was generally one of routine and monotony. Isolated from civilization, the nearest village, Grand Marais, was 12 miles to the east by foot trail or 8 miles by boat. Those who could not appreciate or tolerate isolation did not last long. Even construction of the road to the station in 1939 did not end the feeling of isolation. Serving at Au Sable was, as an early Lighthouse Service inspector noted, "...just as isolated as if it were thirty miles from land."

As a general rule, lighthouse keepers were dedicated and professional. Those who became principal keepers achieved their stations through the seniority that came with years of service. His station was his responsibility; failure to keep it serviceable could threaten the property and the lives that passed by on the lake. His most critical responsibility—the lamp that must burn each night during the navigation season—accounted for only a small part of the work at Au Sable.

He must maintain the station's extensive physical plant that included the light tower, quarters, a fog signal and its housing, several utility structures, and a few acres of grounds. The Au Sable keeper was a mechanic, carpenter, painter, gardener, who often labored around the clock, seven days a week during Lake Superior's shipping season.

The keeper managed his accounts and the public property in his care, supervised one or more assistants, and kept his records religiously. One of those records was his journal. From those records, the story of life at Au Sable can be pieced together.

On December 8, 1876, for instance, Napoleon Beedon described the arrival of a violent and dangerous storm. A *"light bree[sic]"* from the south, he wrote, had been replaced at 5 p.m. by a *"frightful storm"* that *"blew down 50 trees or more close by the lighthouse"* and caused him to fear that *"the lighthouse and tower would blow down as they shook like a leaf[sic] the wind was N.H. West snowing and feesint[sic] it was the worst storm I ever saw on Lake Superior."*

While storms, shipwrecks, and the occasional visitor provided moments of excitement, boredom and loneliness were a far more common emotion. To help interrupt that boredom, light-house tenders delivered circulating libraries to stations along the Great Lakes. Au Sable received a library in 1878.



Keeper and Mrs. Arthur Taylor

Holidays presented particularly vivid reminders of isolation away from family and friends. During a rare year of occupation through the winter, Keeper Herbert W. Weeks wrote on December 26, 1897, "*This has been a very lonesome Christmas.*"

Besides reading, routine was used by the keepers and their assistants to stave off the effects of loneliness and boredom—and a poor evaluation by the district lighthouse inspector. Watch duty in the light tower and maintenance of the Fresnel lens and lamp consumed many hours each day. Crews painted the buildings almost yearly and kept them clean as possible. Maintenance on the tramway apparatus, fuel tanks, and engines, pipes, and boilers in the fog signal house also kept personnel busy. Because of its isolation, routine duties like getting supplies and mail also occupied a lot of time, as did grounds care and wood cutting.

Life at the station had its human, and sometimes sad side as well. On October 29, 1896, a cryptic entry in the station log noted that "*on the 29th day of Oct. Gus Gigandet, the principal Keeper died after an illness of 2 weeks.*" Two years later, Gigandet's successor, Herbert W. Weeks, had his own tragedy. The entry for September 30, 1898, recorded: "*The Principal Keeper left his Station to go to Grand Island at 8 a.m. for to Bury one of his Children. Partly Clear Fresh Breeze North West.*"

JOURNAL of Light-house Station at Big Sable

1897 MONTH	DAY	RECORD OF IMPORTANT EVENTS AT THE STATION, BAD WEATHER, &c
May	1	Cloudy Fresh Breeze North
	2	Clear Fresh Breeze North East
	3	Clear light Changeable Wind
	4	Clear fresh Breeze East
	5	Clear Fresh Breeze North East
	6	Clear Moderate Breeze North East
	7	Clear Moderate breeze North East
	8	Clear a gale from the South
	9	Rain Showers fresh breeze South West
	10	Clear light Changeable Wind
	11	Very Foggy Changeable Wind
	12	Foggy Fresh Breeze West
	13	Rain Showers Moderate Breeze N.E.
	14	Clear Fresh Breeze North East
	15	Clear Fresh breeze North East
	16	Clear Fresh Breeze West
	17	Clear light Changeable Wind
	18	Cloudy Moderate breeze South East
	19	Cloudy Changeable Wind
	20	Rain nearly all day
	21	Clear light Changeable Wind
	22	Rain Showers fresh Breeze South
	23	Rain Showers fresh Breeze West
	24	Clear fresh Breeze North West
	25	Clear light Changeable Wind
	26	Clear and Warm Moderate Breeze South
	27	Cloudy Rain Showers light Breeze South

Page from keeper's log

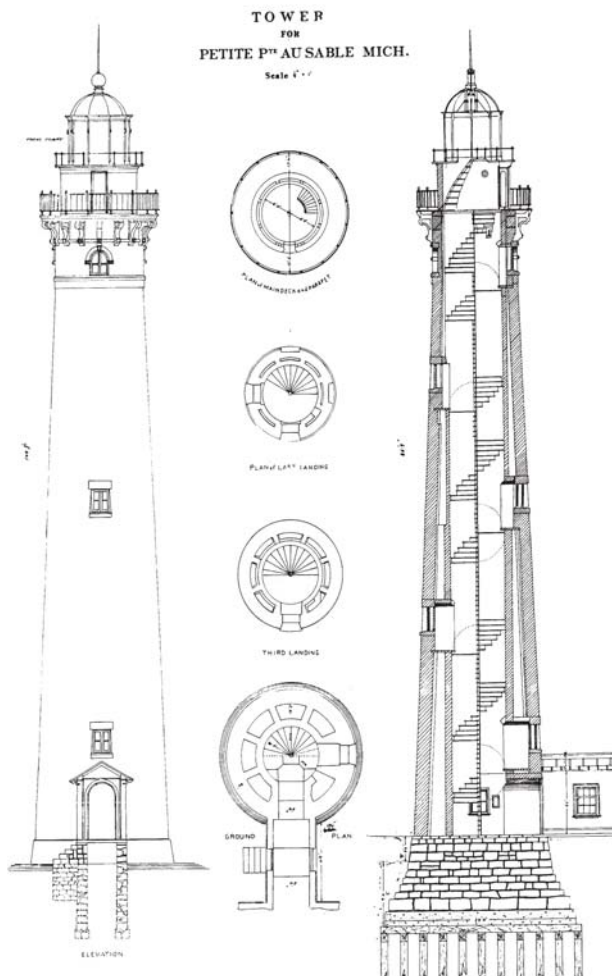
"Notice is hereby given..."

By the early 1870s, following several wrecks and near-wrecks in the area, mariners and their allies in the press began to urge that a light station be built between Grand Island and Whitefish Point. The *Marquette Mining Journal*, for example, said on July 29, 1871, that *"in all navigation of Lake Superior, there is none more dreaded by the mariner than that from Whitefish Point to Grand Island."* The Eleventh Lighthouse District agreed, noting in its 1871 annual report that a light was more a necessity at Au Sable Point than at any other unprotected location in the district.

Congress acted in 1872, appropriating \$40,000 for a lighthouse at Au Sable. The State of Michigan sold 326 acres of land to the federal government for the light station at a cost of \$407. Work began the following year and continued into 1874. In late July, 1874 the Light House Board released a *Notice to Mariners* announcing, *"Notice is hereby given that on or about the night of Wednesday the 19th day of August 1874 a fixed white light will be exhibited from the new brick tower at Big Sable Point..."*

As was common for the U.S. Lighthouse Service, the tower at Big Sable (the name was changed to Au Sable in 1910) was not a unique design. Built on the same plan as the 1874 Outer Island Light in the Apostle Islands of Wisconsin, its whitewashed walls and black-trimmed tower made it an easily noticed landmark.

The tower is 86 feet high measured from its base to the rooftop ventilator ball. At its base the walls are over four feet thick while the wall at the lower lantern room is over three feet thick. The tower foundation consists of rubble masonry lying on bedrock 23 feet below the surface!



tower blueprints from 1874

Restoration

Restoration efforts at the station began in earnest in 1988 with initial historic investigations of the double keeper's quarters and light tower. These activities included paint and plaster analysis, researching historic room sizes and uses, and shingle detail. Projects included fabrication and installation of missing interior wood trim, restoring the walnut balustrade and repairing the plaster walls and ceilings.

Since 1988, several of the structures have been painted, both inside and out. Doors, windows and screens have been restored, and the front porch on the double keeper's quarters was reconstructed to the 1909-1910 period. In 1988 an Historic American Buildings Survey crew measured the buildings which led to detailed structural drawings.

During the summer of 1992, the light tower lens room exterior was painted the historic black color and the lens room interior was restored. In 1993 the interior of the tower was painted and work in the lens room completed. In 1994, replica linen curtains were hung in the lens room. In 1996, a replica chimney cone was installed in the lens room and the original Fresnel lens was returned to Au Sable.

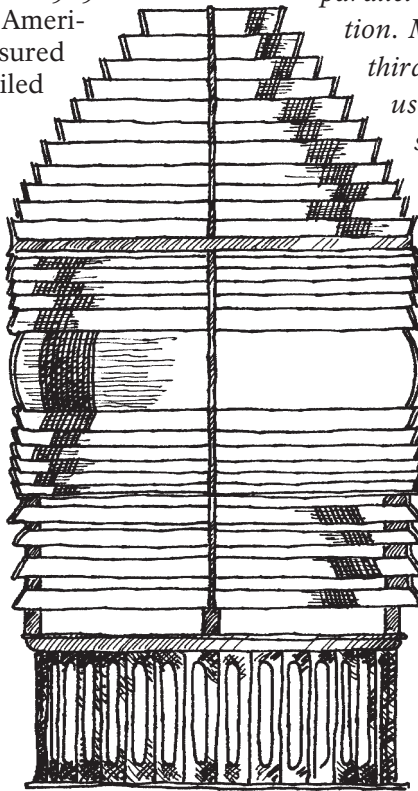
Landscape restoration projects are underway at the station. Please use the stairs west of the garage to access the beach and station.

The Fresnel Lens

Invented by the French physicist Augustin Fresnel in 1822, the lens which bore his name revolutionized lighthouse technology. Far more efficient than earlier lighting equipment, the lens was easy to use. Short of neglect, it was impossible to not show a good light.

The Fresnel lens (fray-nell) was a circular glass lens surrounding a double wick lamp. Its rays were refracted by the prisms and reflective bull's-eyes into concentrated parallel rays aimed in the desired direction. Manufactured in seven sizes, the third-order lens was most commonly used on the Great Lakes. The smaller fifth and sixth order lenses were used to mark harbors, such as at Grand Marais.

The Au Sable light originally burned lard oil, but later changed to more efficient kerosene. The glowing mantle of the Au Sable Station was augmented to 6,750 candlepower after being reflected by a 90 degree mirror through a 270 degree third-order Fresnel lens. Manufactured by L. Sauter & Co. of Paris, France the fixed white light was visible 18 miles out on the lake.



Au Sable 3rd order lens

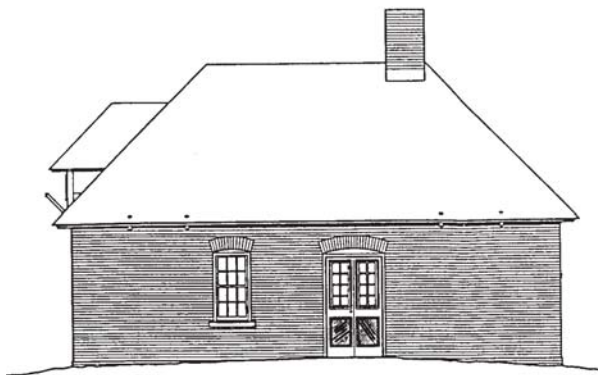
Changes Over Time

The first major improvement at the station was in 1897 when the hand-cranked fog signal was replaced by a steam-powered fog signal. This required construction of a new crib and seawall, a signal building, and pipes to carry lake water to operate the signal. The first signal did not work, however, and it was another year before a replacement was obtained and put in operation. This ended the duty of the lighthouse keeper to start cranking when the fog rolled in.

Until a road was built from Hurricane River in 1939, Lake Superior was the easiest way to access the Au Sable station. Docks existed at the station from first construction, but due to the battering of waves and ice they were constantly being repaired and improved. A tramway was installed in 1899, allowing supplies to be more easily moved between the dock and fog signal building.

Extensive alterations and additions were made to the light station in 1909. Among these changes were additions to the quarters attached to the tower and new quarters for the principal keeper built just west of the tower. The attached dwelling was originally designed for just one keeper, but had been converted to a “double” with the appointment of an assistant keeper the year after the station began operation. The isolation and workload of the station was too much for one man. A third keeper, the second assistant, was assigned to Au Sable to do the additional work of keeping the steam-powered fog signal.

Over time other improvements were made at the station. A new metal oilhouse was erected in 1915; walkways, wells, woodsheds, and a garage in 1954. In 1930, a radio was placed at the station, and in 1935 a telephone line was installed connecting the keepers to the outside world. By the 1930s, the quarters were modernized and the keepers and their families enjoyed central heat, gas cooking, electric light, and indoor plumbing.



The fog signal building is open during staffed tour hours. Tours are normally scheduled between July 1 and Labor Day.

Automation—End of An Era

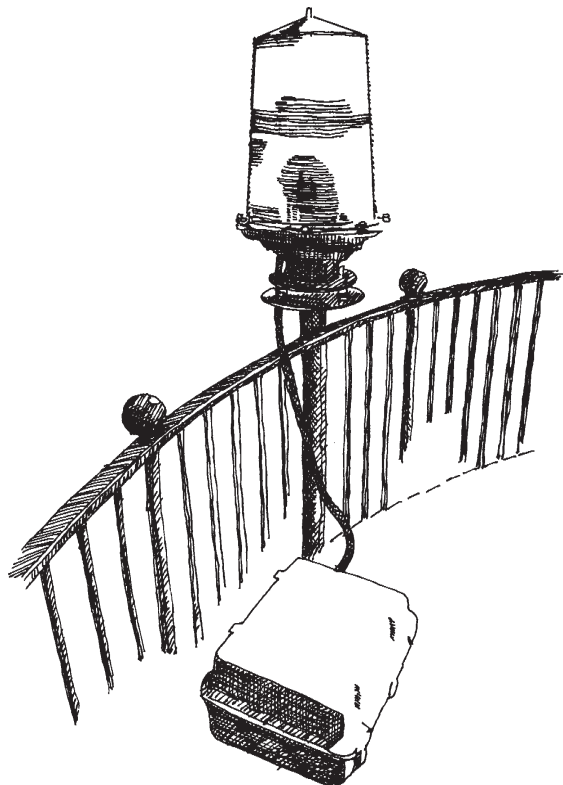
Assimilation of the Lighthouse Service by the Coast Guard signalled the end of an era. The new Service began automating the lights to reduce operating costs and relieve men of the long, monotonous hours of isolation. One Coast Guard spokesman succinctly summed it up. *"The lighthouse keeper gave a reliability critical to equipment of his time. It was equipment susceptible to failure and needed constant attention. Technology has changed. We no longer need a man there 24 hours a day with an oil can."*

For Au Sable, the fateful day came July 30, 1957 at a meeting in the Coast Guard's Ninth District Headquarters in Cleveland where the announcement was made that the light would be automated. As justification the Coast Guard stated *"the chief difficulty with this unit is the fact that it is remotely located some 14 miles by road from Grand Marais. The road is a tortuous path over sand dunes and through wooded areas, frequently made impassable by snow and washouts. Transportation of school-age children via government vehicle over this road to the nearest school...is unfair [to] the children."*

By this time Au Sable had the intensity of its light reduced, its fog signal removed, an automatic bulb changer installed, and a bell buoy placed offshore near the shoal areas. The last three Coast Guardsmen stationed at the light were assigned to the Grand Marais Station to assist in the upkeep of Au Sable.

On July 6, 1961 the lighthouse land was declared excess property by the U.S. Coast Guard to the General Services Administration. In 1968, GSA transferred the land to the Department of Interior, National Park Service, for inclusion in the Pictured Rocks National Lakeshore.

Today, the Coast Guard still maintains a light at Au Sable. Mounted on the tower's catwalk is a plastic Fresnel lens containing a solar powered lamp. Maintained once a year by the Coast Guard, Au Sable still shines its warning to the lake's mariners.



Current 300 mm acrylic lens

U.S. Lighthouse Service and Coast Guard

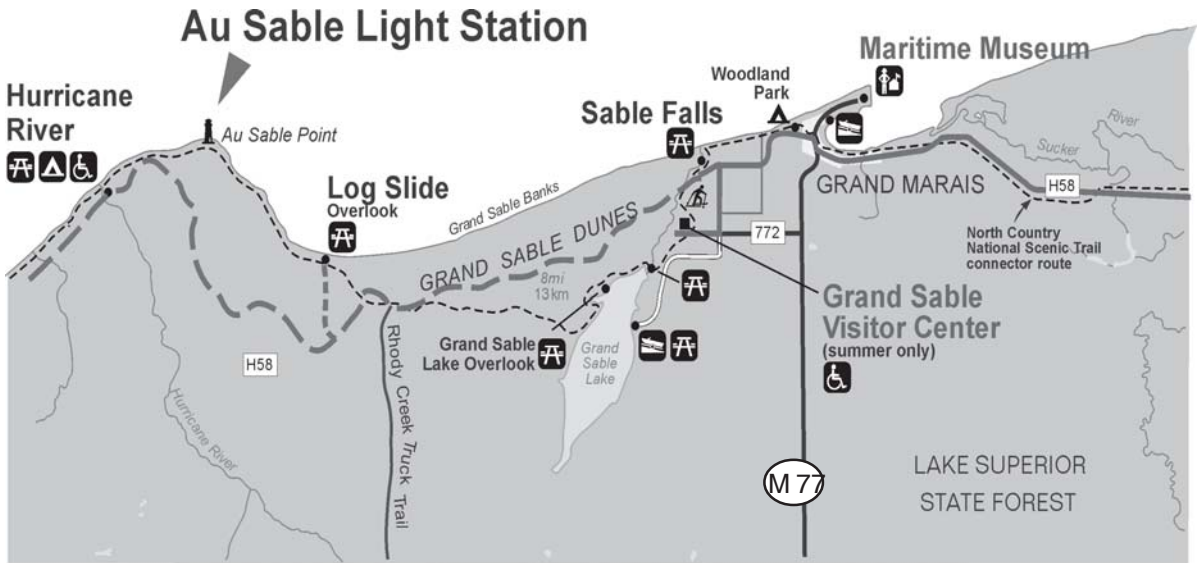
The operation of aids to navigation is one of the longest continuous services of the United States government—a federal responsibility since August 7, 1789. The operation of the federal lighthouses was, however, nothing short of scandalous. For sixty years, contractors administered the lights with no system or direct control—exercising wide latitude to their care. Public criticism brought change with the creation of the first Lighthouse Board in 1851.

Composed of four military officers and two civilian scientists, the board set out reforming the lighthouse bureaucracy. Improvements in lighting systems, in supervision, and instructions to keepers were made. Maintenance and construction standards were improved and, most importantly, new lights were established.

In 1910, the Board was abolished and its power transferred to a single commissioner. The first commissioner, George R. Putnam, served for 25 years and was known for both the economies and innovations that resulted from his leadership.

President Franklin D. Roosevelt transferred the U.S. Lighthouse Service to the U.S. Coast Guard in 1939. This brought about the eventual end of civilian lighthouse keepers and the eventual end of manned lighthouses. Today the Coast Guard insures the safety of navigation with automated lights, buoys, and satellite positioning systems.





How To Get There

Au Sable Light Station is located 1.5 miles northeast of the Lower Hurricane River Campground within Pictured Rocks National Lakeshore. Hurricane River is 12 miles west of Grand Marais, MI, on Alger County road H-58. Visitors may also hike to the lighthouse from the Logslide, a six mile round-trip walk on the North Country Trail. *There is a \$2.00 fee for guided tours (age six and older.) Proceeds from this fee will be used to refurbish the assistant keepers quarters.*

Lighthouse visitors are encouraged to park at the day use parking area adjacent to the campground entrance. The hiking trail (North Country Trail) to the lighthouse begins at the gated service road at the east end of the lower campground loop. Bicycles are not permitted on the trail to the lighthouse. Pets are not permitted at the lighthouse. For information on seasonal lighthouse interpretive programs, contact the Lakeshore at 906-387-3700 or visit our web site: www.nps.gov/piro