

United States Department of the Interior
National Park Service

426

National Register of Historic Places Registration Form



This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

1. Name of Property

Historic name: Keweenaw Waterway Lower Entrance Light

Other names/site number: Portage Lake Lower Entry Light, Portage Entry Light

Name of related multiple property listing:
Light Stations of the United States

2. Location

Street & number: South end of Breakwater at mouth of Portage River

City or town: Torch Lake Township State: Michigan County: Houghton

Not For Publication: Vicinity:

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this X nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property X meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___ national ___ statewide X local

Applicable National Register Criteria:

X A ___ B X C ___ D

[Signature] CG Federal Pres. Officer, 29 JAN, 2014
Signature of certifying official/Title: Date
United States Coast Guard
State or Federal agency/bureau or Tribal Government

In my opinion, the property X meets ___ does not meet the National Register criteria.
[Signature] 5/14/14
Signature of commenting official: Date
STATE HISTORIC PRESERVATION OFFICER / SHPO
Title: State or Federal agency/bureau or Tribal Government

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4. National Park Service Certification

I hereby certify that this property is:

- entered in the National Register
- determined eligible for the National Register
- determined not eligible for the National Register
- removed from the National Register
- other (explain:)

for Edson H. Beall
Signature of the Keeper

7-18-14
Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply.)

- Private:
- Public – Local
- Public – State
- Public – Federal

Category of Property

(Check only **one** box.)

- Building(s)
- District
- Site
- Structure
- Object

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Number of Resources within Property

(Do not include previously listed resources in the count)

| Contributing | Noncontributing | |
|--------------|-----------------|------------|
| _____ | _____ | buildings |
| _____ | _____ | sites |
| <u>1</u> | _____ | structures |
| _____ | _____ | objects |
| <u>1</u> | <u>0</u> | Total |

Number of contributing resources previously listed in the National Register 0

6. Function or Use

Historic Functions

(Enter categories from instructions.)

Transportation
Water-related

Current Functions

(Enter categories from instructions.)

Transportation
Water-related

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7. Description

Architectural Classification

(Enter categories from instructions.)

No style

Materials: (enter categories from instructions.)

Principal exterior materials of the property: Steel, concrete

Narrative Description

(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

Summary Paragraph

The Keweenaw Waterway Lower Entrance Light is located in Lake Superior at Torch Lake Township near the community of Jacobsville in Houghton County, Michigan. Established as a Federal aid to navigation in 1920, it marks the southern entrance to the Keweenaw Waterway. This property sits at the offshore end of a breakwater extending southward from shore at the mouth of the Portage River. It consists of one contributing property, a lighthouse that stands approximately 90 feet tall above the lake bed. The Keweenaw Waterway Lower Entrance Light includes a timber crib foundation and concrete pier that support a concrete one-story machine room and a three-story octagonal steel tower topped with a circular lantern. The property's concrete portion is unpainted. The steel tower and lantern are painted white. The lantern's roof is painted red. The lantern gallery's guard rail is painted black with a red handrail. This lighthouse is owned by the U.S. Coast Guard and operated as an automated aid to navigation identified as number 14765 on the regional light list. It is equipped with a modern optic that signals a white flash every six seconds, along with a modern fog signal. The Keweenaw Waterway Lower Entrance Light remains much the same as when it was built. The limited modifications that have been made to it are largely superficial and reversible. This property is accessible from shore by way of the breakwater and is not open to public visitation.

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Narrative Description

Contributing Resource (Lighthouse):

The Keweenaw Waterway Lower Entrance Light was built in 1919 to 1920 and established as a Federal aid to navigation in 1920. Its setting is the western side of Lake Superior's Keweenaw Bay at the mouth of the Portage River. This lighthouse sits upon submerged land owned by the State of Michigan in water approximately 19 feet deep. It is located approximately 0.4 mile from shore at the southern end of the Portage River breakwater, a Federal navigation structure owned by the U.S. Army Corps of Engineers. The breakwater extends southward from the shoreline of Torch Lake Township near the community of Jacobsville in Houghton County, Michigan. It shelters the southern end of the Keweenaw Waterway, a navigable channel that extends across the southern Keweenaw Peninsula.

The Keweenaw Waterway Lower Entrance Light is approximately 90 feet tall and includes a timber crib foundation, reinforced concrete pier, one-story reinforced concrete machine room, and a three story octagonal steel tower topped with a circular lantern. It is owned by the U.S. Coast Guard and identified as number 14765 on the Great Lakes regional light list.

Foundation and Pier

The structure's foundation is a rectangular crib approximately 32 feet wide by 50 feet long by 16 feet tall. It is built of heavy timbers and supported by piles cut off even with the lake bed. The crib is surrounded by a continuous sheet wall of wooden pilings that protect it from ice. Viewed in plan, this crib includes 18 rectangular interior compartments which are filled with rock. There is riprap along the crib's eastern, southern, and western sides. The northern side abuts the southern end of the Portage River entrance breakwater.

The crib supports a concrete platform that measures approximately 32 feet by 50 feet and is eight feet thick. It includes open-air deck space approximately five feet above water level at its northern and southern ends. These decks are each approximately 7.5 feet wide by 32 feet long. The northern deck is level with the deck of the adjoining breakwater. A steel bollard painted red is mounted at each of the platform's four corners. They are used to secure lines for a vessel moored alongside.

A one-story rectangular reinforced concrete pier sits atop the concrete deck. It is approximately 32 feet wide by 35 feet long and 11 feet tall. The exterior wall on each side curves outward at the top, forming an overhang to deflect water thrown by wave action. The concrete pier is unpainted.

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A steel ladder is affixed within a vertical recessed channel at the middle of the pier's western side wall. It provides access from water level to the pier's rooftop deck. There is a similar recessed channel at the pier's northern side next to the northwestern corner, facing the breakwater. This formerly held a built-in steel ladder that has been removed. A balustrade of steel pipe stanchions surrounds the perimeter of the pier's rooftop deck. This supports a two-tier steel pipe railing that is continuous except for narrow openings on its northern and western sides for the pier's wall ladders. This guardrail is painted black.

There is a doorway fitted with a metal double door on the pier's northern side, facing the breakwater. It provides for access between the outside breakwater deck and the cellar room inside the pier. This doorway includes a steel two-leaf double door on the exterior, an interior vestibule approximately three feet wide, and an interior wooden two-leaf double door. The inner and outer double doors are both painted white. The lighthouse's cellar is a rectangular room inside the pier. It is approximately 19.5 feet wide by 25 feet long with a vaulted concrete ceiling approximately nine feet above the concrete floor. A recessed alcove in the cellar room's northern wall, west of the entrance doorway, holds electrical cables that pass through the pier's northern wall to the cellar interior. This lighthouse was formerly powered by an electrical cable extending from shore along the breakwater, but it has been disconnected. A steel ship's ladder stairway near the center of the cellar room rises to an opening in the ceiling. It provides access to the lighthouse's first story room, above.

Superstructure

The lighthouse's first story machine room sits atop the concrete pier. It is rectangular, built of reinforced concrete, and is approximately 25 feet wide by 25 feet long by 16 feet tall. It has a flat roof that contains embedded steel I-beams for supporting the light tower, above. Its exterior and interior concrete walls are unpainted. This part of the lighthouse formerly held machinery used in operating the lighthouse. Its exterior is decorated at each corner with a molded concrete, classical revival wrap-around pilaster. These are stylized Tuscan order columns that include a three-foot wide base, column, and capital. The faces of each molded base and capital project outward from the side of the structure. A molded concrete architrave and frieze surrounds the machine room's exterior above the pilasters. It is bounded above and below by horizontal lines of concrete molding. A projecting molded concrete classical revival cornice surrounds the upper edge of the first story's flat roof. Atop the roof, a 1.5-foot tall molded concrete parapet wall extends in a continuous rectangular run. It is set back approximately two feet from the roof's edge. This parapet wall is surmounted by a balustrade of short steel pipe stanchions supporting a single horizontal steel pipe rail. This guardrail's stanchions and railing are painted black.

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The first story's northern, eastern, and southern sides are each pierced with two rectangular windows approximately five feet tall by three feet wide and four feet above the concrete pier's rooftop deck. The window spaces are fitted with steel framed two-over-two sash that hold glass lights reinforced with chicken wire. Each window is covered on the outside with a rectangular steel plate painted white. The first story's western wall is pierced with a rectangular doorway adjacent to the concrete pier's rooftop deck, directly in front of the wall ladder on the pier's western side. This doorway is fitted with a steel two-leaf double door that opens inward. It is painted white. The first story interior is approximately 22 feet long by 22 feet wide. The concrete floor is painted red. A small room formed with wooden partitions is set against the northern wall. It has a metal and wood composite door. There is a steel cage enclosure painted red in the main room's northwestern corner next to the steel double door. It contains equipment for the lighthouse's electrical power system. In the center of the main room, a steel ship's ladder with a single handrail rises to an opening in the ceiling. It is painted green and provides access to the second story room which is inside the light tower, above.

The structure's light tower is built of steel and is octagonal in plan. It is approximately 30 feet tall and sits centered atop the first story's roof. The tower is three stories tall from its base to its flat roof. These are the lighthouse's second, third, and fourth stories. Its exterior is fabricated from steel plates fastened with rivets and is painted white. The interior frame is made with 6-inch steel I-beams that rise vertically on the inner side of each of the octagonal tower's eight corners. Horizontal steel I-beams support its interior floors and roof.

The tower's lower level is the lighthouse's second story. It is octagonal and approximately 16 feet in diameter. The second story's exterior includes a steel bracket on the tower's southeastern facet that supports the existing modern automated fog signal. The exterior is wider than the tower's upper stories and projects outward approximately one-foot on all sides. This forms a sill from which rises eight 12-inch wide stylized Tuscan order pilasters. These extend to the top of the tower along the eight exterior corners. Each pilaster is topped with a column capital below a stylized architrave and frieze surrounding the tower's upper level. Above this architrave and frieze, a cornice surrounds the lower edge of the tower's projecting flat roof.

The second story room includes a rectangular doorway in its southern facet wall. This is fitted with an inward-opening steel door that provides access to the first story's flat roof. The second story's north and west facet walls are each pierced with a rectangular window opening fitted with a steel framed two-over-two-over-two window on the inner side and covered on the outside with a steel plate. The room's east facet wall has two brackets attached four feet above the floor. Two side-by-side circular openings above these brackets formerly held fog horns. They are presently covered with steel plates. A steel ship's ladder stairway rises up from the center of the second story room to an opening in the ceiling. It has a handrail on one side and is painted green. This stairway provides access to the third story.

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The lighthouse's third story room is octagonal and 14 feet in diameter. It has four window openings, one each in the room's northern, eastern, southern, and western facets. Each is fitted with steel framed two-over-two-over-two sash and is covered on the outside with a steel plate. A steel ship's ladder stairway with a handrail on one side rises up from the center of the room to an opening in the ceiling. It is painted green and provides access to the fourth story.

The fourth story room is octagonal and 14 feet in diameter. It has four window openings, one each in the northern, eastern, southern, and western facets. They are smaller than the third story windows. Each fourth story window is fitted with steel framed two-over-two sash and is covered on the outside with a steel plate. A curving steel ladder with low handrails on both sides rises from the floor to an opening in the ceiling. It provides access through a trap door to the lantern room, above.

The lighthouse's circular lantern sits centered atop the light tower's flat steel roof, which is the floor of the structure's octagonal open-air lantern gallery. The lantern's interior room is approximately seven feet in diameter and surrounded by a parapet wall 3.5 feet tall that is pierced by eight circular vents spaced at equal intervals. Three vents are missing their covers. The parapet wall is made with curved steel plates and supports steel muntins arranged in helical fashion. The lantern room floor and the parapet wall's inner and outer sides are painted white. The muntins are painted black and hold the lantern's glazing which consists of triangle-shaped and diamond-shaped panes. Some of the original glass lights have been replaced with lexan. The lantern's conical roof springs from a soffit above the glazing. The roof rises to a central circular vent opening at its apex. Outside, the roof is surmounted by a vent ball topped with a lightning rod and is painted red.

An original brass pedestal affixed to the center of the lantern room floor supports a modern automated SABIK LED-350 two-tier lantern optic. It signals a white light that flashes every six seconds and is visible for nine miles in clear weather. Its focal plane is 68 feet above water level.

A full-height doorway on the lantern's northern side provides access to the lantern gallery. It has a steel lower panel and a single-pane glass upper panel. The lantern gallery's deck is painted white. It is surrounded by a guardrail made with a complex decorative lattice of welded steel bars arranged in horizontal and diagonal patterns. This guardrail is painted black except for the handrail on top which is painted red. A steel pedestal attached to the outer edge of the gallery deck on the southern side supports a modern standby optic available for use if the lighthouse's main optic malfunctions. A solar array is also mounted on the gallery's southern side. It is used to recharge batteries that power the lighthouse's optic and fog signal.

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Changes through time

The Keweenaw Waterway Lower Entrance Light remains structurally the same today as when it was established as a Federal aid to navigation in 1920. Its exterior configuration is essentially unchanged and modifications to its interior are limited and reversible. Physical changes to the lighthouse structure include removing the exterior steel ladder from the northern side of its concrete pier, and building a wooden-framed room inside its concrete machinery room. Other changes that have been made to this lighthouse consist largely of replacing and updating its aid to navigation equipment and power system. This includes its optic and fog signal, along with the supporting machinery and power supply. The lighthouse's original optic was a fourth order Fresnel lens that had been installed in the pierhead lighthouse that preceded the Keweenaw Waterway Lower Entrance Light. That structure was removed after the Keweenaw Waterway Lower Entrance Light was built. The fourth order Fresnel lens was subsequently removed from this property's lantern circa 2010 and replaced with the exiting modern optic.

The Keweenaw Waterway Lower Entrance Light's original fog signal was a 6-inch diameter air-powered siren. It was powered with compressed air provided by a pipe from an onshore power house. This fog signal was later removed and replaced with duophone horn fog signal. It, in turn, was replaced with a modern automated electric-powered fog signal mounted outside the light tower.

This lighthouse was originally connected to an onshore power house that contained electrical generators and air compressors. Electrical cables and compressed air lines extended from the power house along the breakwater to the lighthouse. This power house was originally tended by keepers working for the U.S. Lighthouse Service. The lighthouse was eventually switched over to commercial power and was automated in the 1950s. The electrical power provided from shore was discontinued when the lighthouse's existing solarized power supply was installed. The existing power system uses batteries recharged using a solar array.

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8. Statement of Significance
Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B. Property is associated with the lives of persons significant in our past.
- C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D. Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

- A. Owned by a religious institution or used for religious purposes
- B. Removed from its original location
- C. A birthplace or grave
- D. A cemetery
- E. A reconstructed building, object, or structure
- F. A commemorative property
- G. Less than 50 years old or achieving significance within the past 50 years

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Areas of Significance

(Enter categories from instructions.)

Maritime History

Transportation

Architecture

Engineering

Period of Significance

1920 to 1964

Significant Dates

1920

Significant Person

N/A

Cultural Affiliation

N/A

Architect/Builder

U.S. Bureau of Lighthouses, Eleventh District

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

The Keweenaw Waterway Lower Entrance Light was established in 1920 to mark the southern entry to an important navigation channel in Houghton County, Michigan. It stands in Lake Superior's Keweenaw Bay at the offshore end of the breakwater sheltering the entrance to the Portage River, which is the southern part of the Keweenaw Waterway. This lighthouse is significant in the local history of Houghton County. Its period of historical significance begins in 1920 and ends in 1964, the more recent year of its operation 50 years before the present. The Keweenaw Waterway Lower Entrance Light qualifies for inclusion in the National Register under Criterion A. by exemplifying the long-term Federal government program to improve navigational safety in the Great Lakes through constructing aids to navigation along routes of maritime transportation. It also qualifies under Criterion C. for being a well-preserved example of early twentieth century architectural design and engineering methods used in constructing offshore lighthouses in the Great Lakes. It includes a wooden crib foundation, concrete pier, and a superstructure that combines reinforced concrete and steel components. This property retains integrity of design, setting, materials, workmanship, feeling, and association. It is widely recognized as an important historic landmark in Houghton County.

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Narrative Statement of Significance

The Keweenaw Waterway Lower Entrance Light is significant in the local maritime and transportation history of Houghton County, Michigan. It is eligible for inclusion in the National Register of Historic Places (NRHP) under Criteria A. and C. Established in 1920, this property was built to mark the southern entry to the Keweenaw Waterway at the mouth of the Portage River. This waterway was an important navigation route for vessels operating on Lake Superior from the late nineteenth century to the middle twentieth century. The Keweenaw Waterway Lower Entrance Light's period of historical significance begins in 1920 and ends in 1964, the most recent year of its operation 50 years before the present. This lighthouse's character and appearance are largely unchanged from its period of significance. It continues to stand at its original location in a setting that remains the same as when it was constructed. The Keweenaw Waterway Lower Entrance Light possesses integrity in historical qualities of design, materials, workmanship, feeling and association.

This property is historically significant in terms of Criterion A. for its association with the Federal government's program of establishing and maintaining an integrated system of maritime aids to navigation throughout the United States. It exemplifies how this important long-term, nationwide program was manifested in Houghton County. Today, the Keweenaw Waterway Lower Entrance Light is a prominent local landmark and continues its historical association with maritime safety by continuing to function as an operating lighthouse. It also conveys feelings that recall the dedication to duty characteristic of lighthouse keepers throughout the course of American history.

The Keweenaw Waterway Lower Entrance Light is also significant under Criterion C. as a representative of early twentieth century lighthouse architecture and engineering. It exemplifies characteristics of design, construction methods, and materials used in building concrete and steel superstructure lighthouses atop wooden crib foundations during that time period. These developments proved to be well suited for offshore locations in the Great Lakes. This property's existing structural integrity attests to the lasting value of its design, as well as its high quality of materials and construction. The Keweenaw Waterway Lower Entrance Light retains substantial structural integrity. Changes that have been made are limited and reversible.

This NRHP registration form is submitted as an individual listing under the overarching *Light Stations of the United States* multiple property documentation form (MPDF). The specific historic contexts that apply are *Bureau of Lighthouses or the U.S. Lighthouse Service (1910-1939)* and *Lighthouses under the U.S. Coast Guard (1939-present)*. The property type sections relating to this registration are *U.S. Lighthouse Construction Type – Non-cast-iron Tower*, and *Foundation Type – Crib Foundation*. Information and historic contexts available in the overarching MPDF are not repeated here. This submission emphasizes the historical significance of the Keweenaw Waterway Lower Entrance Light as an individual property.

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Regional and Local Historical Context

This property's Great Lakes regional setting includes Lakes Superior, Michigan, Huron, Erie, and Ontario, along with their connecting waters and the St. Lawrence River. This is one of the largest concentrations of fresh water on earth. It encompasses a waterway system having a total shore length of approximately 11,000 statute miles and a total water surface area of about 95,000 square miles.

The Keweenaw Waterway Lower Entrance Light is located in Lake Superior's Keweenaw Bay, near the southeastern shore of the Keweenaw Peninsula in Michigan's Upper Peninsula (U.P.). It is situated at the offshore end of the breakwater that shelters the mouth of the Portage River at the Keweenaw Waterway's southern end.

The Keweenaw Waterway includes the Portage River and Portage Lake, which were part of an important transportation route during prehistoric and early historic times. Native American groups discovered that waterborne travel along Lake Superior's southern shore could avoid a long and hazardous journey around the Keweenaw Peninsula's northern end by carrying their canoes and goods across a two-mile wide neck of land from one waterway to another. This overland portage place separated the peninsula's western Lake Superior shore from the head of the Portage Lake, which provided access to the peninsula's eastern shore by way of the Portage River. It was the origin of the area's Algonquian language name, *keweenaw*, which means a place where portage is made.

Explorers and fur traders from French colonial Canada came to Lake Superior during the first quarter of the seventeenth century. Fur trading in the region continued to grow in economic importance through the early nineteenth century. Like the region's Native American inhabitants, the French Canadians relied on waterborne travel using canoes to transport goods. Their east-west voyages along Lake Superior's southern shore brought them to the Portage River and Lake and the related crossing place. The French also gained knowledge of the Keweenaw region's deposits of pure native copper. An entrepreneur named De la Ronde attempted to exploit these copper resources between 1720 and 1740, but was unsuccessful. The French colonial presence in the upper Great Lakes included establishing Fort Michilimackinac on the northern tip of Michigan's Lower Peninsula at the Straits of Mackinac during the early eighteenth century. It soon became an important center for fur trading and other commerce.

French Roman Catholic missionaries followed the early explorers and fur traders. Jesuit priests who traveled along Lake Superior's southern shore during the second half of the seventeenth century included Claude Allouez and Jacques Marquette. Father Marquette operated missions during the 1660s at Sault St. Marie near Lake Superior's eastern end, and La Pointe, located in western Lake Superior near present-day Ashland, Wisconsin. His travels between them included navigating the Portage River and Portage Lake and crossing the *keweenaw*.

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Rivalry between France and Great Britain during the middle eighteenth century led to warfare in North America. A major development was British victory in the Seven Years' War which resulted in the loss of French control over Canada and the Great Lakes. British forces occupied Fort Michilimackinac at the Straits of Mackinac in 1761. Subsequent tensions between the British and the region's Native Americans led to the 1763 outbreak of Chief Pontiac's rebellion during which the fort was captured. The British regained control of the Upper Great Lakes a year later, after which fur trading and other colonial economic activity resumed. In 1766, an English fur trader named Alexander Henry visited the Keweenaw Peninsula region and inspected a famous boulder of pure copper near the Ontonagon River. He later attempted to establish a copper mine nearby, but was unsuccessful.

The 1783 Treaty of Paris that ended the American Revolutionary War established British recognition of United States sovereignty. It also included cession by Britain to the U.S. of a large portion of the upper Great Lakes region known as the Northwest Territory. This included the Upper and Lower Peninsulas of Michigan and other lands bordering Lake Superior, Lake Huron, and Lake Michigan. However, the U.S. Federal government did not finalize uncontested control over these parts of the Great Lakes until decades later. Even though the United States established the Michigan Territory in 1805, rivalry with Great Britain continued in the region until years after the War of 1812 was concluded with the 1814 Treaty of Ghent. Negotiations with the British over the Great Lakes border between the United States and Canada were finally concluded in 1818.

Lewis Cass was appointed Governor of the Michigan Territory in 1813. In 1820, he undertook an expedition to explore Michigan's Upper Peninsula and lands farther west. Among the expedition's members was Henry Schoolcraft, a geologist and ethnologist. During this expedition, Cass and Schoolcraft passed through the Keweenaw area where information on the presence of pure copper was compiled and a visit made to the Ontonagon Boulder.

Schoolcraft subsequently represented the United States during interactions with Native American tribes in the Great Lakes region. This included work, along with others, to secure ownership of lands for the Federal government through a series of treaties. The 1836 Treaty of Washington and 1842 Treaty of La Pointe involved the Chippewa (Ojibwe) and Ottawa tribes. These treaties resulted in transferring ownership of a vast area, including Michigan's Upper Peninsula (U.P.), to the Federal government. Following the admission of Michigan into the U.S. as a State, its first state geologist, Douglass Houghton, conducted investigations in the Keweenaw Peninsula. His work there from 1840 to 1841 confirmed the commercial potential of the area's copper resources.

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As the Great Lakes region's vast lands were opened to settlement and development, economic and population growth increased. During the first half of the nineteenth century, most of this activity was distributed across the Lower Peninsula of Michigan and in Wisconsin, Illinois, Indiana, and Ohio. The 1840s discovery in Michigan's Upper Peninsula of the Marquette Range's rich iron ore deposits, and the beginning of copper mining in the Keweenaw Peninsula, began a sustained period of settlement expansion and economic development along the U.P.'s Lake Superior shore. During those times, the area's only reliable means for mass transport of people and goods from commercial centers to the south was aboard vessels navigating between Sault Sainte Marie and other Lake Superior ports. This maritime traffic expanded through time, especially after the St. Mary's Falls Ship Canal (the Soo Locks) opened at Sault Ste. Marie in 1855. It allowed vessels to navigate between Lake Huron and Lake Superior.

The Great Lakes region was characterized by substantial growth in commerce and population from the second half of the nineteenth century to the middle twentieth century. The lumber industry accounted for a major part of the early development and expansion of waterborne commercial traffic. In addition, the large-scale development of iron ore production in Michigan's Upper Peninsula, northern Wisconsin, and Minnesota, as well as grain from farms and flour from mills in the Midwest and northern Great Plains, furnished cargoes carried aboard vessels bound for the lower Great Lakes. These shipments corresponded with the heavy up-bound movement of coal and manufactured goods from ports in the lower lakes.

By 1910, the amount of goods shipped annually on the Great Lakes increased to 80 million tons. Most of this was bulk cargo such as iron ore and coal. Shipped freight tonnage reached a record of 217 million tons in 1948. The combined movement of lumber, grain, flour, iron ore and coal, together with limestone cargoes from the Lake Michigan area to centers of steel production, resulted in the greatest bulk freight marine commerce the world had ever seen. With the opening of the St. Lawrence Seaway in 1959, the industrial and agricultural heartland of North America became accessible to deep-draft oceangoing vessels navigating the Great Lakes. In addition, barge and small craft traffic reaches the Great Lakes from the Gulf of Mexico via the Mississippi River and the Illinois Waterway, as well as from the Hudson River by way of the New York State Barge Canal System.

The need for aids to navigation on the Great Lakes increased with the expansion of shipping associated with the growth of settlement and commerce. Seven lighthouses were built in the region between 1818 and 1822, and 32 were completed during the 1830s. From 1841 to 1852, the U.S. Lighthouse Establishment added 33 new lights. Between 1852 and 1860, the total number of Great Lakes aids to navigation increased from 76 to 102.

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A lighthouse was built in 1856 on the Keweenaw Peninsula's eastern shore approximately one mile east of the Portage River. Named the Portage River Light, it was situated there in order to be more visible to approaching vessels than it would have been at the river's mouth. It served as the principal Federal aid to navigation in the area from its initial establishment in 1856 until the Keweenaw Waterway Lower Entrance Light was established in 1920. The original 1856 lighthouse was demolished after a new lighthouse structure was constructed in 1869 and established as a Federal aid to navigation in 1870. The lighthouse's vicinity underwent significant development during the 1880s resulting from the opening of commercial quarries nearby and the founding of the village of Jacobsville. The village grew over time to include the lighthouse area. The Portage River Light was discontinued in 1920 and was later designated surplus property by the Federal government. Sold to a private owner in 1958, it is known today as the Jacobsville Lighthouse and privately operated as a bed and breakfast.

The U.S. Lighthouse Establishment operated a number of other lighted and unlighted Federal aids to navigation along the Portage River and Portage Lake during the late nineteenth century. These improvements were often coordinated with channel dredging projects and the construction of navigation structures. One such structure was a breakwater built during the late 1860s on the eastern side of the Portage River in order to shelter its mouth from rough waters on Keweenaw Bay. The Portage Entry Light was established in 1868 to mark this breakwater's offshore end. The number of Federal aids to navigation elsewhere in the Great Lakes also increased during the late nineteenth century. By the beginning of the twentieth century, there were 334 major lighted aids, 67 fog signals, and 563 buoys in the region.

Several distinct designs or types of lighthouses were constructed in the Great Lakes during the nineteenth century. Until 1870 or so, the most common design consisted of a wood, stone, or brick keeper's dwelling that exhibited the lighthouse's optic in a lantern on the roof or atop an attached square tower. Taller masonry towers connected to a keeper's dwelling by an enclosed passageway also became popular by the 1870s. From 1870 to around 1910, lighthouse engineers also practiced and perfected the construction of light stations built on isolated islands and atop submerged reefs and shoals.

Wooden crib foundations were widely used for the construction of lighthouses on submerged lands in the Great Lakes from the middle nineteenth century through the middle twentieth century. This method was employed for lights built on piers that extended from land into nearby waters, as well as for offshore lights. It involved constructing the crib (a massive wooden box) onshore using heavy timbers. Each was tall enough to reach to, or near to, the water's surface at its designated offshore location. A crib included several open-top compartments. When completed, it was towed to its designated location and sunk using ballast. Additional ballast and concrete were added to stabilize and strengthen the crib structure for serving as a foundation.

Keweenaw Waterway Lower Entrance Light
Name of Property

Houghton County, MI
County and State

The superstructures of lighthouses built on piers in the Great Lakes also went through an evolution in design and technology. The earlier ones were built of wood, but this material deteriorated over time. Cast iron came into widespread use for building U.S. lighthouses during the middle nineteenth century. Cast iron lighthouse structures were commonly built from parts manufactured to specification at a foundry and sent to the designated site as a prefabricated kit for onsite assembly. Steel products for building lighthouse structures became available in the U.S. during the late nineteenth century. As the output of mass production mills increased through time, steel's cost as a building material declined. By the 1920s, the cost versus benefit ratio for building a structure using steel instead of cast iron led to its adoption as the preferred material for constructing both pier and offshore lighthouses in the Great Lakes.

History of the Keweenaw Waterway Lower Entrance Light

The history of the Keweenaw Waterway Lower Entrance Light is closely related to late nineteenth century and early twentieth century navigation improvements in the Portage River and Portage Lake. They became important to Lake Superior commercial shipping following the 1841 publication of Douglass Houghton's report on the Keweenaw Peninsula region's copper resources, and the 1842 Treaty of La Pointe which transferred ownership of Michigan's western Upper Peninsula to the Federal government. A rush to claim and develop copper mining sites in the Keweenaw area occurred from 1843 to 1845. This was followed by economic and population growth through time as the mining industry matured and expanded.

The Houghton County towns of Houghton and Hancock along the shores of upper Portage Lake were initially settled during the 1850s. However, maritime access to them from Lake Superior was restricted due to the Portage River's meandering channel and shallow waters. The Portage Lake and River Improvement Company was founded by local businessmen in 1860 to dredge straight cuts across river meanders in order to open a shipping channel from the Portage River mouth to Portage Lake. Another project the company undertook was to excavate a canal across the two-mile-wide neck of land separating the Keweenaw Peninsula's western shore from upper Portage Lake. This canal was completed in the early 1870s, thus opening a 25-mile long waterway that allowed maritime traffic to navigate from one side of the Keweenaw Peninsula to the other. This part and other segments of the Keweenaw Waterway were deepened, widened, and otherwise improved over subsequent decades. The Keweenaw Waterway provided a shorter route, stopover for fuel, and shelter from inclement weather. It soon became an important corridor for Lake Superior shipping.

Keweenaw Waterway Lower Entrance Light
Name of Property

Houghton County, MI
County and State

The U.S. Lighthouse Establishment constructed a number of navigational aids along the Keweenaw Waterway from the 1860s onward. Among the first of these was a pair of onshore range lights erected in 1868 at the Portage River mouth. They marked the alignment of the dredged channel for vessels to enter. The rear range light was atop a dwelling built for the lighthouse keeper. By the early twentieth century, Federal aids to navigation at the Keweenaw Waterway included the Portage River Light, four other individual lighthouses, 21 range lights, and a number of buoys. These guided vessels from one end of the waterway to the other.

The U.S. Army Corps of Engineers (USACE) became substantially involved in improving navigation in the area after the Federal government purchased the Keweenaw Waterway in August 1891. This included widening and deepening the Portage River entrance channel and improving the breakwater on its eastern side. By 1898, the Portage River's entrance channel had been extended farther into Lake Superior's Keweenaw Bay and deepened to 16 feet. Navigation structures built along the waterway by the USACE included the Portage River breakwater and a western pier extending offshore from an islet inside the river mouth. Both structures were connected at their northern end with bulkheads extending several hundred feet upriver along the adjoining river bank. The western pier was removed in the 1930s in conjunction with dredging at the Portage River's mouth. The Portage River breakwater was extended farther into the waters of Keweenaw Bay during the early twentieth century. Its existing length is approximately 2,560 feet. Other improvements made over time include a concrete deck and riprap along the sides.

In 1902, the U.S. Lighthouse Establishment built the Portage River Pierhead Light at the breakwater's offshore end. Twenty-seven feet tall and constructed of wood, its equipment included a minor lens lantern and remotely operated fog bell. This lighthouse proved to be inadequate and it was replaced in 1911. The new Portage River Pierhead Light was a two-story rectangular iron skeletal tower that supporting an enclosed service room topped with a lantern. This lighthouse was equipped with a fourth order Fresnel lens displaying a fixed red light, as well as a mechanically operated fog bell. The river mouth's western pier was marked at that time with a pair of fixed white range lights. By 1917, the eastern breakwater light's characteristic had been changed to flashing white and an aligned rear range light had been established onshore that displayed a fixed red signal. The pierhead light and rear range light marked a range showing approaching vessels the alignment of the Keweenaw Waterway's lower entrance channel. These entrance channel lights were maintained by a keeper who occupied a dwelling located onshore near the eastern breakwater's northern end. This dwelling was later removed.

Keweenaw Waterway Lower Entrance Light
Name of Property

Houghton County, MI
County and State

The U.S. Lighthouse Establishment and its administrative parent, the Lighthouse Board, were abolished by Congress in 1910, and reorganized as the U.S. Bureau of Lighthouses. This included transferring the Federal lighthouse program from the Department of the Treasury to the Department of Commerce where it remained until 1939 when the Bureau of Lighthouses was merged with the U.S. Coast Guard, then part of the Department of the Treasury.

The Bureau of Lighthouses undertook a project in 1917 to install electric lights along the Keweenaw Waterway and construct a new and taller lighthouse to replace the Portage River Pierhead Light. The proposed structure was designed to include a timber crib foundation, concrete pier and equipment room, and a steel tower topped with the lighthouse's lantern. Construction of this new lighthouse began in 1919 and was completed the following year. It was officially established as the Keweenaw Waterway Lower Entrance Light on 1 August 1920. The fourth order Fresnel lens that had been installed previously in the 1911 Pierhead Light was transferred to the new lighthouse, and lighted with an electric lamp. The Keweenaw Waterway Lower Entrance Light was also equipped with a 6-inch siren fog signal operated remotely from shore using compressed air stored in tanks in the lighthouse's equipment room. A keepers dwelling and power house were built near the breakwater's onshore end in conjunction with the new lighthouse's construction. The power house supplied electricity and compressed air for the lighthouse's aids to navigation. These were supplied by cable and pipe extending along the breakwater. The power house also supplied electricity to the waterway light system installed contemporaneously with the lighthouse's construction. The lighthouse's original siren fog signal was later replaced with a duophone system.

The Portage River Pierhead Light and its partner rear range light became superfluous when the Keweenaw Waterway Lower Entrance Light was established. They were discontinued and removed. The Portage River Light located in Jacobsville was also discontinued at this time.

The Keweenaw Waterway Lower Entrance Light was operated by U.S. Lighthouse Service keepers from 1920 to 1939 and thereafter by U.S. Coast Guard personnel until it was automated during the 1950s. The lighthouse's original daymark coloration of a white tower atop an unpainted concrete pier remains unchanged to the present day. The lighthouse's original fourth order Fresnel lens was removed circa 2010. The existing optic is a modern automated SABIK LED-350 optic. The power cable extending along the breakwater has been disconnected and the lighthouse is currently powered by batteries recharged using a solar array mounted on the lantern gallery. The duophone fog signal equipment has also been removed. The lighthouse's existing fog signal is electrically-powered using batteries and operates when activated by keying on a designated VHF marine radio channel.

Keweenaw Waterway Lower Entrance Light
Name of Property

Houghton County, MI
County and State

The Keweenaw Waterway provided maritime access to the area's copper industry, and a fueling stopover and harbor of refuge for vessels navigating Lake Superior, from the late nineteenth century through the middle twentieth century. During the second half of the twentieth, however, its importance to commercial shipping declined. The last operating copper mine in the Keweenaw closed in the 1960s, and advancements in vessel design and construction including greater size and draught meant that using the waterway became unnecessary and impracticable for modern ships. At the present time, the Keweenaw Waterway is navigated mostly by recreational and excursion watercraft, along with the U.S. National Park Service vessel *Ranger III* which operates between Houghton and Isle Royal National Park. U.S. Coast Guard boats based at Station ANT (Aids to Navigation Team) Portage at Dollar Bay on Portage Lake also use the waterway, as well as other USCG vessels.

Today, the Keweenaw Waterway Lower Entrance Light continues to operate as a U.S. Coast Guard aid to navigation and is widely recognized as a prominent historic landmark in Houghton County. It serves as a lasting reminder of the role that the Keweenaw Waterway has played in Great Lakes maritime commerce. This property continues to occupy its original location at the offshore end of the Portage River breakwater in a setting that remains essentially unchanged from its 1920 to 1964 period of historical significance. In addition, it retains substantial integrity in the qualities of design, materials, and workmanship. The continuing preservation of these aspects reflects their high quality and appropriateness for the property's designated purpose. As an operating lighthouse, the Keweenaw Waterway Lower Entrance Light maintains its association with the Federal government's long-term program for promoting maritime safety on the Great Lakes and evokes feelings that recall the dedication to duty characteristic of lighthouse keepers throughout the course of United States history. This property also illustrates the spirit of innovation that characterized American lighthouse engineers during the early twentieth century. Their focus on lasting results has characterized generations of U.S. lighthouse builders.

9. Bibliography

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Keweenaw Waterway Lower Entrance Light
Name of Property

Houghton County, MI
County and State

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Keweenaw Waterway Lower Entrance Light
Name of Property

Houghton County, MI
County and State

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Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____
- recorded by Historic American Landscape Survey # _____

Primary location of additional data:

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository: U.S. National Archives

Historic Resources Survey Number (if assigned):

Keweenaw Waterway Lower Entrance Light
Name of Property

Houghton County, MI
County and State

10. Geographical Data

Acreeage of Property Less than one acre.

Use either the UTM system or latitude/longitude coordinates

Latitude/Longitude Coordinates

Datum if other than WGS84: _____

(enter coordinates to 6 decimal places)

1. Latitude:

Longitude:

Or

UTM References

Datum (indicated on USGS map):

NAD 1927 or NAD 1983

1. Zone: 16

Easting: 391140

Northing: 5202480

Verbal Boundary Description (Describe the boundaries of the property.)

The property's boundary is the perimeter of the timber crib which is the structure's foundation.

Boundary Justification (Explain why the boundaries were selected.)

This boundary encompasses the entirety of the Keweenaw Waterway Lower Entrance Light.

11. Form Prepared By

name/title: Daniel Koski-Karell, Ph.D.
organization: Office of Environmental Management (COMDT CG-47), USCG Headquarters
street & number: US Coast Guard Stop 7714, 2703 Martin Luther King Jr Avenue SE
city or town: Washington state: DC zip code: 20593-7714
e-mail: Daniel.A.Koski-Karell@uscg.mil
telephone: 202-475-5683
date: 23 January 2014

Keweenaw Waterway Lower Entrance Light
Name of Property

Houghton County, MI
County and State

Additional Documentation

- **Map:** Figure 1. **USGS map** (7.5 minute series) indicating the property's location.
- **Photographs:**

Historic Photographs (Figure 2. and Figure 3.)

1. 1920 view of the Keweenaw Waterway Lower Entrance Light under construction and the 1911 Portage River Pierhead Light, camera facing southeast.
2. 1935 view of Keweenaw Waterway Lower Entrance Light showing fog signal horn at base of the light tower, camera facing northeast.

Contemporary Photographs (# 1 to # 6)

Name of Property: Keweenaw Waterway Lower Entrance Light
City or Vicinity: Torch Lake Township
County: Houghton County
State: MI
Name of Photographer: Leigh Cutler
Date of Photographs: September 2006
Location of Original Digital Files: U.S. Coast Guard Historian's Office, U.S. Coast Guard Headquarters, 2703 Martin Luther King Jr. Ave. SE, Washington, DC 20593
Number of Photographs: 6

Photo # 1.
Northern elevation, camera facing south.

Photo # 2.
First story exterior, northwest corner detail, camera facing south.

Photo # 3.
Light tower exterior, third and fourth story, camera facing southwest.

Photo # 4.
Lantern gallery exterior, guardrail and view of breakwater, camera facing north.

Photo # 5.
First story interior, stairway to second story, camera facing east.

Photo # 6.
Light tower interior, fourth story, curving ladder leading to lantern, camera facing southeast.

Keweenaw Waterway Lower Entrance Light
Name of Property

Houghton County, MI
County and State

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management, U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

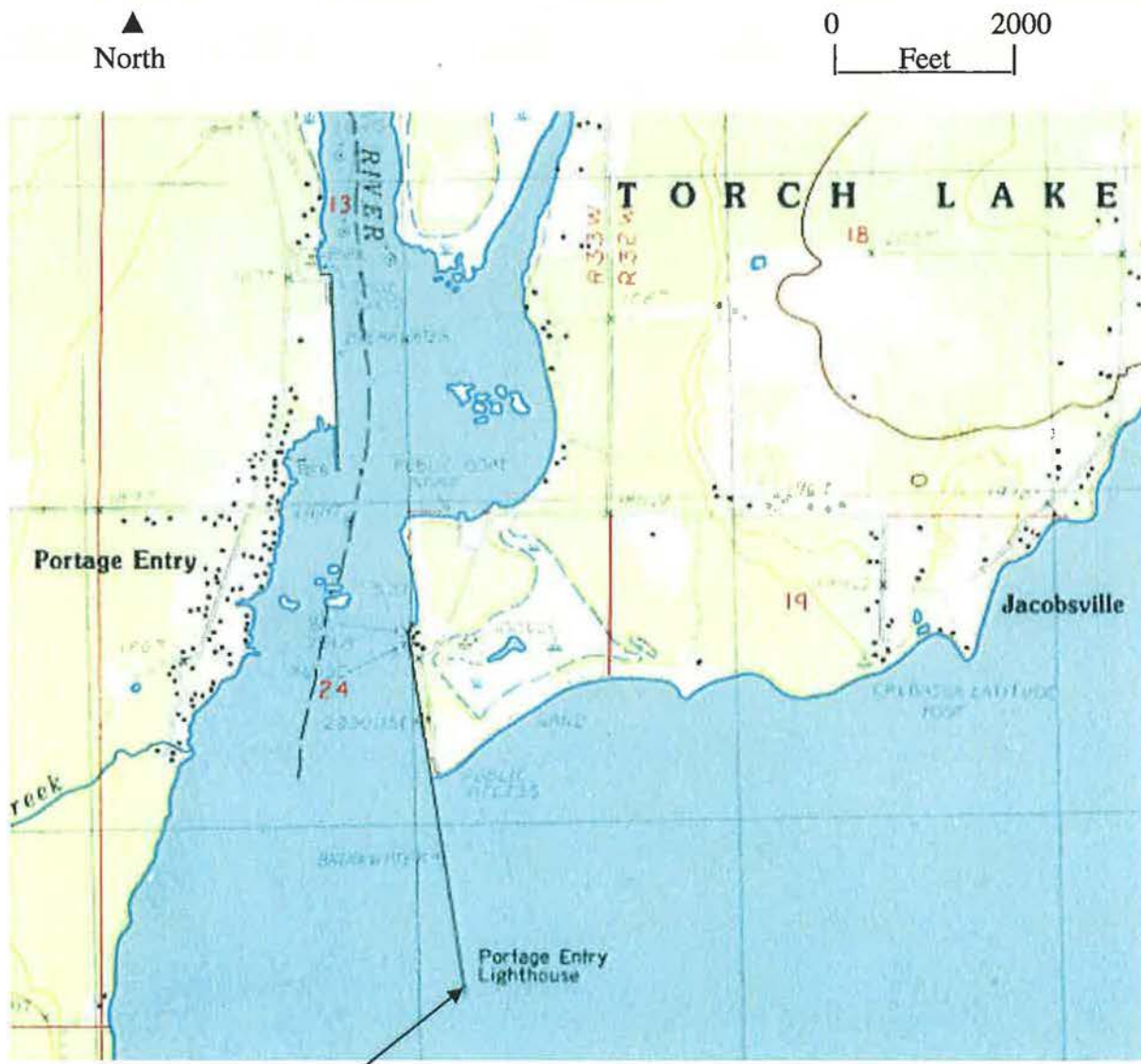
United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 1

| |
|--|
| Keweenaw Waterway Lower Entrance Light |
| Name of Property |
| Houghton County, Michigan |
| County and State |
| Light Stations of the United States |
| Name of multiple listing (if applicable) |

Figure 1. Location Map. This is a portion of the "Portage Entry, Michigan" 7.5 minute quadrangle topographic map, scale 1:24,000 (United States Geological Survey 1984).



Keweenaw Waterway Lower Entrance Light

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 1

Keweenaw Waterway Lower Entrance
Light

Name of Property
Houghton County, Michigan

County and State
Light Stations of the United States

Name of multiple listing (if applicable)

Figure 2. Historic Photograph. This 1920 photo shows the Keweenaw Waterway Lower Entrance Light under construction and the 1911 Portage River Pierhead Light, camera facing southeast. Photographer: Unknown. Location of original photo: Record Group 26, National Archives and Records Administration.



United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 1

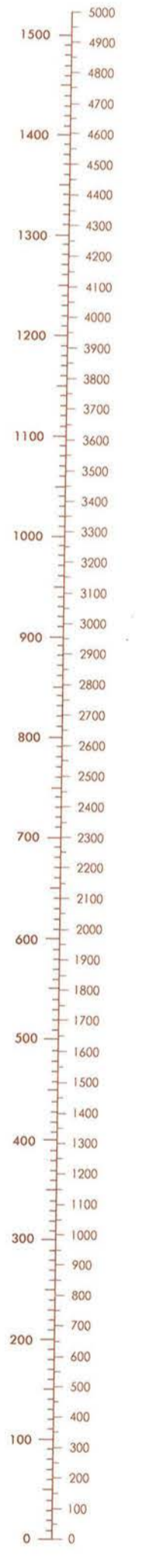
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|---|
| Keweenaw Waterway Lower Entrance Light |
| Name of Property |
| Houghton County, Michigan |
| County and State |
| Light Stations of the United States |
| Name of multiple listing (if applicable) |

Figure 3. Historic Photograph. This 1935 photo shows the fog signal horn pointed eastward at the base of the light tower, camera facing northeast. Photographer: F.C. Hingsburg. Location of original photo: Record Group 26, National Archives and Records Administration.





57° 30' CONVERSION GRAPH
(1 meter = 3.28 feet)
Meters Feet



| Meters | Feet |
|--------|---------|
| 1 | 3.2808 |
| 2 | 6.5617 |
| 3 | 9.8425 |
| 4 | 13.1234 |
| 5 | 16.4042 |
| 6 | 19.6850 |
| 7 | 22.9659 |
| 8 | 26.2467 |
| 9 | 29.5276 |
| 10 | 32.8084 |

EXAMPLE: Convert 479 meters to feet
479 = 400 + 70 + 9
400m = 1312.28
70m = 229.79
+ 9m = 29.53
479m = 1571.56

PRODUCED BY THE UNITED STATES GEOLOGICAL SURVEY CONTROL BY... USGS AND NOS/NOAA COMPILED FROM AERIAL PHOTOGRAPHS TAKEN... 1968-81 FIELD CHECKED... 1982. MAP EDITED... 1984 PROJECTION... UNIVERSAL TRANSVERSE MERCATOR GRID... 30-METER UNIVERSAL TRANSVERSE MERCATOR... 1884-METER STATE GRID TICKS... MICHIGAN, NORTH ZONE UTM GRID DECLINATION... 193° WEST 1984 MAGNETIC NORTH DECLINATION... 1° 30' WEST VERTICAL DATUM... NATIONAL GEODETIC VERTICAL DATUM OF 1929 HORIZONTAL DATUM... 1927 NORTH AMERICAN DATUM

To place on the predicted North American Datum of 1983, move the projection lines as shown by dashed corner ticks (7 meters north and 8 meters east)

There may be private inholdings within the boundaries of any Federal and State Reservations shown on this map. No distinction made between houses, barns, and other buildings.

PROVISIONAL MAP
Produced from original manuscript drawings. Information shown as of date of photography. 1



SCALE 1:24 000
INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1986

CONTOUR INTERVAL 5 METERS
SUPPLEMENTARY CONTOUR INTERVAL 2.5 METERS
184.5 METER SUPPLEMENTARY CONTOUR ALONG SHORELINE
CONTROL AND FIELD ESTABLISHED ELEVATIONS SHOWN TO THE NEAREST 0.1 METER
OTHER ELEVATIONS SHOWN TO THE NEAREST METER

To convert meters to feet multiply by 3.2808
To convert feet to meters multiply by 0.3048

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS FOR SALE BY U.S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
MICHIGAN DEPARTMENT OF NATURAL RESOURCES, LANSING, MICHIGAN 48909



QUADRANGLE LOCATION

| | | | |
|---|---|----|-----------------|
| 1 | 2 | 3 | Chassell |
| 2 | 3 | 4 | Point Mills |
| 3 | 4 | 5 | Traverse Island |
| 4 | 5 | 6 | Otter Lake |
| 5 | 6 | 7 | Keweenaw Bay NE |
| 6 | 7 | 8 | Bear Town |
| 7 | 8 | 9 | 1/2 Acre |
| 8 | 9 | 10 | Acre |

ADJOINING 7.5' QUADRANGLE NAMES

CONTOURS AND ELEVATIONS IN METERS
ROAD LEGEND

Improved Road
Unimproved Road
Trail

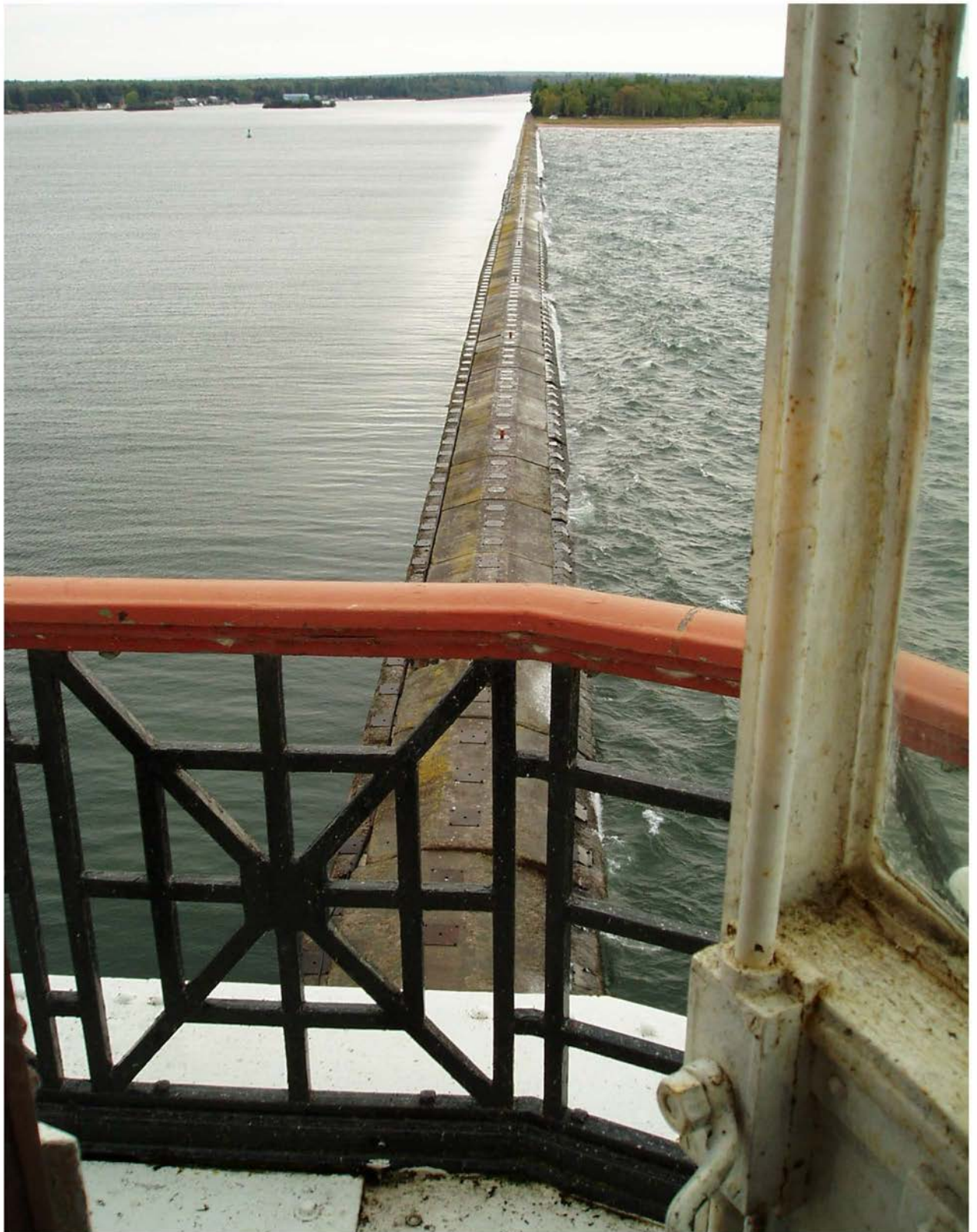
Interstate Route U.S. Route State Route

PORTAGE ENTRY, MICHIGAN
PROVISIONAL EDITION 1984

46088-H4-TM-024

























National Register of Historic Places
Memo to File

Correspondence

The Correspondence consists of communications from (and possibly to) the nominating authority, notes from the staff of the National Register of Historic Places, and/or other material the National Register of Historic Places received associated with the property.

Correspondence may also include information from other sources, drafts of the nomination, letters of support or objection, memorandums, and ephemera which document the efforts to recognize the property.

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Keweenaw Waterway Lower Entrance Light

MULTIPLE NAME: Light Stations of the United States MPS

STATE & COUNTY: MICHIGAN, Houghton

DATE RECEIVED: 6/06/14 DATE OF PENDING LIST: 6/25/14
DATE OF 16TH DAY: 7/10/14 DATE OF 45TH DAY: 7/23/14
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 14000426

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: N SAMPLE: N SLR DRAFT: N NATIONAL: N

COMMENT WAIVER: N

ACCEPT RETURN REJECT 7-18-14 DATE

ABSTRACT/SUMMARY COMMENTS:

Entered in
The National Register
of
Historic Places

RECOM./CRITERIA _____

REVIEWER _____ DISCIPLINE _____

TELEPHONE _____ DATE _____

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

2703 Martin Luther King Jr. Ave SE
U.S. Coast Guard STOP 7714
Washington DC 20593-7714
Staff Symbol: CG-47
Phone: (202) 475-5687
Fax: (202) 372-8419
Email: edward.f.wandelt@uscg.mil

16475

JAN 28 2014

Honorable Scott Ala, Chairman
Houghton County Board of Commissioners
Houghton County Courthouse, 2nd Floor
401 E. Houghton Avenue
Houghton, MI 49931

SUBJECT: NATIONAL REGISTER NOMINATION FOR THE KEWEENAW WATERWAY
LOWER ENTRANCE LIGHT

Dear Mr. Ala:

The U. S. Coast Guard (USCG) has determined that the Keweenaw Waterway Lower Entrance Light in Houghton County, Michigan, is a historic property eligible for listing in the National Register of Historic Places (NRHP). We are proposing to nominate this lighthouse for official inclusion in the NRHP. A summary of the NRHP nomination is enclosed for your information (enclosure (1)). This action is being performed pursuant to the authorities contained in Section 110 of the National Historic Preservation Act, the National Historic Lighthouse Preservation Act, and the National Park Service regulations at 36 Code of Federal Regulations Part 60.9.

As part of the nomination process, the USCG is seeking your comments. Please provide any comments within 45 days from the date your office receives this letter. If we receive no response from your office within 45 days, we will assume you have no comments. We have also submitted the NRHP nomination form for the Keweenaw Waterway Lower Entrance Light to the Michigan State Historic Preservation Officer for review and comment. Thank you in advance for your assistance in this matter. If you have any questions or desire additional information, please feel free to contact Dr. Daniel Koski-Karell at (202) 475-5683.

Sincerely,

A handwritten signature in black ink, appearing to read "Edward F. Wandelt".

E. F. WANDELT

Chief
Office of Environmental Management
U. S. Coast Guard

Enclosure: (1) Summary of NRHP nomination for Keweenaw Waterway Lower Entrance Light

Copy (w/o enclosure): J. Paul Loether, National Park Service
COMDT (CG-0942)
CG SILC
CG CEU Cleveland
CG D9 (dpw)

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

2703 Martin Luther King Jr. Ave SE
U.S. Coast Guard STOP 7714
Washington DC 20593-7714
Staff Symbol: CG-47
Phone: (202) 475-5687
Fax: (202) 372-8419
Email: edward.f.wandelt@uscg.mil

16475

JAN 28 2014

Honorable Al Koskela, District 2 Commissioner
Houghton County Board of Commissioners
Houghton County Courthouse, 2nd Floor
401 E. Houghton Avenue
Houghton, MI 49931

SUBJECT: NATIONAL REGISTER NOMINATION FOR THE KEWEENAW WATERWAY
LOWER ENTRANCE LIGHT

Dear Mr. Koskela:

The U. S. Coast Guard (USCG) has determined that the Keweenaw Waterway Lower Entrance Light in Houghton County, Michigan, is a historic property eligible for listing in the National Register of Historic Places (NRHP). We are proposing to nominate this lighthouse for official inclusion in the NRHP. A summary of the NRHP nomination is enclosed for your information (enclosure (1)). This action is being performed pursuant to the authorities contained in Section 110 of the National Historic Preservation Act, the National Historic Lighthouse Preservation Act, and the National Park Service regulations at 36 Code of Federal Regulations Part 60.9.

As part of the nomination process, the USCG is seeking your comments. Please provide any comments within 45 days from the date your office receives this letter. If we receive no response from your office within 45 days, we will assume you have no comments. We have also submitted the NRHP nomination form for the Keweenaw Waterway Lower Entrance Light to the Michigan State Historic Preservation Officer for review and comment. Thank you in advance for your assistance in this matter. If you have any questions or desire additional information, please feel free to contact Dr. Daniel Koski-Karell at (202) 475-5683.

Sincerely,



E. F. WANDELT

Chief

Office of Environmental Management
U. S. Coast Guard

Enclosure: (1) Summary of NRHP nomination for Keweenaw Waterway Lower Entrance Light

Copy (w/o enclosure): J. Paul Loether, National Park Service
COMDT (CG-0942)
CG SILC
CG CEU Cleveland
CG D9 (dpw)

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

2703 Martin Luther King Jr. Ave SE
U.S. Coast Guard STOP 7714
Washington DC 20593-7714
Staff Symbol: CG-47
Phone: (202) 475-5687
Fax: (202) 372-8419
Email: edward.f.wandelt@uscg.mil

16475

JAN 28 2014

Honorable Brian Cadwell, Supervisor
Torch Lake Township Board
P.O. Box 429
Hubbell, MI 49934-0429

SUBJECT: NATIONAL REGISTER NOMINATION FOR THE KEWEENAW WATERWAY
LOWER ENTRANCE LIGHT

Dear Mr. Cadwell:

The U. S. Coast Guard (USCG) has determined that the Keweenaw Waterway Lower Entrance Light in Houghton County, Michigan, is a historic property eligible for listing in the National Register of Historic Places (NRHP). We are proposing to nominate this lighthouse for official inclusion in the NRHP. A summary of the NRHP nomination is enclosed for your information (enclosure (1)). This action is being performed pursuant to the authorities contained in Section 110 of the National Historic Preservation Act, the National Historic Lighthouse Preservation Act, and the National Park Service regulations at 36 Code of Federal Regulations Part 60.9.

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Sincerely,

A handwritten signature in black ink, appearing to read "Edward F. Wandelt".

E. F. WANDELT

Chief

Office of Environmental Management

U. S. Coast Guard

Enclosure: (1) Summary of NRHP nomination for Keweenaw Waterway Lower Entrance Light

Copy (w/o enclosure): J. Paul Loether, National Park Service
COMDT (CG-0942)
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16475

JAN 2 8 2014

Honorable Warren C. Swartz, Jr., President
Keweenaw Bay Indian Community
16429 Beartown Road
Baraga, MI 49908

SUBJECT: NATIONAL REGISTER NOMINATION FOR THE KEWEENAW WATERWAY
LOWER ENTRANCE LIGHT

Dear Mr. Swartz:

The U. S. Coast Guard (USCG) has determined that the Keweenaw Waterway Lower Entrance Light in Houghton County, Michigan, is a historic property eligible for listing in the National Register of Historic Places (NRHP). We are proposing to nominate this lighthouse for official inclusion in the NRHP. A summary of the NRHP nomination is enclosed for your information (enclosure (1)). This action is being performed pursuant to the authorities contained in Section 110 of the National Historic Preservation Act, the National Historic Lighthouse Preservation Act, and the National Park Service regulations at 36 Code of Federal Regulations Part 60.9.

As part of the nomination process, the USCG is seeking your comments. Please provide any comments within 45 days from the date your office receives this letter. If we receive no response from your office within 45 days, we will assume you have no comments. We have also submitted the NRHP nomination form for the Keweenaw Waterway Lower Entrance Light to the Michigan State Historic Preservation Officer for review and comment. Thank you in advance for your assistance in this matter. If you have any questions or desire additional information, please feel free to contact Dr. Daniel Koski-Karell at (202) 475-5683.

Sincerely,

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E. F. WANDELT

Chief

Office of Environmental Management

U. S. Coast Guard

Enclosure: (1) Summary of NRHP nomination for Keweenaw Waterway Lower Entrance Light

Copy (w/o enclosure): J. Paul Loether, National Park Service
COMDT (CG-0942)
CG SILC
CG CEU Cleveland
CG D9 (dpw)

**NATIONAL REGISTER OF HISTORIC PLACES NOMINATION
KEWEENAW WATERWAY LOWER ENTRANCE LIGHT
HOUGHTON COUNTY, MICHIGAN**

The Keweenaw Waterway Lower Entrance Light, also known as the Portage Entry Lighthouse, is an offshore lighthouse located approximately 0.4 mile south of the Torch Lake Township shoreline near Jacobsville in Houghton County, Michigan. It marks the offshore end of the Portage River Entry breakwater at the southern end of the Keweenaw Waterway, approximately 12 miles south of the City of Houghton. This property is an operating aid to navigation owned by the U.S. Coast Guard (USCG) and is identified as number 14765 on the regional Light List. It is accessible from land along the breakwater. The Keweenaw Waterway Lower Entrance Light was officially established as a Federal aid to navigation in 1920. Based on its historic character, the USCG intends to nominate this property for listing in the National Register of Historic Places (NRHP).

The National Historic Preservation Act of 1966, as amended (NHPA) (16 United States Code 470 *et seq.*) authorizes the Secretary of the Interior to expand and maintain a national register of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, engineering, and culture. Federal agencies are charged with identifying, evaluating, and nominating such properties under their control to the NRHP. The National Historic Lighthouse Preservation Act of 2000 (Public Law 106-355) amended the NHPA for the purpose of establishing a National Historic Lighthouse Preservation Program.

The USCG has prepared a NRHP registration form for the Keweenaw Waterway Lower Entrance Light. It has been sent to the Michigan State Historic Preservation Officer for review and comment concerning the USCG position that the property is eligible for listing in the NRHP. Pursuant to implementing regulation 36 Code of Federal Regulations 60.9, we are notifying local elected officials who may have an interest in the property and inviting them to comment on the nomination during the 45-day comment period. The property is described below.

Site Name and Location:

- Keweenaw Waterway Lower Entrance Light
- Located offshore in Lake Superior's Keweenaw Bay, approximately one mile southwest of Jacobsville in Houghton County, MI
- Light List Number 14765

Owner:

- U.S. Coast Guard COMDT (CG-47)
ATTN: Dr. Daniel Koski-Karell
US Coast Guard – STOP 7714
2703 Martin Luther King Jr. Avenue SE
Washington, DC 20593-7714

Summary Description:

The Keweenaw Waterway Lower Entrance Light includes a crib foundation, platform and pier, equipment room, and light tower topped with a lighthouse lantern. It is surrounded by water on its eastern, southern, and western sides. The lighthouse's northern side abuts the Portage River Entry breakwater. This lighthouse is approximately 90 feet tall from the base of its foundation to the top of its lantern. The foundation crib is made of heavy timbers and is filled with rock. The platform and pier atop

the crib are made of concrete. The pier measures approximately 32 feet wide by 35 feet long by 11 feet tall and contains the lighthouse's basement. The concrete equipment room above the pier measures approximately 25 feet long by 25 feet wide by 16 feet tall. It is the lighthouse superstructure's first story. The light tower atop the equipment room is octagonal and made of steel. It is approximately 30 feet tall and includes three stories. This tower supports the lighthouse's lantern, which is circular and surrounded by an open-air gallery bounded by a guardrail.

The structure's concrete pier and first story are unpainted. The light tower is painted white. The lantern is painted white with a red roof. The guardrail surrounding the lantern gallery is painted black with a red handrail. This lighthouse's optic is a modern automated beacon mounted in the lantern atop the light tower. It has a focal plane 68 feet above water level, signals a flashing white light, and is visible for nine miles in clear weather. This property is also equipped with a fog signal that sounds a blast when keyed with a radio microphone on a specified radio channel. The lighthouse's aids to navigation are powered by batteries recharged using a solar array mounted on the lantern gallery.

The Keweenaw Waterway Lower Entrance Light is entered by way of a steel double-leaf door in the concrete pier's northern side, facing the breakwater. An exterior access ladder on the pier's western side provides access from water level. Steel ship-ladder stairways inside the structure provide for access from one story to another. Access to the lantern gallery is by way of a doorway in the lantern.

Summary Statement of Historical Significance:

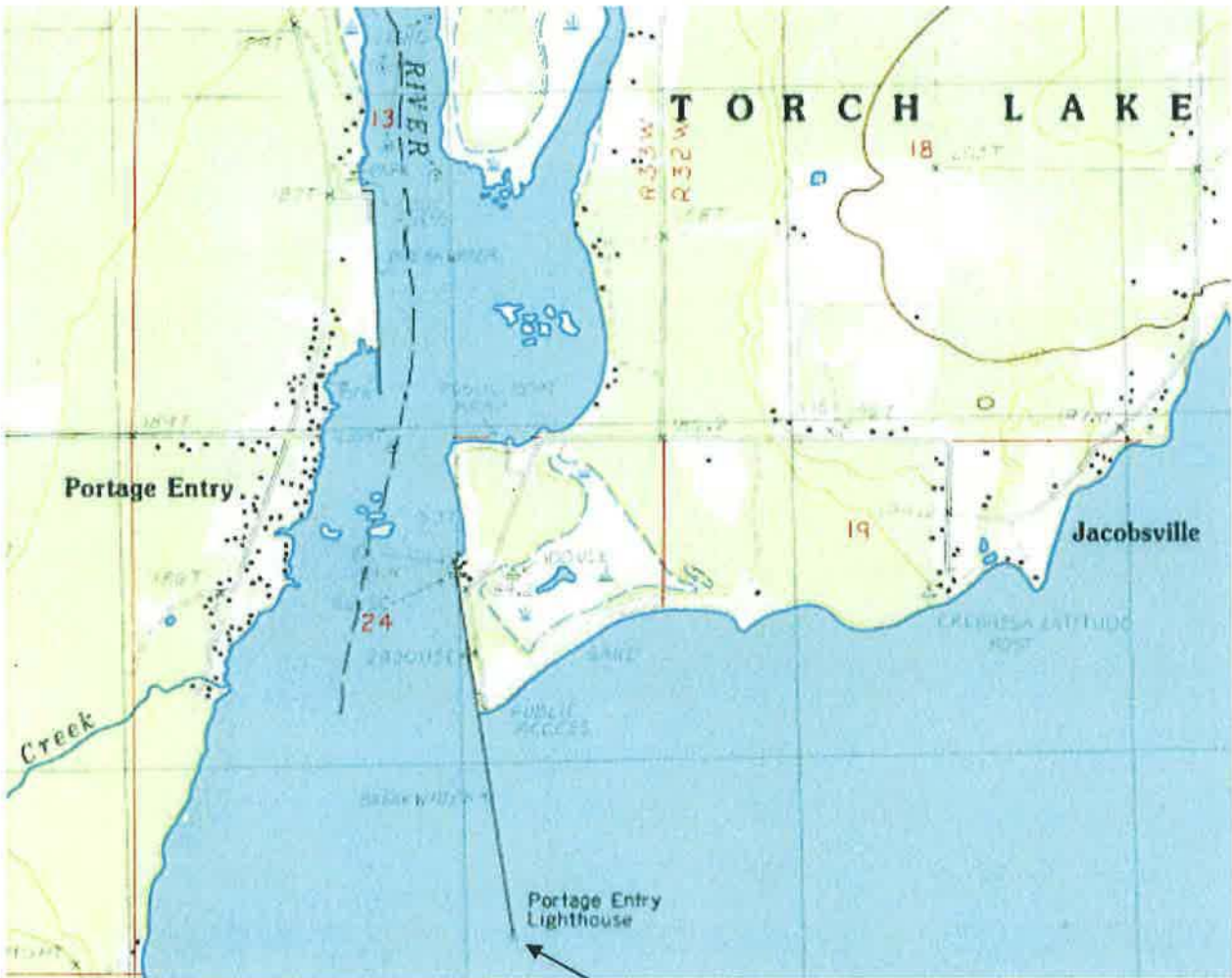
This lighthouse was constructed in 1920. It marks the southern entrance to the Keweenaw Waterway which provides a navigable route between the Keweenaw Peninsula's eastern and western lakeshores. The Keweenaw Waterway first opened in the 1870s and was improved through time until the early twentieth century. Its southern entry was the mouth of the Portage River on the Keweenaw Peninsula's eastern shore facing Keweenaw Bay. The breakwater at the Portage River mouth is approximately 0.4 mile long and shelters the Keweenaw Waterway's lower entrance. Its lighthouse was operated remotely from shore by lighthouse keepers until it was automated during the 1950s. From the 1960s onward, the volume of maritime traffic navigating the Keweenaw Waterway declined as the area's last working copper mine closed and improvements in the design and construction of commercial shipping led to vessels that did not need to use it.

The Keweenaw Waterway Lower Entrance Light is significant in the history of Houghton County and the State of Michigan. It is eligible for National Register of Historic Places listing under Criterion A for its association with the historic Federal government program to establish a nationwide system of aids to navigation in order to promote maritime safety and commerce. This property exemplifies how that program was manifested in the Houghton County area. It is also eligible for NRHP listing under Criterion C for its architectural and engineering significance. It exemplifies how characteristics of early twentieth century lighthouse architecture and engineering were applied to mark the entrance to an important waterway. The qualities of this structure's design, materials, and construction methods were applied to overcome difficulties relating to building an offshore lighthouse in a setting subject to harsh environmental conditions. The Keweenaw Waterway Lower Entrance Light retains substantial integrity in terms of its design, setting, materials, workmanship, feeling, and association. It is a well-known landmark in the Houghton County area.

Map and Photograph:

- Location map
- View of the Keweenaw Waterway Lower Entrance Light, looking south

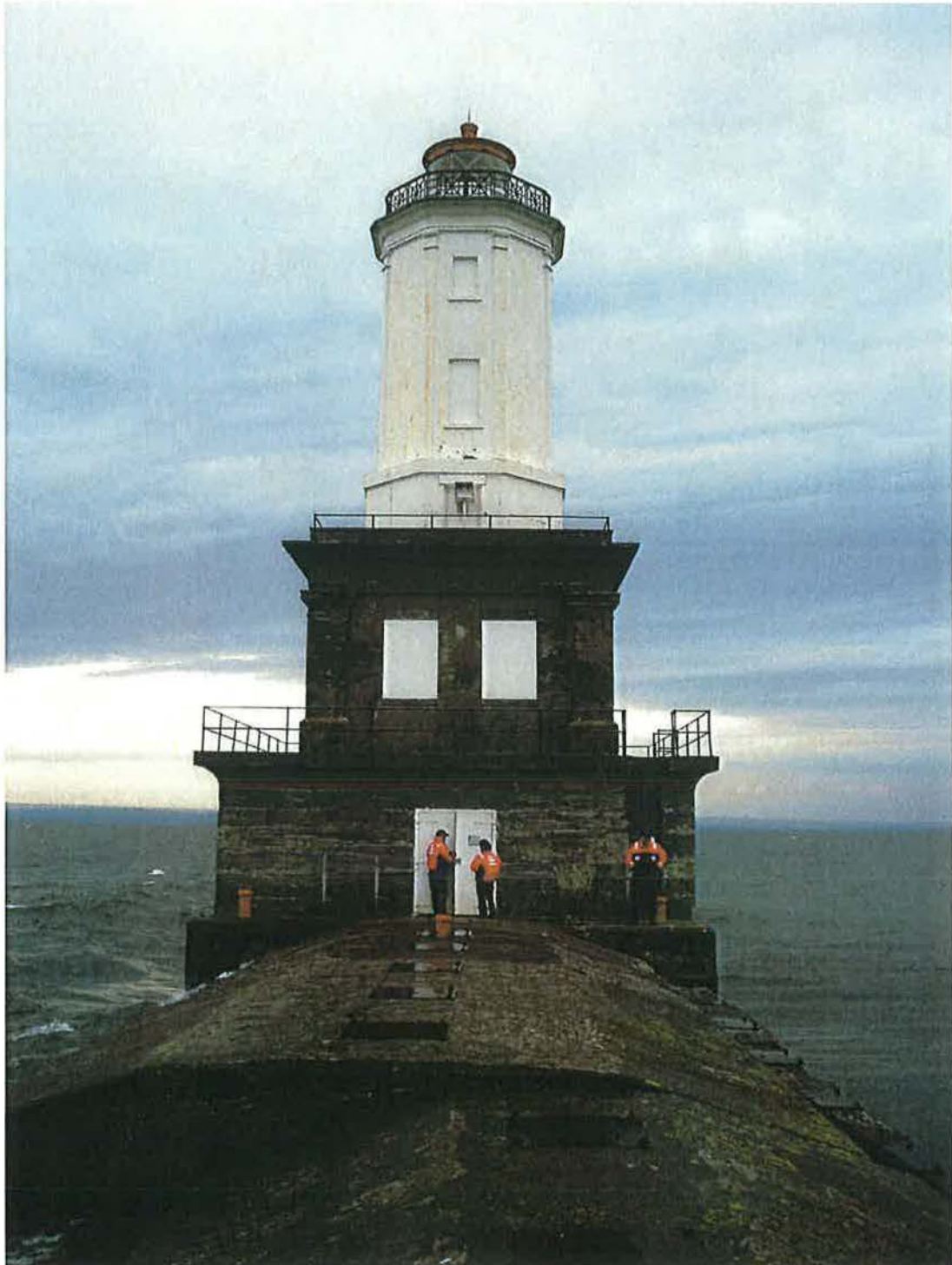
Location Map



**Keweenaw Waterway
Lower Entrance Light**

Part of the "Portage Entry, Michigan" 7.5-minute series topographic map,
Scale 1:24,000 (U.S. Geological Survey, 1984).

View of the Keweenaw Waterway Lower Entrance Light, looking south



U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

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Staff Symbol: CG-47
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16475

JUN 03 2014

MEMORANDUM

E. F. Wandelt
From: E. F. Wandelt, Chief
COMDT (CG-47)

Reply to Dr. Daniel Koski-Karell
Attn of: (202) 475-5683

To: Mr. J. Paul Loether, Chief
National Register of Historic Places and National Historic Landmarks Program
National Park Service
1849 C Street NW (Stop 2280)
Washington, DC 20240

Subj: KEWEENAW WATERWAY UPPER ENTRANCE LIGHT AND KEWEENAW
WATERWAY LOWER ENTRANCE LIGHT, HOUGHTON COUNTY, MICHIGAN

Ref: (a) National Historic Preservation Act Section 110, 16 U.S.C. 470h-2
(b) Programmatic Agreement Regarding Outgranting of Historic Lighthouse Properties

1. The Coast Guard nominates the Keweenaw Waterway Upper Entrance Light and the Keweenaw Waterway Lower Entrance Light in Houghton County, MI, for listing on the National Register of Historic Places (NRHP). The nomination packages are enclosed (Enclosures (1) and (2)).
2. The Michigan State Historic Preservation Officer's comments on these NRHP nominations were requested and received. They have been incorporated into the NRHP registration forms where deemed appropriate.
3. Comments from appropriate local officials were solicited and no responses were received. Copies of this correspondence are included in the enclosures.

#

Enclosure: (1) NRHP nomination package for the Keweenaw Waterway Upper Entrance Light
(2) NRHP nomination package for the Keweenaw Waterway Lower Entrance Light

Copy: CG SILC (with encl)
CG CEU Cleveland (with encl)
CG D9(dpw) (with encl)