

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

PEWABIC (propeller) Shipwreck Site
Name of Property

Alpena Co., MI
County and State

n/a
Name of multiple property listing

Section number _____ Page _____

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 14001096
Property Name: PEWABIC (propeller) Shipwreck Site
County: Alpena County
Multiple Name: n/a

State: MI

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

Signature of the Keeper

Date of Action

Amended Item in Nomination: Level of Significance

The purpose of this Supplementary Listing Record (SLR) is to note that on resubmission, both of the nominating authorities (i.e., the Michigan State Historic Preservation Officer and the National Oceanic and Atmospheric Administration's Federal Preservation Officer) certified the historic property as meeting the statewide level of significance.

Both direct and indirect assertions of national significance are made in several places throughout the document, including:

- Section 8, p. 7;
- Section 8, p. 11; and
- Section 8, p. 24.

National Register Staff concur with the SHPO and FPO assignment of statewide significance, and this SLR is issued to clarify that this historic property (a rare, late nineteenth-century, twin-screwed, wooden propeller-driven passenger/package freight steamer) was forwarded and is

being listed in the National Register of Historic Places at the statewide level of significance for the following reason. Specifically, *National Register Bulletin 36: Guidelines for Evaluating and Registering Archeological Properties*, distinguishes among the local, state, and national levels of significance, observing that:

Note that “statewide” is checked for “regionally” significant properties. The preservation officer may check “nationally” significant if the significance of the property transcends regional significance (p. 12).

The PEWABIC (propeller) Shipwreck site is a Great Lakes vessel, its 8/9/1865 collision is remembered as “Lake Huron’s Worst Maritime Disaster,” and its predominant role in carrying passengers and freight is that of regional (i.e., Great Lakes) significance. To be sure, the 250 tons of Keweenaw Peninsula copper aboard when the vessel wrecked inspired a century’s worth of salvage efforts and experimentation in marine salvage. The associated documentation and context provided, however, are not sufficient to distinguish among the military, domestic, and industrial uses to which the Keweenaw Peninsula copper cargo aboard the PEWABIC was intended. Instead, what is being designated is a rare example of a unique Great Lakes vessel type, that transported Great Lakes passengers and was once a prominent feature of Lake Superior shipping. The story here, as documented, is a regional one.

Distribution List

National Register files

Nominating Authorities (i.e., Michigan SHPO and NOAA FPO), without nomination attached

RESUB
14-1096

United States Department of the Interior
National Park Service

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.

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Nat. Register of Historic Places
National Park Service

1. Name of Property

Historic name: PEWABIC Shipwreck Site

Other names/site number: 20UH002

Name of related multiple property listing:

(Enter "N/A" if property is not part of a multiple property listing)

2. Location

Street & number: Thunder Bay, 6.5 Miles SE of Thunder Bay Island, Lake Huron

City or town: Alpena Township State: Michigan County: Alpena

Not For Publication: Vicinity:

3. State/Federal Agency Certification

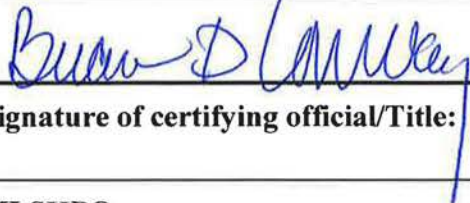
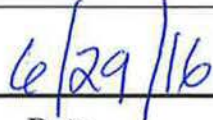
As the designated authority under the National Historic Preservation Act, as amended,

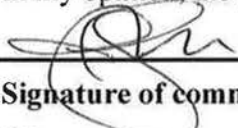
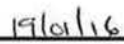
I hereby certify that this x nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

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 X statewide ___ local
Applicable National Register Criteria:

X A ___ B X C X D

	
Signature of certifying official/Title:	Date
MI SHPO	

In my opinion, the property <u>X</u> meets ___ does not meet the National Register criteria.	
	
Signature of commenting official:	Date
Director, NHP & PPO designee	NPSAA
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:) _____


Signature of the Keeper

8/22/16
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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- determined eligible for the National Register
- determined not eligible for the National Register
- removed from the National Register
- other (explain:) _____

Signature of the Keeper

Date of Action

5. Classification

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(Check as many boxes as apply.)

- Private:
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- 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
_____	_____	structures
_____	_____	objects
_____	_____	Total

Number of contributing resources previously listed in the National Register _____

6. Function or Use

Historic Functions

(Enter categories from instructions.)

TRANSPORTATION / WATER-RELATED

Current Functions

(Enter categories from instructions.)

LANDSCAPE / UNDERWATER / UNDERWATER SITE

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7. Description

Architectural Classification

(Enter categories from instructions.)

Other: Shipwreck-Propeller-Driven Passenger/Package Freight Steamer

Materials: (enter categories from instructions.)

Principal exterior materials of the property: Wooden hull and iron machinery

Narrative Description

Summary Paragraph

The wreck site of the 200-foot long wooden propeller-driven passenger/package freight steamer PEWABIC lies roughly 6.5 miles southeast of Thunder Bay Island and 18 miles east-southeast from the coastal town of Alpena, Michigan, in Lake Huron. PEWABIC was built in 1863 and sank in 1865 following a collision with steamer *Meteor*. The shipwreck site lies in between 155 and 175 feet of water. PEWABIC ran between Cleveland and the Keweenaw Peninsula in Lake Superior, where it dropped off miners, tourists, and supplies, and loaded copper that was strategic to the Union war effort.

Narrative Description

PEWABIC was built in 1863 by Peck and Masters in Cleveland, Ohio. Commissioned by J. T. Whiting, agent of the Pioneer Lake Superior Line, PEWABIC was designed to carry passengers and freight between Cleveland and Michigan's Keweenaw Peninsula, including carrying copper ingots back from the Keweenaw's copper mines in its hold. When launched, PEWABIC and *Meteor* were two of the best outfitted propeller-driven steamers on the lakes with elegant furnishings and the most modern technology and amenities. PEWABIC and *Meteor* departed Cleveland on reciprocal schedules, and often passed each other along Lake Huron (*Cleveland Morning Leader* 1865). Such was the case on the calm evening of August 9, 1865. After signaling to *Meteor* to pass to port, or keeping their left sides parallel, PEWABIC inexplicably heaved to its port side, and oncoming *Meteor* collided with it, its bow driving deep into

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PEWABIC's hull, just aft of the wheelhouse. PEWABIC and its 250 tons of native copper cargo, many of its 125 passengers, and the rest of its package freight cargo sank to the lake bottom in four minutes (*Erie Daily Dispatch* 1865). The death toll made the collision between PEWABIC and *Meteor* "Lake Huron's Worst Maritime Disaster" (*New York Times* 1865). The shipwreck is located off the northeastern Lower Peninsula of Michigan, 6.5 miles southeast of Thunder Bay Island and 18 miles east of the mouth of the Thunder Bay River in Alpena.

At 200 feet in length and 31 feet in beam, PEWABIC's dimensions were based on the navigable clearance at both the locks at Sault Saint Marie, Michigan, and the winding waters of the Portage River. PEWABIC was built at a cost of \$100,000, builders Peck and Masters providing unusually up-to-date passenger accommodations and the latest in propeller-driven propulsion technology: twin screws (Busch 1975). Henry Hobart, a passenger on an 1864 PEWABIC voyage, recounted his experience in his journal: "We are running fifteen or twenty miles an hour and the spray rolls away from our noble propeller in fine style as she cuts the water with her heavy load ... I should prefer to go on the PEWABIC to any boat on the lake" (Mason 1991:311). Inside, the elaborate main dining area hosted first-class meals and served as a dance floor once tables were cleared. PEWABIC's quality accommodations and cutting-edge propulsion technology made its collision with *Meteor* more tragic and shocking.

An important feature on PEWABIC's main deck are its engines: twin Cuyahoga 26.5" x 30" high pressure, inverted, direct-acting steam engines. The cylinder heads and boiler heads protrude from the main deck. One staircase through a hatch leads to the engine room beneath the main deck. The main deck also still contains material remains from passengers, cargo, and equipment.

PEWABIC's upright hull is buried in the sand and in good condition. The hull is 200' in length with a 31' beam. It rises between ten and eighteen feet above the sandy lake bottom and is largely coated by zebra and quagga mussels. Due to collision damage from *Meteor* and later salvage efforts focused on the bow, the stern section of PEWABIC is in better condition than the bow which features the collision damage and later damage caused by dynamite during salvage expeditions of 1897 and 1917. PEWABIC's two 8.5' square-bladed Loper propellers remain intact along with their vertical and horizontal reinforcing struts and stuffing boxes (Hartmeyer 2014:60). Between the propellers lays the wooden rudder, whose port orientation suggests that second-mate George Cleveland, operator of the vessel when it sunk, attempted to heave PEWABIC hard to port in the final seconds before the collision.

The rapid sinking and subsequent salvage expeditions are responsible for the absence of PEWABIC's first class cabins on the wreck itself. The cabin structure lies in disarticulate piles primarily off the starboard side of the wreck site. The main deck, however, remains intact for most of the vessel's 200' overall length. On the main deck rest two of PEWABIC's important structural features. A massive centerline arch on the vessel provided stem-to-stern rigidity that prevented hogging and sagging, a problem common in long wooden vessels. The arch was secured directly to the keelson assembly by long iron turnbuckles and a series of hanging knee/stanchion arrangements that retained the structure's strength and shape. The centerline arch rises six to eight feet above the main deck and ends abruptly sixty feet from the bow, just at the arch's peak (Hartmeyer 2014:63). The main deck also ends at this point on the shipwreck. The

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damage is attributed to dynamite used in 1897 and 1917 salvage expeditions. Looking back towards the stern from the bow, one can access the intact hold (beneath the main deck) which illuminates PEWABIC's construction style and likely contains a plethora of material culture buried beneath 1-4' of silt.

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

COMMERCE

ENGINEERING

ARCHAEOLOGY - HISTORIC

Period of Significance

1863-1865

Significant Dates

1863 (Launch)

8/9/1865 (Sinking)

Significant Person

(Complete only if Criterion B is marked above.)

N/A

Cultural Affiliation

Non-Aboriginal

Architect/Builder

Peck and Masters, Cleveland

Statement of Significance Summary Paragraph

PEWABIC is eligible under Criterion A for its role in carrying passengers and freight — in the early years of the Keweenaw copper boom in Michigan’s Upper Peninsula, a nationally significant industrial period. PEWABIC helped facilitate the peopling of the Keweenaw region with Finnish, Irish, and Cornish immigrants. PEWABIC was one of few conveyance systems that Keweenaw mines could regularly rely on for copper and provision deliveries. During the Civil War, copper was an important wartime commodity that was only transported by Lake Superior-going vessels like PEWABIC. Part of PEWABIC’s significance lies in the survival of part of the cargo of Keweenaw copper ingots from its last voyage down bound toward Cleveland. Its final cargo spurred a century-long history of salvage as famous divers and inventors competed over dive suit designs that were all built to salvage PEWABIC. PEWABIC is also eligible under Criterion C as a rare example of a unique Great Lakes vessel type, the wooden passenger/package freight propeller. The hull structure and machinery remains have the potential

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to yield important information about Great Lakes' wooden passenger/package freight propeller vessels, once a prominent feature of Lake Superior shipping but now non-existent except for a very few preserved as shipwrecks in deep waters in the Great Lakes. Therefore, PEWABIC is also eligible under Criterion D for its potential to yield additional historical and archaeological information about this transitional vessel type.

Narrative Statement of Significance

Criterion A: Maritime History

Though PEWABIC only had a two year career, its valuable copper cargo kept the steamer in the media limelight throughout the nineteenth and twentieth centuries. Marine salvagers arrived in Alpena within months after the collision. Due to its inherent danger, lucrative payouts, and competitive market, deep water marine salvage in the nineteenth and early twentieth centuries attracted vibrant personalities who vied for investor attention with homebuilt equipment. High profile shipwrecks like PEWABIC attracted salvagers from across the country and after the first few dives ended in fatalities, salvaging the copper cargo was as much about bravado as financial gain.

Billy Pike was the first diver on scene but died from decompression illness after his surface crew rapidly brought him to the surface after a twenty-minute dive (Richards 1939). Pike was using traditional hard-hat dive equipment developed in the 1830s. Unfortunately for Pike, the general lack of knowledge surrounding deep diving and the physiological effects of breathing air under extreme pressure were directly responsible for his death.

Pike's death left PEWABIC undisturbed until 1891, when inventor and Minnesota native Oliver Pelkey revealed his patented dive suit developed specifically for the PEWABIC salvage. The suit was constructed of an inner layer of metallic armor rings, which were shaped to fit the contours of the body. Screws then attached metallic armor plates over the ring skeleton. Lastly, a thick outer layer made of vulcanized rubber covered the metallic skeleton (Pelkey 1889:3). Pelkey's strategy was to keep the diver dry, and be able to retain flexibility with the many moving parts. During his first dive, however, Pelkey became tragically entangled in the wreck. After not responding to surface signals on his umbilical hose, the surface crew cleated off his air supply line and wrenched him from the wreck. They quickly recovered the suit, and Pelkey died on the wrecking barge in front of investors.

One of Pelkey's rival marine inventors, E. H. Brault, arrived with his own patented dive-suit in 1892. PEWABIC had become a salvage training ground. With each fatality came more reward and glory for the inventor to reach PEWABIC first. Like Pelkey's suit, Brault's invention featured a layered design with an inner metallic skeleton, but the armor plates were fewer in number. Brault's patent illustrates the rising concern over pressure at depth. His breastplate and torso assembly is much stronger than Pelkey's, and was built with fewer interlocking pieces (Brault 1891:1). Additional upgrades include the helmet-mounted incandescent light and speaking tube. Brault became the first diver to see PEWABIC after a dive to 147 feet for 43 minutes but came up due to frigid water temperatures and a poor air-delivery system. Despite his

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success, Brault mysteriously disappeared days after the dive. Rumors hold financial complications between Brault and his chartered wrecking barge responsible. While Brault became the first diver to see PEWABIC, it remained unclear how salvagers were to extract the copper.

Gordon W. Smith is credited as the first person to salvage PEWABIC in an expedition during the summers of 1896, 1897, and 1898. Smith designed a two-person diving bell specifically for PEWABIC. Outfitted with grapple hooks, adjustable iron feet, and thick glass portholes, the bell successfully recovered 50 tons of copper. Smith used the bell as a director for clam-bucket operators at the surface. Smith watched the bucket descend on the wreck and guided the surface crew around different parts of the vessel. Smith's luck ended when one of the portholes cracked and flooded the bell (*Alpena Weekly Argus* 1898). The double fatality promptly ended the three-year expedition and PEWABIC remained in the shadows until high copper prices during World War I brought B. F. Leavitt to Alpena.

Benjamin F. Leavitt was PEWABIC's most enterprising suitor. In October 1916 he set the world diving record to 361 feet in Grand Traverse Bay in Lake Michigan (*Scientific American* 1920:46). Leavitt quickly received investor backing to head to Alpena. Nicknamed the "iron duke," Leavitt's suit was cast of manganese bronze and was a true one-atmosphere suit. The one-piece dive suit kept the diver inside at surface pressure, allowing him to remain at the lake bottom for extended periods. Leavitt also installed an air-recycling system mounted on the back of the suit; it operated similar to a modern-day closed-circuit rebreather. Exhaled air traveled through a caustic medium that absorbed carbon dioxide and the air mixture was then supplemented by oxygen stored in a small pony tank (Leavitt 1920). The rebreather system sustained life for four hours. Leavitt's suit was just the second one-atmosphere suit developed in the United States and represents a breakthrough in deep diving technology and understanding of pressure (Figure 1).

Over the course of the summer 1917 Leavitt salvaged 70 tons of copper, 50 tons of iron ore, 140 sides of leather, and a vast collection of cultural material (*Alpena News* 1917f). Leavitt also utilized a clam bucket that was responsible for most of the recovered items. Leavitt used his success on PEWABIC as a springboard into further salvage ventures and went on to conduct noteworthy cargo recoveries in deep waters off Alaska and Chile including an expedition to RMS LUSITANIA off Old Head of Kinsale, Ireland (*Bridgeport Telegram* 1922).

PEWABIC's longest dormant stage was between 1918 and 1974, when Michigan's Department of Natural Resources granted Saginaw resident Gregory Busch a salvage permit for PEWABIC (Busch 1975:75). Using modern scuba equipment Busch recovered most of the remaining copper and some significant artifacts including the anchor.

PEWABIC's century-long salvage history kept the vessel in the forefront of local, regional, and national media outlets with each diving fatality and salvage attempt. National headlines "The Curse of the Copper" and "Lake Huron's Death Ship" kept the shipwreck in the forefront of American marine exploration and treasure hunting.

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As a salvage training ground PEWABIC attracted inventors from all parts of the country to test their dive apparatuses. PEWABIC's location in freshwater and valuable copper cargo made it the perfect site to demonstrate their units and win investor support for future salvage projects. Due to the early lack of salvage infrastructure and appropriate equipment and extreme risk, the marine salvage industry remains a close-knit industry. Throughout the nineteenth and twentieth centuries marine salvagers and undersea exploration inventors have needed to travel all over the world in search of potentially-profitable shipwreck sites in the safest-possible environments. Significant historical data can be gleaned on the equipment, players, and industry climate from future research into PEWABIC's salvage history.

Since 1974 PEWABIC has been visited and occasionally pilfered by wreck divers. Maritime archaeologists became interested in PEWABIC as it lay within the boundaries of the Thunder Bay National Marine Sanctuary. Recent research efforts have focused on video, photo, and manual documentation, and remote sensing surveys (Figures 2, 3, 4, 5, 6). Sanctuary personnel visit the site every few years for additional monitoring, but its location near the western Lake Huron shipping lane presents additional problems for site visitation. Research has focused on monitoring site preservation and deducing effects of particular salvage expeditions from the status of the shipwreck.

Criterion A: Commerce

PEWABIC and other passenger/package freight propellers were essential to the commercial, social, and industrial development of the Keweenaw Peninsula, an isolated region with national economic importance. Railroads through the Keweenaw Peninsula did not arrive until the 1880s, leaving regional development and provisioning between 1843-1880 up to Lake Superior-bound vessels. PEWABIC was one of the few vessels serving this northern maritime frontier and thus facilitated development along the southern Lake Superior coast. It connected urban America with the northern frontier by bringing tourists, immigrant laborers, and provisions north and returning with profitable copper and other cargoes in considerable quantities. Most importantly, PEWABIC made stops at both large (Houghton, Copper Harbor) and small (Ontonagon, Bayfield) ports, servicing the needs of both developed copper towns and rural hamlets.

On August 9, 1865, PEWABIC was steaming downbound off Alpena, Michigan, on its seventh trip of the summer season after a successful trip to the Keweenaw. First class excursionists were the primary passenger class on board. Beneath the first class cabins lay PEWABIC's mixed cargo of copper (131 tons from Quincy Mine, 45 tons from Ontonagon, 25 tons from Central Mine, 65 tons from the Portage Lake Smelting Works, 1 ton from Smith Harris), 179 tons of iron ore, half barrels of fish (202 from Detour, 20 from Ontonagon), 200 ships knees, 2 ½ tons of potash from Portage, and 27 rolls of leather from Ontonagon (Dismond 1955). The copper on board PEWABIC alone was worth \$195,000 in 1865. That evening PEWABIC collided with METEOR and dozens of passengers and the valuable mixed freight cargo were sent to the lake bottom.

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PEWABIC carried a variety of goods north bound and south bound. Its copper cargo on its final voyage was worth \$195,000 in 1865 alone. Coupled with the value of other cargoes such as iron ore, leather, ship knees, and barreled fish, PEWABIC was laden with market goods that facilitated continued growth along the Keweenaw Peninsula. PEWABIC contributed to the Great Lakes economy in cultural ways as well. It brought numerous Finnish, Cornish, and Irish immigrants to the Copper Country to work in the region's mining operations. Profits were made from first class passengers as well, who stayed in hotels while at port. Unlike most vessels that specialized in carrying one type of good, whether iron ore, grain, or people, PEWABIC profited from many industries and carried a wide range of consumables and people on every voyage. Thus its fingers of influence stretched far and wide as a carrier for multiple interests.

PEWABIC is nationally significant and eligible under Criterion A for its direct role in facilitating copper transport for the Union war effort between 1863 and 1865. The metal was used for canteens, buttons, pots and pans, and wooden vessel sheathing. Despite the geographical separation between the Keweenaw Peninsula and the front lines, copper's importance was so great that Confederate sabotage operations were a constant threat to merchant vessels on the lakes. Since railroads did not connect the Keweenaw Peninsula with the Lower Lakes until the 1880s, passenger/package freight propellers like PEWABIC were one of few means for Keweenaw copper to reach the mills and factories that produced goods vital for the Union war effort (Figure 7).

Criterion C: Engineering

Because PEWABIC was tasked with facilitating numerous cargo types as well as conveying passengers, builders Peck and Masters outfitted the vessel with cutting-edge technology while partitioning passenger and cargo spaces to maintain both the comfort and amenities of a passenger line and the utility of a freighter. Each square foot of the vessel was utilized by passenger accommodations, cargo space, or vessel equipment. Its sleek dimensions permitted PEWABIC to pass through the locks at Sault Ste. Marie connecting the lower Great Lakes with Lake Superior. Due to the increased risk of leaking, wooden steamers were rarely outfitted with twin screws, which PEWABIC features. To date, PEWABIC is the only known passenger/package freight propeller surviving with a centerline arch in a high level of historic preservation.

Wooden hulls with twin screws were a transitional vessel design on the lakes that were only built between 1860 and 1880. Though steam propulsion was not as quickly adopted on the Great Lakes as it was on the Atlantic seaboard, engine technology evolved at a rapid pace. Between 1818 when WALK ON THE WATER was launched as the first steamer on the Great Lakes and 1863 when PEWABIC was launched in Cleveland, several significant developments occurred in engine technology that had national implications on shipbuilding on the east and west coasts of the United States. First, early to middle nineteenth century sidewheel steamers, or sidewheelers, utilized walking beam low pressure engines which were very large, consumed substantial amounts of fuel, and had wide beams that prevented them from entering most locks and canals.

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After the Panic of 1857 these luxurious passenger carriers were too expensive to maintain and most were scrapped.

The issues of engine size, required fuel caches, and wide profiles led shipbuilders to experiment with screw propellers whose engines were more space and fuel efficient which granted more room for profitable passengers and package freight cargoes especially. The adoption of the screw propeller was especially popular for the Lake Superior trade which was only made accessible in 1855 with the construction of the locks at the Saint Mary's River. The locks had major implications for the iron ore and copper industries of Michigan's Upper Peninsula and within weeks shipbuilders were contracted to build sleek wooden propellers that were built to the dimensions of the locks and could carry both passengers and package freight. The most elegant of this new purpose-built vessel was PEWABIC. Built just 8 years after the locks opened, PEWABIC was bringing east coast mining investors, provisions, and excursionists during Lake Superior's frontier settlement phase.

PEWABIC was equipped with a rare screw propeller system that had two independent engines, and not the conventional one. The two screws provided redundant propulsion systems should one engine malfunction in the remote Lake Superior region. Twin screw vessels also drew less water, or had a shallower draught than comparable single screw vessels. Propellers on a twin screw were smaller in diameter and could be "tucked" higher underneath the stern. Reduced draught was advantageous in the sandbar-ridden small ports that PEWABIC visited that were not regularly dredged or had federal appropriations to do so. These advantages of twin screws illustrate that PEWABIC was built specifically for the wild, remote Lake Superior landscape.

Twin screws did not get popular until they were outfitted in steel-hulled vessels. The sternpost is the strongest aft timber on wooden vessels and was the logical choice to be bored through with a single propeller shaft. Twin screws are offset from the centered sternpost and require more creativity in how they are supported internally. Internal support systems were crucial in harnessing and deflecting shaft vibration to the hull and preventing friction. Propeller shafts on wooden hulls required constant attention and lubricating as minutes of dry friction could produce enough heat to start a fire. Little has been researched on the mechanical arrangement of twin screws on wooden hulls and the subject poses an excellent research question for future inquiry on PEWABIC.

Twin screws did not become popular on the Great Lakes until the advent of the steel hull. Steel-hulled designs were much stronger and could withstand the torque and power generated by twin engine systems that were increasing in horsepower and complexity. PEWABIC was built at the onset of twin screw technology, but still with a wooden hull: a rare combination illustrative of PEWABIC's transitional vessel identity. Because few of these vessels were built, little is known about their construction. The engineering features make PEWABIC exceptionally unique, possessing high levels of integrity and worthy of National Register nomination. Its unique design, significant workmanship as a transitional vessel with a rare combination of technologies, and consistent materials that were used in PEWABIC's initial construction in 1863 highlight its high level of integrity under Criterion C. Because PEWABIC was only afloat for three years its physical remains, as a shipwreck site, visually convey its significance as a transitional vessel

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type with few other examples in existence. Further study will contribute to our national understanding of the evolution of steamship technology as outlined in Criterion D below.

Criterion D: Historical and Archaeological Potential

Due to its long documented salvage history, PEWABIC is of notable archaeological interest. The available salvage records allow the archaeologist to retrace significant events in PEWABIC's post-wrecking history. Plenty of artifacts remain buried in the silt on the wreck site as well, particularly off the starboard side. Disarticulate boards, planking, and cabin remains suggest this debris pile was created by dynamite usage in the salvages of 1897 and 1917.

PEWABIC is also a gravesite. Conservative death estimates range between 33 and 40, while inflated numbers cite up to 125 persons died in the collision. Even the conservative estimates, however, give PEWABIC's collision with *Meteor* the title of "Lake Huron's Worst Maritime Disaster" (*New York Times* 1865). Passenger remains and personal effects are likely buried under the debris pile beside the hull and would provide insights into the people that walked its decks on its last voyage in 1865. Champagne bottles, silver spoons, and elegant personal effects have already been recovered from PEWABIC (Figure 8).

Few examples of wooden passenger/package freight propellers exist because the vessel class was built during the transition from wood to metal hulls. They were made obsolete by 1900 and many were converted into barges, floating docks, or dismantled altogether. PEWABIC is a unique example of this vessel class, frozen in time by deep, cold water in excellent preservation. Its combination of rare structural features like the twin screws and centerline arch further elevate its importance in the catalog of nineteenth-century Great Lakes vessels.

Unfortunately, PEWABIC is still negatively impacted by the sport diving community. During dives in July 2014, archaeologists from the Thunder Bay National Marine Sanctuary recreated photographs taken on the shipwreck site from 2005 and 2013. Their objective was to obtain comparable visual data of the site's formation process. Among other observations of quagga mussel colony expansions and evidence of rogue mooring systems was the disturbing reality of artifacts being moved and/or taken from the site. Figure 5 shows a human bone next to a block, five copper ingots, a broken pitcher base and some tableware resting on part of the railing amidships. This photograph was taken in 2005. In 2014 archaeologists took another photograph of the same area and discovered that the five ingots, block, pitcher base, tableware and human bone have been moved or taken from the site.

These two photographs offer evidence that despite present levels of federal (NOAA) and state (Michigan) legislative protection, PEWABIC (and others) continue to be disturbed. PEWABIC's position on the National Register of Historic Places adds an additional level of protection and further recognizes PEWABIC as a site of historical and archaeological importance.

PEWABIC retains excellent physical integrity and presents a rare opportunity to answer important archaeological questions about the short-lived wooden passenger/package freight propeller vessel class. How did builders integrate twin screws in wooden hulls? Are the propeller

PEWABIC Shipwreck Site
Name of Property

Alpena, Michigan
County and State

shafts considerably higher on the vessel than a contemporary single screw bored out the sternpost? How were centerline arches anchored to the keelson assembly? Did centerline arches present any additional fire threat to the vessel? How did shipbuilders consolidate twin boilers out to one smokestack? How does PEWABIC's twin screw arrangement compare with steel-hulled twin screws that became popular on the Great Lakes in the early twentieth century? These questions have national importance to grow our understanding of the evolution of the steamship.

There is no official record of Great Lakes wooden shipbuilding or construction plans for PEWABIC and its sister vessels. Information gathered from PEWABIC's shipwreck site has, and will continue to produce a wealth of knowledge about this transitional vessel type that had regional importance as a deliverer of settlement provisions and workers and national importance as a vessel that brought Keweenaw copper into the national market for wartime, domestic, and industrial uses.

PEWABIC Shipwreck Site
Name of Property

Alpena, Michigan
County and State

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PEWABIC Shipwreck Site

Name of Property

Alpena, Michigan

County and State

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PEWABIC Shipwreck Site

Name of Property

Alpena, Michigan

County and State

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PEWABIC Shipwreck Site

Alpena, Michigan

Name of Property

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 # _____

PEWABIC Shipwreck Site
Name of Property

Alpena, Michigan
County and State

_____ 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: Charles P. Labadie Collection at the Alpena County Public Library

Historic Resources Survey Number (if assigned): 20UH002

10. Geographical Data

Acreage of Property: 33.42 acres

Latitude/Longitude Coordinates

Datum if other than WGS84: _____

(enter coordinates to 6 decimal places)

- | | |
|--------------------------------|-----------------------|
| 1. Latitude: 44.965061 (Bow) | Longitude: -83.102437 |
| 2. Latitude: 44.965390 (Stern) | Longitude: -83.102846 |

Boundary Box Coordinates:

- | | |
|---|-----------------------|
| 1. Latitude: 44.966656 (Northwest Corner) | Longitude: -83.104825 |
| 2. Latitude: 44.963373 (Southwest Corner) | Longitude: -83.104726 |
| 3. Latitude: 44.963444 (Southeast Corner) | Longitude: -83.100037 |
| 4. Latitude: 44.966772 (Northeast Corner) | Longitude: -83.100180 |

Verbal Boundary Description

PEWABIC rests 18 miles east of the mouth of the Thunder Bay River in Alpena, Michigan and 6.5 miles southeast of Thunder Bay Island at a depth of 155-175 feet of water and. The vessel's remains lie in Michigan waters and are in the boundaries of the Thunder Bay National Marine Sanctuary. The bow is located at latitude 44.965028 longitude -83.102015 and the stern is located at latitude 44.965390 longitude -83.102846. The boundaries of the wreck site are defined by a rectangle extending out from the tip of the bow and stern and out

PEWABIC Shipwreck Site

Alpena, Michigan

Name of Property

County and State

from the edges of the vessel's sides amidships. This rectangle surrounds all sides of the main hull structure, encapsulates the vessel's original dimensions of 200' long by 31' of beam, and marks the entirety of the vessel's remains including hull structure, machinery, artifacts, and debris field associated with the sinking event. The area of the boundary box is 33.42 square acres. The northwest corner is located at longitude -83.104825 latitude 44.966656. The southwest corner is located at longitude -83.104726 latitude 44.963373. The southeast corner is located at longitude -83.100037 latitude 44.963444. The northeast corner is located at longitude -83.100180 latitude 44.966772.

Boundary Justification (Explain why the boundaries were selected.)

The National Register boundaries of the PEWABIC shipwreck encompass the footprint of its articulated remains within the coordinates listed above to capture the wreck site, hull structure, machinery, associated artifacts, and debris field. Side scan sonar, remotely operated vehicle, and diver surveys conducted by the Thunder Bay National Marine Sanctuary revealed the extents of the PEWABIC's hull structure, machinery, and associated artifacts are centralized in the coordinates previously listed. The justification for the 1300' x 1300' boundary box surrounding the main hull structure is that the PEWABIC, like the majority of vessels involved in collisions that resulted in a sinking event, has a scattered debris field that disperses away from the main hull as the ship settled in deeper water. The examination of this debris field in the future may yield information important to history, and provide information about shipboard life, vessel design, use, adaptation, cargo stowage, and PEWABIC's wrecking event.

11. Form Prepared By

name/title: Philip A. Hartmeyer/Maritime Archaeologist
organization: Thunder Bay National Marine Sanctuary
street & number: 500 West Fletcher
city or town: Alpena state: Michigan zip code: 49707
e-mail: phil.hartmeyer@noaa.gov
telephone: (925) 286-9648
date: January 11, 2016

PEWABIC Shipwreck Site

Name of Property

Alpena, Michigan

County and State

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A USGS map or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Additional items:** (Check with the SHPO, TPO, or FPO for any additional items.)

Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

- | | |
|---------------------|---|
| Photograph/Figure 1 | B. F. Leavitt, Historic Photograph
Name of Photographer: <i>Thunder Bay Sanctuary Research Collection</i> , Alpena, MI
Date of Image: 1917
Location of Digital Image: Patrick C. Labadie Collection, Alpena, MI
MI_Alpena_Pewabic Shipwreck Site_0001 |
| Photograph/Figure 2 | PEWABIC, Site Plan
Name of Author: Patrick C. Labadie
Date of Image: 2009
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI
MI_Alpena_Pewabic Shipwreck Site_0002 |
| Photograph/Figure 3 | PEWABIC, Side Scan Sonar Image
Name of Author: National Oceanic and Atmospheric Administration
Date of Image: 2013
Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI |

PEWABIC Shipwreck Site

Alpena, Michigan

Name of Property

County and State

MI_Alpena_Pewabic Shipwreck Site_0003

Photograph/Figure 4

PEWABIC, Photo Mosaic

Name of Author: National Oceanic and Atmospheric Administration

Date of Image: 2005

Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI

MI_Alpena_Pewabic Shipwreck Site_0004

Photograph/Figure 5

PEWABIC, Photograph of copper and human remains on deck

Name of Author: National Oceanic and Atmospheric Administration

Date of Image: 2005

Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI

MI_Alpena_Pewabic Shipwreck Site_0005

Photograph/Figure 6

PEWABIC, Photograph of fan-tail stern

Name of Author: National Oceanic and Atmospheric Administration

Date of Image: 2012

Location of Digital Image: Thunder Bay National Marine Sanctuary, Alpena, MI

MI_Alpena_Pewabic Shipwreck Site_0006

Photograph/Figure 7

PEWABIC, Historic Photograph

Name of Author: *Thunder Bay Sanctuary Research Collection*

Date of Image: 1864

Location of Digital Image: Patrick C. Labadie Collection, Alpena, MI

MI_Alpena_Pewabic Shipwreck Site_0007

Photograph/Figure 8

PEWABIC, Excursion Advertisement

Name of Author: *Thunder Bay Sanctuary Research Collection*

Date of Image: 1864

Location of Digital Image: Patrick C. Labadie Collection, Alpena, MI

MI_Alpena_Pewabic Shipwreck Site_0008

PEWABIC Shipwreck Site
Name of Property

Alpena, Michigan
County and State

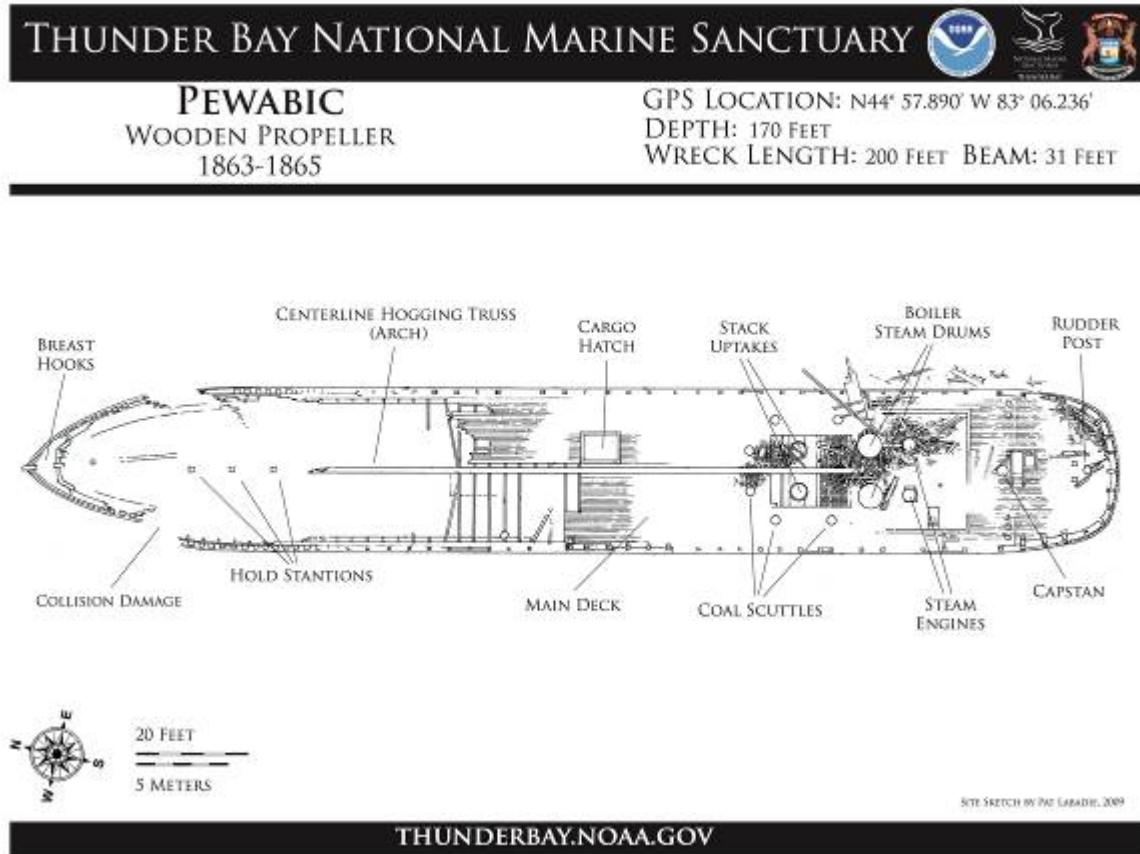
Figure 1:



PEWABIC Shipwreck Site
Name of Property

Alpena, Michigan
County and State

Figure 2:



PEWABIC Shipwreck Site
Name of Property

Alpena, Michigan
County and State

Figure 3:

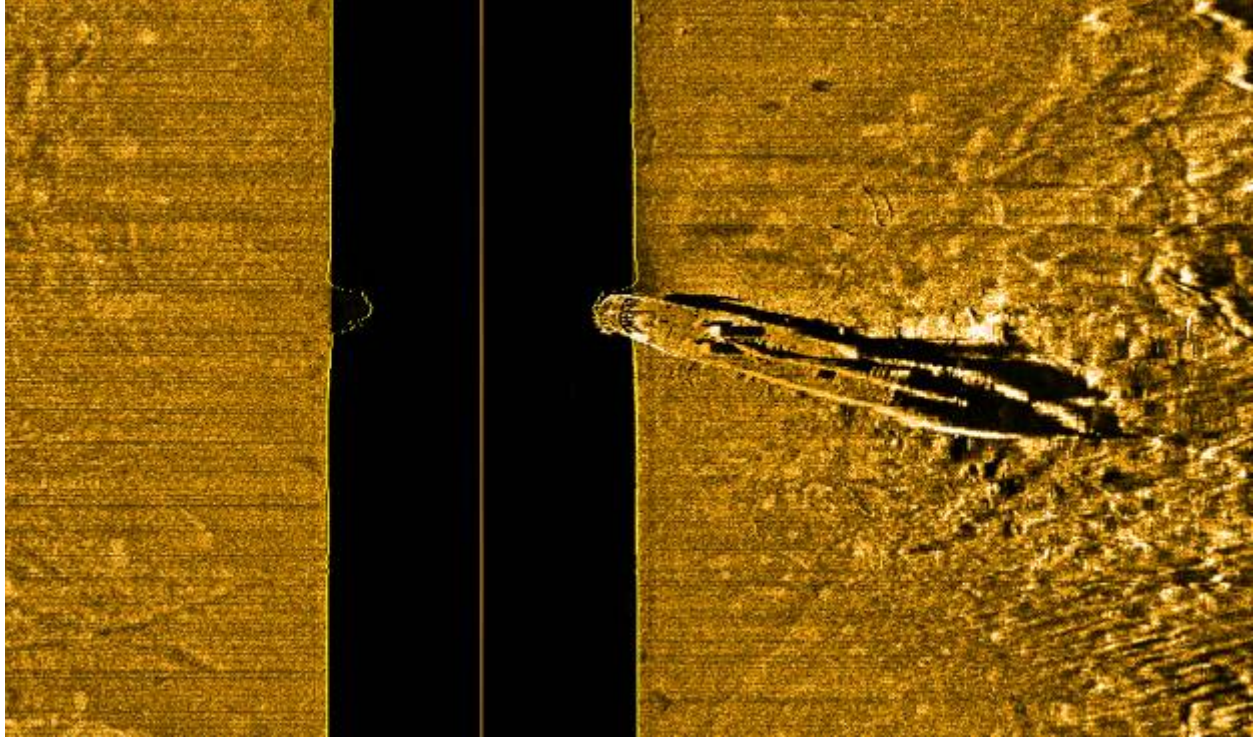
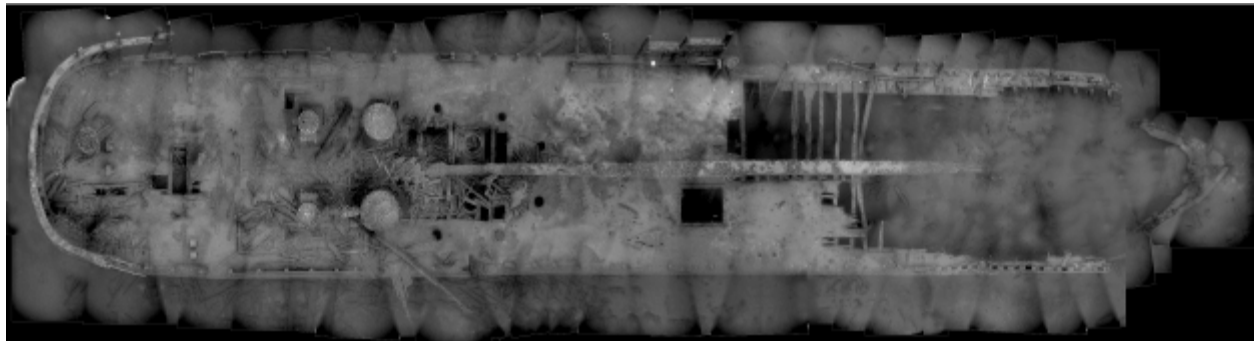


Figure 4:



PEWABIC Shipwreck Site
Name of Property

Alpena, Michigan
County and State

Figure 5:



PEWABIC Shipwreck Site
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Alpena, Michigan
County and State

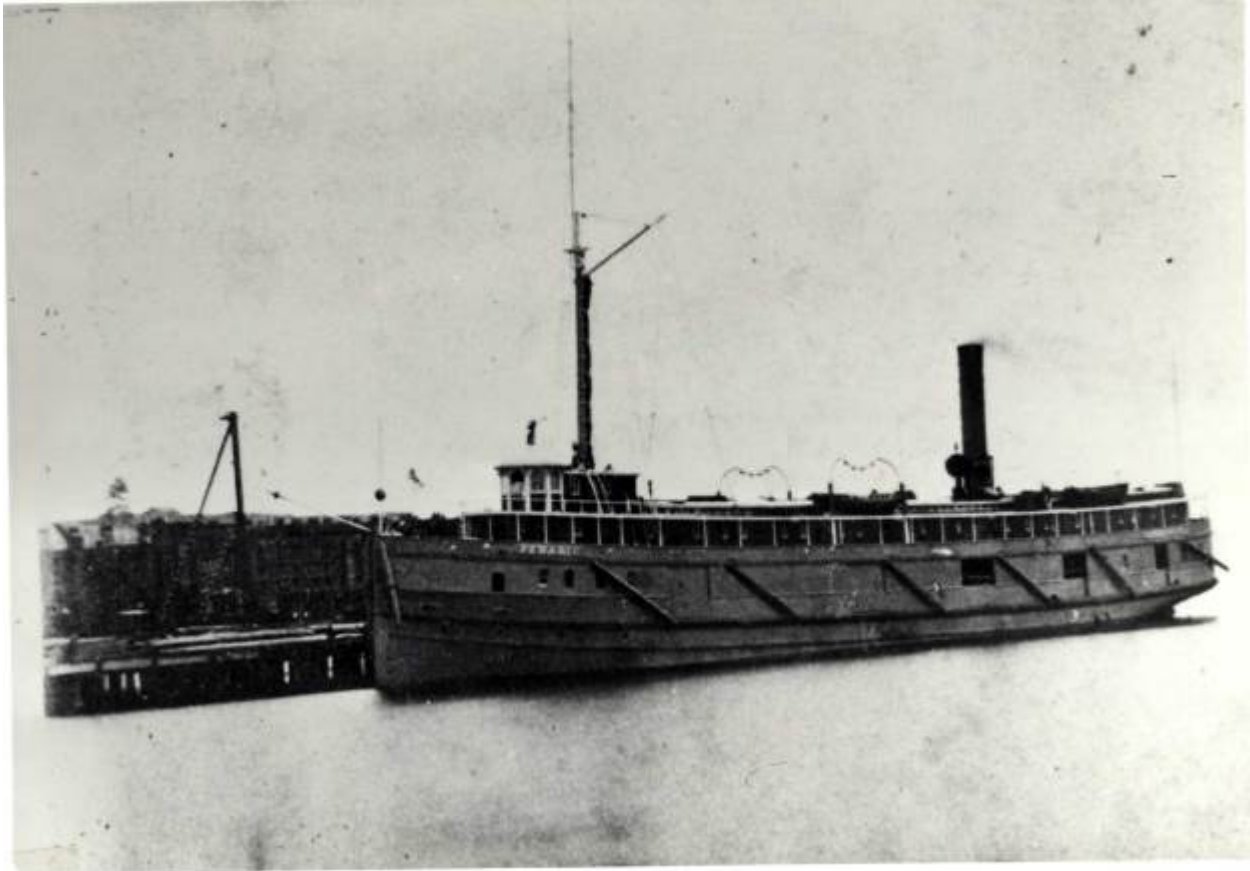
Figure 6:



PEWABIC Shipwreck Site
Name of Property

Alpena, Michigan
County and State

Figure 7:




PEWABIC Shipwreck Site
 Name of Property

Alpena, Michigan
 County and State

Figure 8:

174 STEAMBOAT ROUTES.

PIONEER LAKE SUPERIOR LINE.



The New and Magnificent Upper Cabin Steamers

METEOR,		PEWABIC,	
THOS. WILSON, Master,		GEO. McKAY, Master.	
Will leave Cleveland, 8 P. M. Mondays.		Will leave Cleveland, 8 P. M. Mondays.	
June.....	26	July.....	3, 17, 31
July.....	10, 24	August.....	14, 28
August.....	7, 21	September.....	11, 25
September.....	4, 18	October.....	9
October.....	2		

Leaving DETROIT on the day following the above named, at 2 O'CLOCK P. M., calling at PORT HURON and SARNIA the same evening.

This is the most pleasant, healthful, and cheapest trip on the American Continent.

The within-named favorite boats will run as advertised during the season of 1865. They are officered by men of long experience on the route, who will devote themselves to the comfort and safety of passengers.

No one should fail to visit this new, growing, and wonderful country. Its immense mineral deposits are attracting the attention of the whole scientific world. Its immense mountains of almost pure Iron, its inexhaustible Native Copper and Silver Mines, the new discoveries of Silver Lead, and that magnificent and singular formation, the Pictured Rocks, form a series of irresistible attractions to the speculator and geologist. The cool and bracing atmosphere suggests recovery of perfect health to the invalid, and the sportsman, with his rod and line, will find abundant recreation in angling for the beautiful speckled trout, in the finest fishing streams in the world.

This Trip, of over 1,000 miles, embraces six degrees of latitude and eleven of longitude, and includes in its circuit Lakes Erie, St. Clair, Huron, and Superior, and the beautiful rivers Detroit, St. Clair, and Ste. Maries.

Grand Pleasure Excursions to all points of interest on Lake Superior will be made through the months of July and August—leaving Cleveland and Detroit on the days as before stated.

For further information regarding Freight or Passage, address,

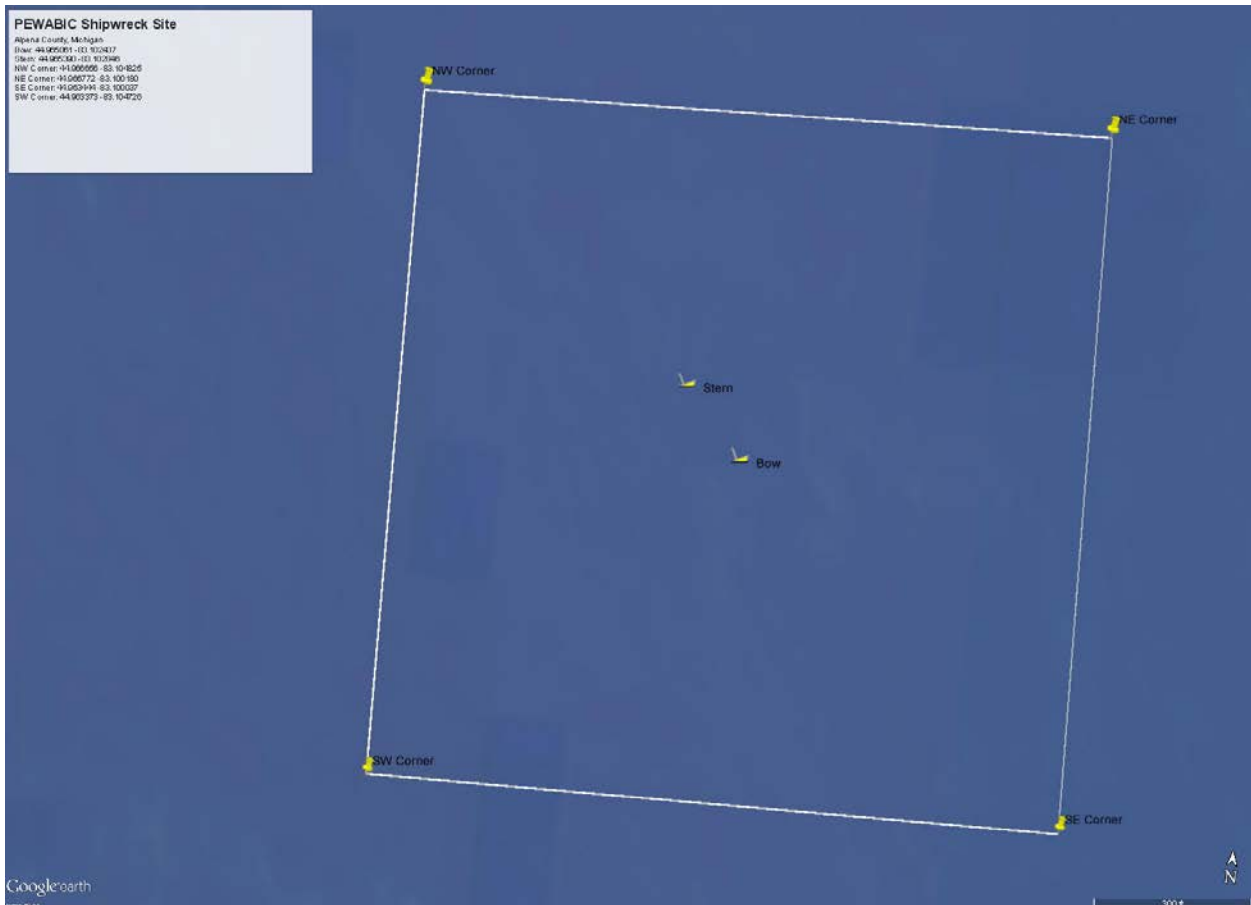
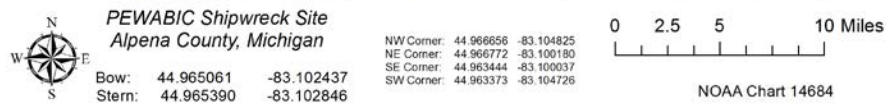
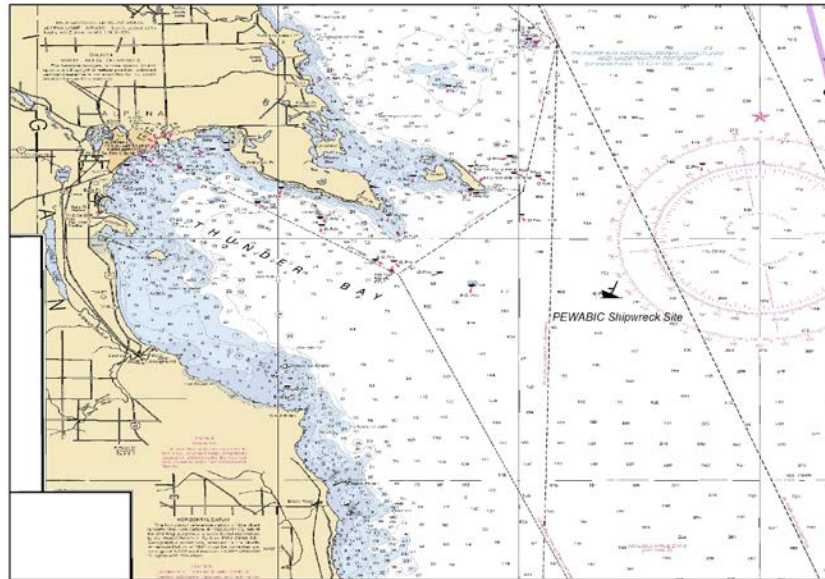
GARRETSON & CO.,
 No. 1 RIVER STREET, CLEVELAND, OHIO.

WHITING & O'GRADY,
 FOOT OF FIRST STREET, DETROIT, MICH.

J. T. WHITING, & CO., Managers,
 FOOT OF FIRST STREET, DETROIT, MICH.

PEWABIC Shipwreck Site
 Name of Property

Alpena, Michigan
 County and State



PEWABIC Shipwreck Site
Name of Property

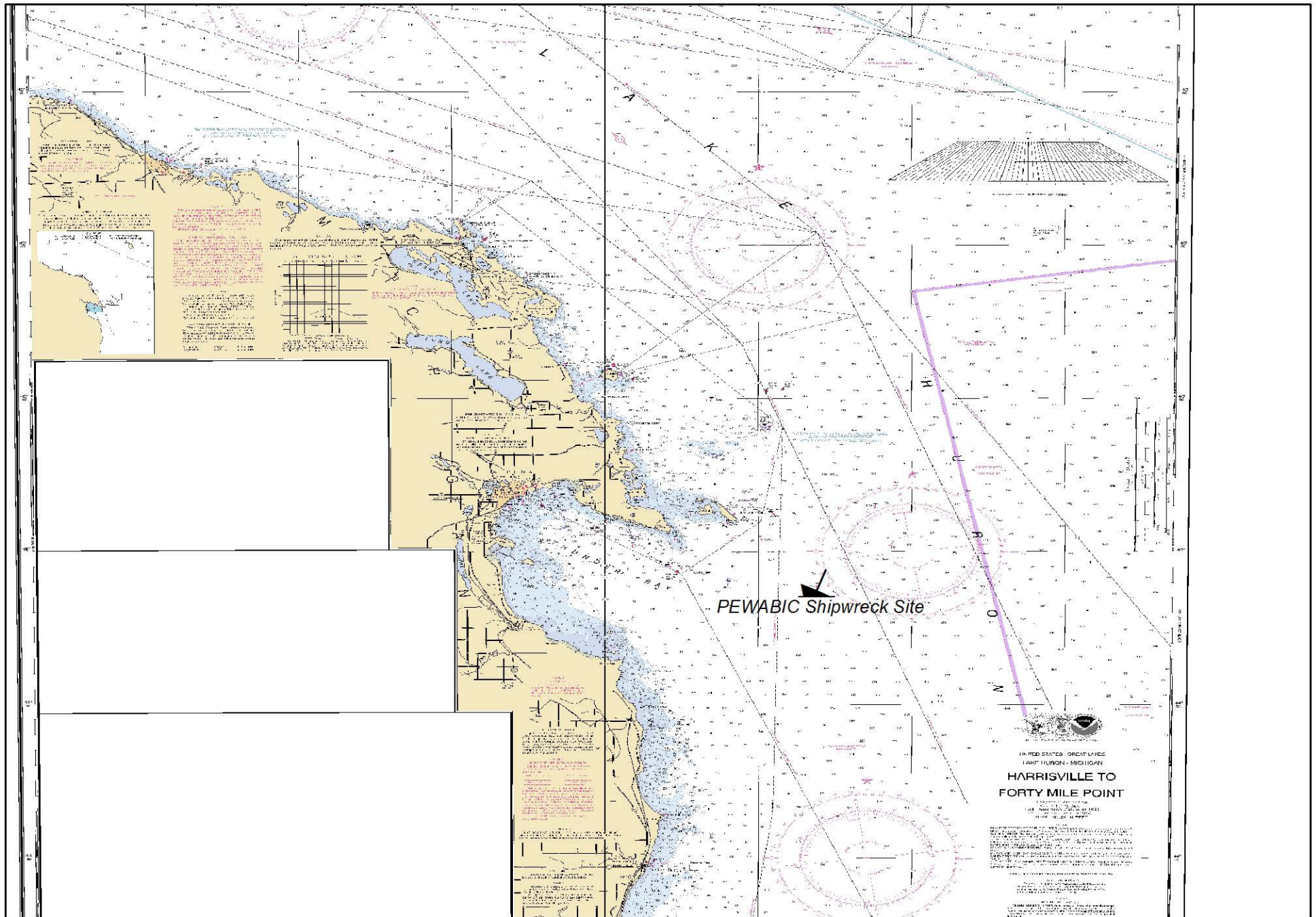
Alpena, Michigan
County and State

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.

PEWABIC Shipwreck Site
Alpena County, Michigan
Bow: 44.965001 -83.102487
Stern: 44.965390 -83.102946
NW Corner: 44.966666 -83.104825
NE Corner: 44.966772 -83.100180
SE Corner: 44.963444 -83.100037
SW Corner: 44.963373 -83.104720





PEWABIC Shipwreck Site
Alpena County, Michigan

Bow: 44.965061 -83.102437
 Stern: 44.965390 -83.102846

NW Corner: 44.966656 -83.104825
 NE Corner: 44.966772 -83.100180
 SE Corner: 44.963444 -83.100037
 SW Corner: 44.963373 -83.104726



NOAA Chart 14684

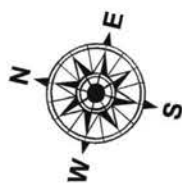
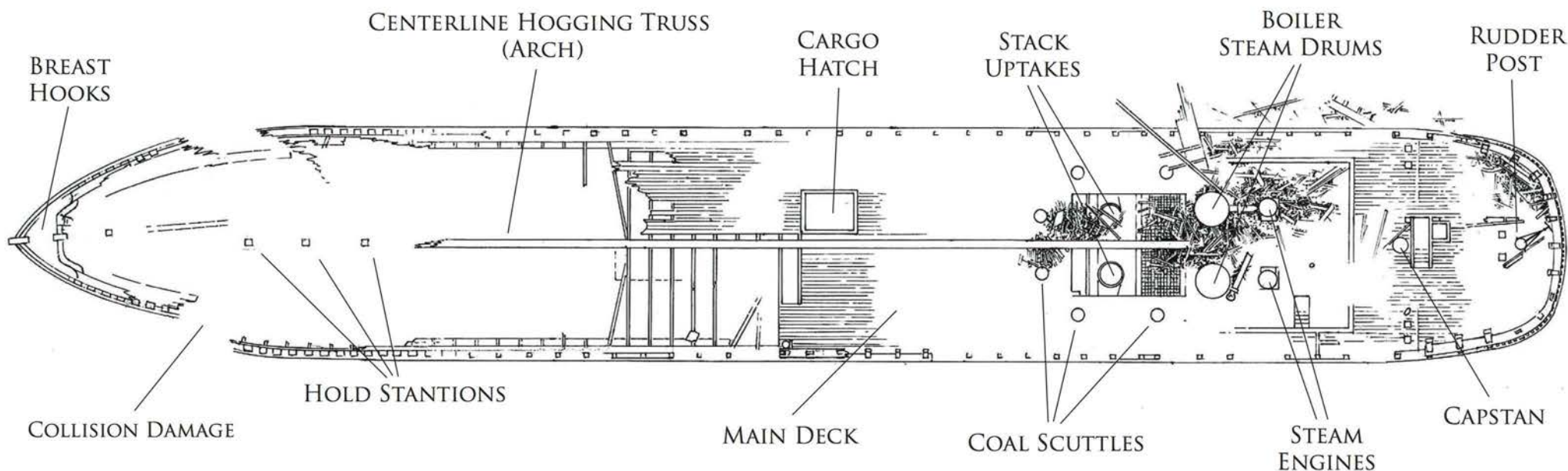


THUNDER BAY NATIONAL MARINE SANCTUARY



PEWABIC WOODEN PROPELLER 1863-1865

GPS LOCATION: N44° 57.890' W 83° 06.236'
DEPTH: 170 FEET
WRECK LENGTH: 200 FEET BEAM: 31 FEET

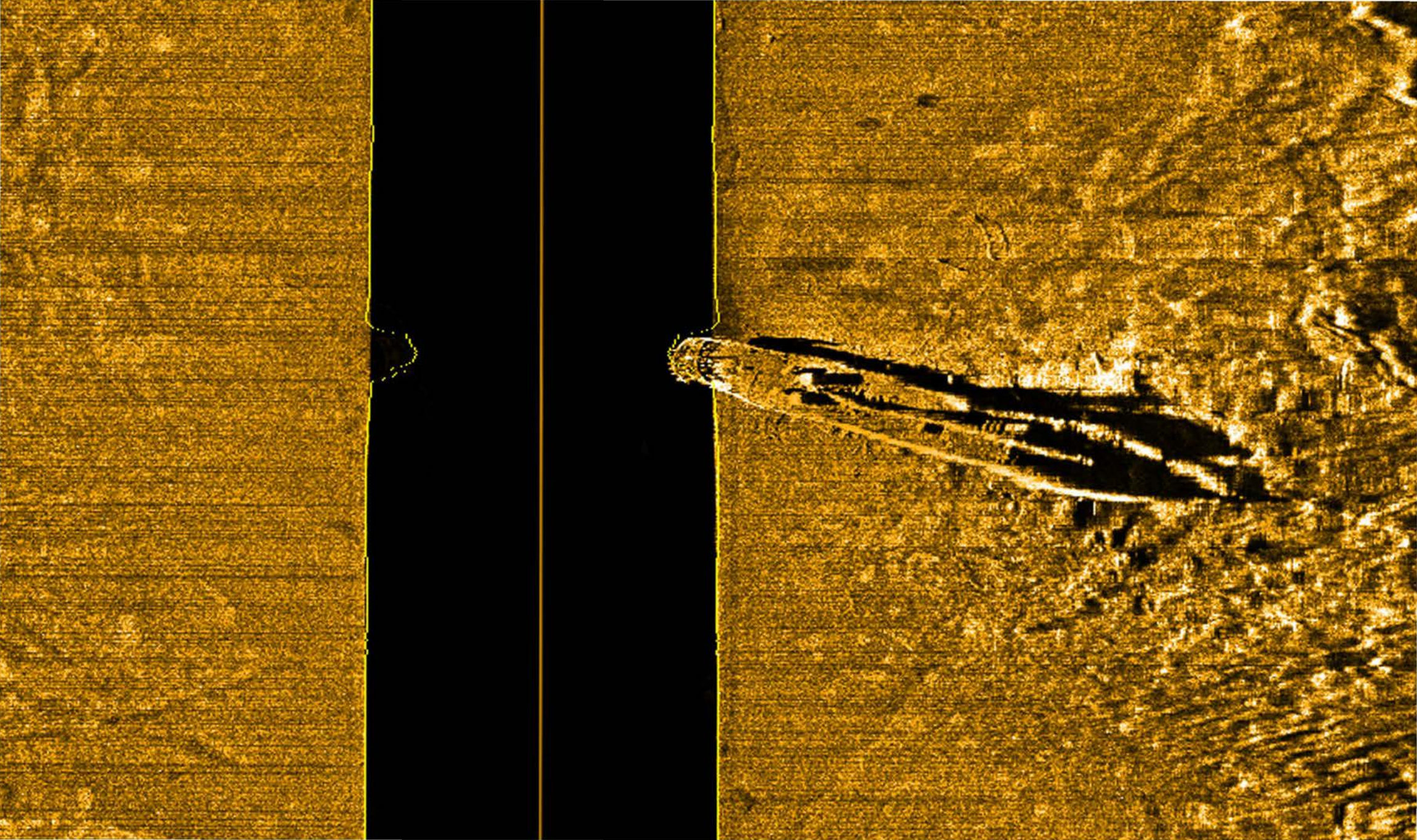


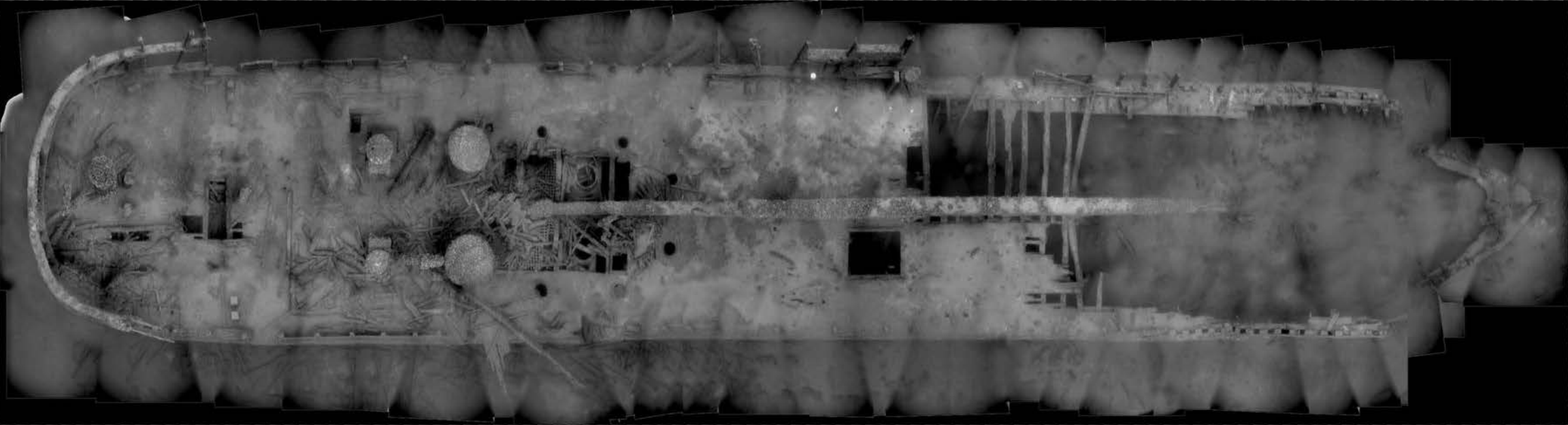
20 FEET

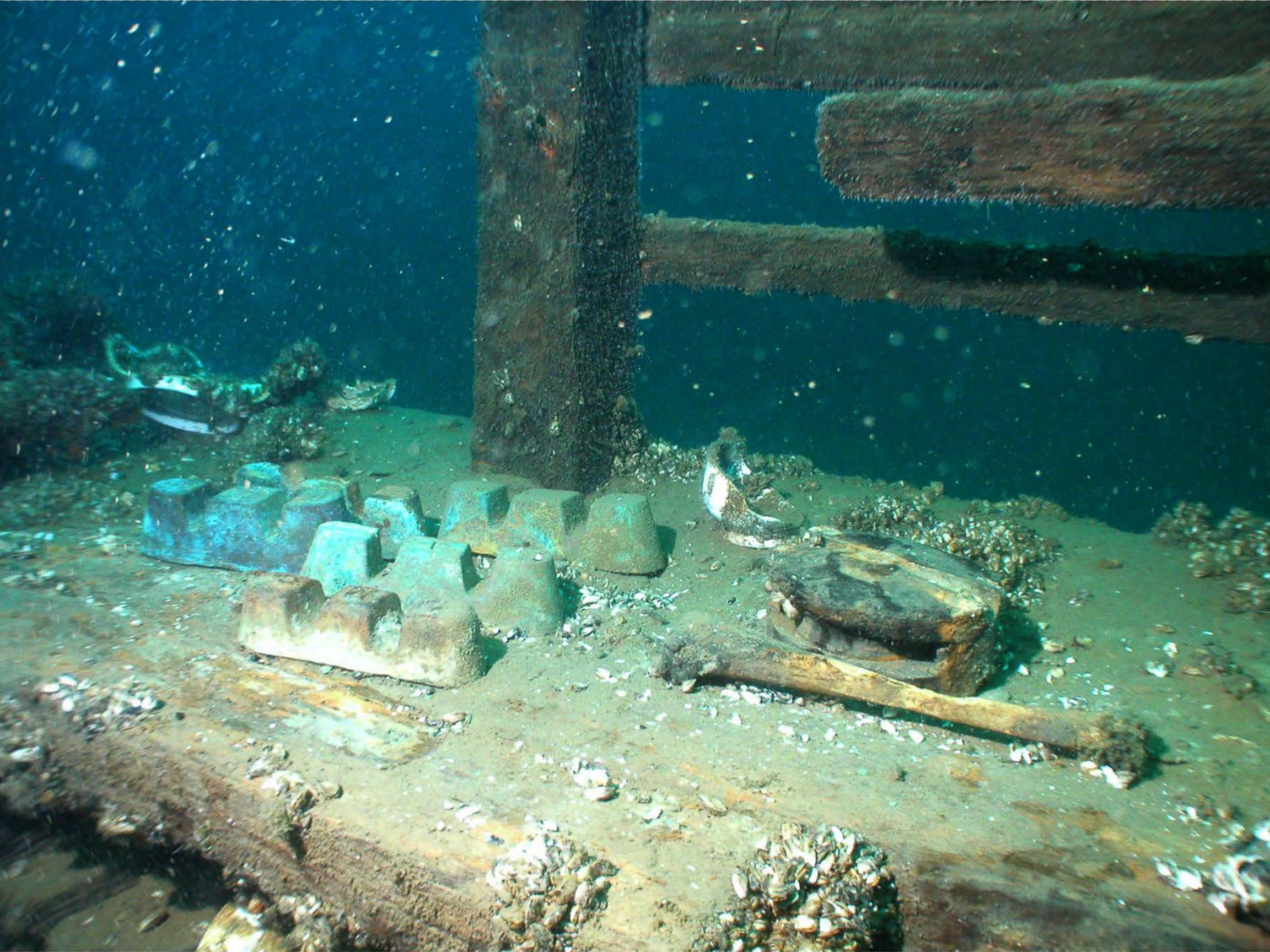


5 METERS

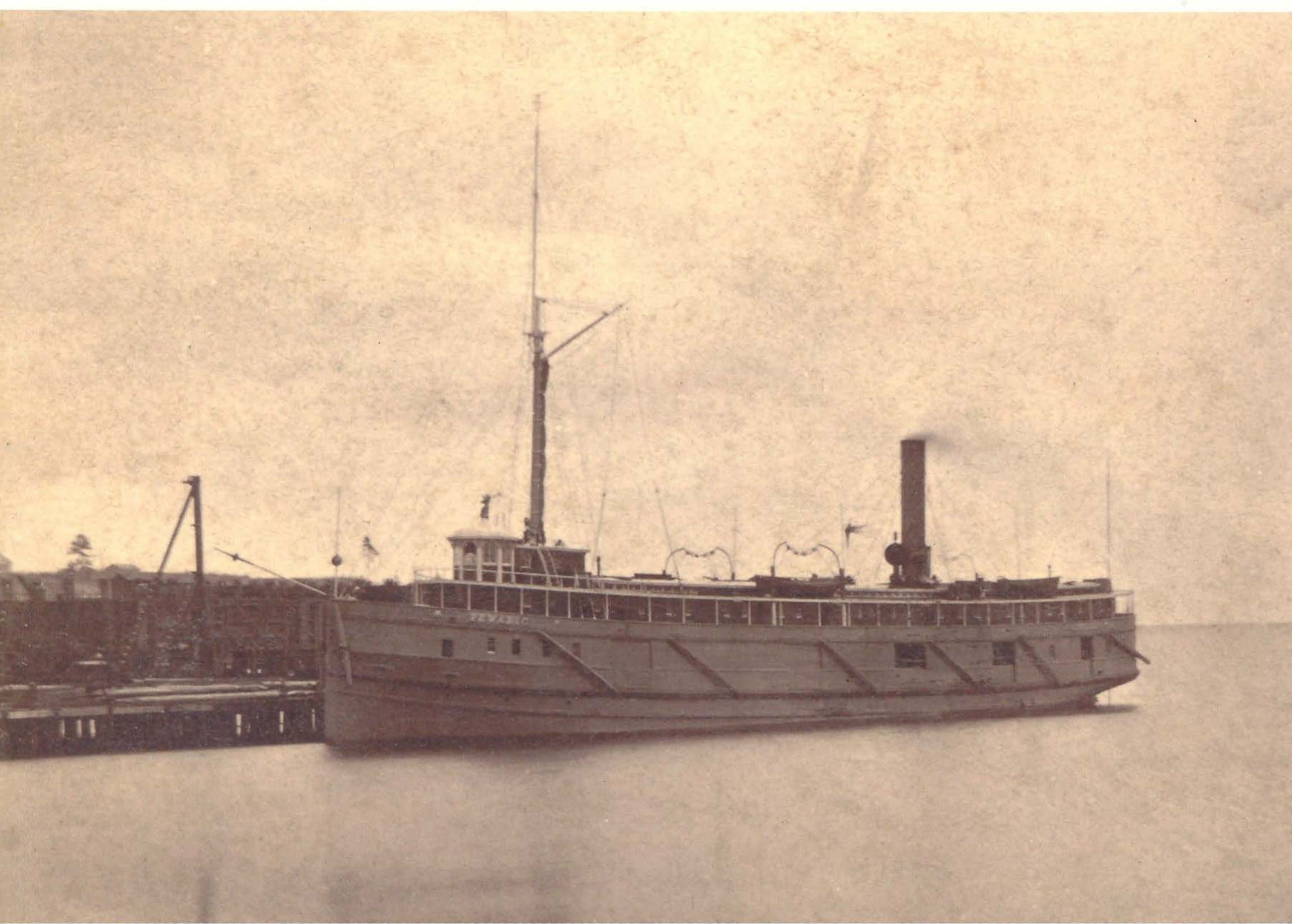
SITE SKETCH BY PAT LABADIE, 2009











PIONEER LAKE SUPERIOR LINE.



The New and Magnificent Upper Cabin Steamers

METEOR, PEWABIC,

THOS. WILSON, Master,

GEO. MCKAY, Master.

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J. T. WHITING, & CO., Managers,

FOOT OF FIRST STREET, DETROIT, MICH.

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: RESUBMISSION

PROPERTY NAME: PEWABIC (propeller) Shipwreck Site

MULTIPLE NAME:

STATE & COUNTY: MICHIGAN, Alpena

DATE RECEIVED: 7/08/16 DATE OF PENDING LIST:
DATE OF 16TH DAY: DATE OF 45TH DAY: 8/23/16
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 14001096

DETAILED EVALUATION:

ACCEPT RETURN REJECT 8/22/16 DATE

ABSTRACT/SUMMARY COMMENTS:

See attached Supplementary Listing Record.

RECOM./CRITERIA A, C & D

REVIEWER Janet K. ...

TELEPHONE 202.354.2217

DISCIPLINE archeology

DATE 8/22/16

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



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



DAN WYANT
DIRECTOR

September 3, 2014

Mr. Robert Christensen
Michigan State Housing Development Authority
State Historic Preservation Office
Michigan Library and Historical Center
P.O. Box 30740
Lansing, Michigan 48909-8240

Dear Mr. Christensen:

Thank you for the letter of August 8, 2014, to Director Dan Wyant, Department of Environmental Quality (DEQ), concerning the proposed nomination of the shipwreck sites *Etruria*, *M.F. Merrick*, *Kyle Spangler*, and *Pewabic* located on Lake Huron public trust bottomlands to the National Register of Historic Places. Director Wyant has referred your letter to the DEQ's Water Resources Division (WRD) for response.

The DEQ supports the proposed nomination of these shipwreck sites to the National Register as this action will further recognize these important historical resources, which are managed jointly by the DEQ and the Department of Natural Resources' Michigan Historical Center.

If you have any further questions regarding this matter, please contact Mr. Tom Graf, Great Lakes Shorelands Unit, Surface Water Assessment Section, WRD, at 517-284-5561; graft@michigan.gov; or DEQ, P.O. Box 30458, Lansing, Michigan 48909-7958; or you may contact me.

Sincerely,

William Creal, Chief
Water Resources Division
517-284-5470

cc: Mr. Brian A. Conway, State Historic Preservation Office
Mr. Dan Wyant, Director, DEQ
Mr. Jim Sygo, Deputy Director, DEQ
Ms. Diana Klemans, DEQ
Mr. James Milne, DEQ
Mr. Tom Graf, DEQ



STATE OF MICHIGAN

RICK SNYDER
GOVERNOR

MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY

WAYNE WORKMAN
ACTING-EXECUTIVE DIRECTOR



November 3, 2014

Mr. J. Paul Loether, Chief
National Register of Historic Places
National Park Service
1201 Eye Street, NW, 8th Floor
Washington, DC 20005

Dear Mr. Loether:

Enclosed is a national register nomination form for the Pewabic Shipwreck Site in Alpena County, Michigan. This property is being submitted for listing in the national register. All written comments concerning this nomination submitted to us prior to the submission of this nomination to you are enclosed.

Questions concerning this nomination should be addressed to Robert O. Christensen, national register coordinator, by phone at 517/335-2719 or email at christensenr@michigan.gov.

Sincerely yours,

Brian D. Conway
State Historic Preservation Officer

State Historic Preservation Office

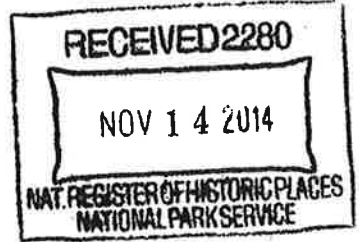
Michigan Library and Historical Center • 702 West Kalamazoo Street • P.O. Box 30740 Lansing, Michigan 48909-8240
michigan.gov/shpo • 517.373.1630 • FAX 517.335.0348 • TTY 800.382.4568

United States Department of the Interior
National Park Service

1096

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: PEWABIC Shipwreck Site

Other names/site number:

Name of related multiple property listing:

(Enter "N/A" if property is not part of a multiple property listing)

2. Location

Street & number: Thunder Bay, 6.5 Miles SE of Thunder Bay Island, Lake Huron

City or town: Alpena Township State: Michigan County: Alpena

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:

X national ___ statewide ___ local
Applicable National Register Criteria:

X A ___ B X C X D

<u>Brian D. Murray</u>	<u>11/5/14</u>
Signature of certifying official/Title:	Date
<u>MI SHPO</u>	

In my opinion, the property ___ meets ___ does not meet the National Register criteria.	
Signature of commenting official:	Date
Title :	State or Federal agency/bureau or Tribal Government

PEWABIC Shipwreck Site
Name of Property

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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:) _____

Signature of the Keeper

Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply.)

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

Returned

Category of Property

(Check only **one** box.)

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

PEWABIC Shipwreck Site
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Number of Resources within Property

(Do not include previously listed resources in the count)

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

Number of contributing resources previously listed in the National Register _____

6. Function or Use

Historic Functions

(Enter categories from instructions.)

TRANSPORTATION / WATER-RELATED

Current Functions

(Enter categories from instructions.)

OTHER / UNDERWATER SITE

Returned

PEWABIC Shipwreck Site
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7. Description

Architectural Classification

(Enter categories from instructions.)

Shipwreck-Wood Hulled Propeller

Materials: (enter categories from instructions.)

Principal exterior materials of the property: Wooden hull and iron machinery

Narrative Description

Summary Paragraph

The wreck site of the 200-foot long wooden passenger/package freight propeller PEWABIC lies roughly 6.5 miles southeast of Thunder Bay Island and eighteen miles east-southeast from the coastal town of Alpena, Michigan, in Lake Huron. PEWABIC was built in 1863 and sank in 1865 following a collision with sister ship METEOR. The shipwreck site lies in between 155 and 175 feet of water.

Narrative Description

PEWABIC was built in 1863 by Peck and Masters in Cleveland, Ohio. Commissioned by J. T. Whiting, agent of the Pioneer Lake Superior Line, PEWABIC was designed to carry passengers and freight between Cleveland and Michigan's Keweenaw Peninsula, including carrying copper ingots back from the Keweenaw's copper mines in its hold. When launched, PEWABIC and its sister ship, METEOR, were two of the best outfitted propellers on the lakes with elegant furnishings and the most modern technology and amenities. PEWABIC and METEOR departed Cleveland on reciprocal schedules, and often passed each other along Lake Huron (*Cleveland Morning Leader* 1865). Such was the case on the calm evening of August 9, 1865. After signaling to pass to port, PEWABIC inexplicably heaved to its port side, and oncoming METEOR collided with it, its bow driving deep into PEWABIC's hull, just aft of the wheelhouse. PEWABIC and its 250 tons of native copper, many of its 125 passengers, and the rest of its package freight cargo were dragged to the lake bottom in four minutes (*Erie Daily Dispatch* 1865). The death toll made the collision between PEWABIC and METEOR "Lake

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Huron's Worst Maritime Disaster." The shipwreck is located off the northeastern Lower Peninsula of Michigan, 6.5 miles southeast of Thunder Bay Island and 18 miles east of the mouth of the Thunder Bay River in Alpena.

At 200' in length and 31' in beam, PEWABIC's dimensions were planned to be able to navigate the locks at Sault Saint Marie, Michigan, and the winding waters of the Portage River. PEWABIC was built at a reported cost of \$100,000, owners Peck and Masters providing unusually up-to-date passenger accommodations and the best in propulsion technology (Busch 1975). Henry Hobart, a passenger on an 1864 PEWABIC voyage, recounts his experience in his journal: "We are running fifteen or twenty miles an hour and the spray rolls away from our noble propeller in fine style as she cuts the water with her heavy load ... I should prefer to go on the PEWABIC to any boat on the lake" (Mason 1991:311). Inside, the elaborate main dining area hosted first-class meals and served as a dance floor once tables were cleared. PEWABIC's quality accommodations and cutting-edge technology made its collision with METEOR more tragic and shocking.

PEWABIC's upright hull is buried in the sand and in good condition. The hull is 200' in length with a 31' beam. It rises between ten and eighteen feet above the sandy lake bottom and is largely coated by zebra and quagga mussels. Due to collision damage from METEOR and later salvage efforts focused on the bow, the stern section of PEWABIC is in better condition than the bow. PEWABIC's two 8.5' square-bladed propellers remain intact along with their vertical and horizontal reinforcing struts and stuffing boxes (Hartmeyer 2014:60). Between the propellers lays the wooden rudder, whose port orientation suggests that second-mate George Cleveland, operator of the vessel when it sunk, attempted to heave PEWABIC hard to port in the final seconds before the collision.

The rapid sinking and later salvage expeditions are responsible for the absence of PEWABIC's first class cabins on the wreck itself. The cabin structure lies in disarticulate piles primarily off the starboard side of the wreck site. The main deck, however, remains intact for most of the vessel's 200' overall length. On the main deck rest two of PEWABIC's important structural features. A massive centerline arch on the vessel provided stem-to-stern rigidity that prevented hogging and sagging, a problem common in long wooden vessels. The arch was secured directly to the keelson assembly by long iron turnbuckles and a series of hanging knee/stanchion arrangements that retained the structure's strength and shape. The centerline arch rises six to eight feet above the main deck and ends abruptly sixty feet from the bow, just at the arch's peak (Hartmeyer 2014:63). The main deck also ends at this point on the shipwreck. The damage is attributed to dynamite used in 1897 and 1917 salvage expeditions. Looking back towards the stern from the bow, one can access the intact hold (beneath the main deck) which illuminates PEWABIC's construction style and likely contains a plethora of material culture buried beneath 1-4' of silt.

Beyond this abrupt end in structure lays the bow section of the vessel. The gap resulted from PEWABIC's fatal collision with METEOR, when METEOR's bow pierced through PEWABIC's hull, and was further enlarged by the use of dynamite in 1897 and 1917 salvage operations.

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The other important features on PEWABIC's main deck are its engines: twin Cuyahoga 26.5" x 30" high pressure, inverted, direct-acting steam engines. The cylinder heads and boiler heads protrude from the main deck. One staircase through a hatch leads to the engine room beneath the main deck. The main deck also still contains material remains from passengers, cargo, and equipment.

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
-

PEWABIC Shipwreck Site
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G. Less than 50 years old or achieving significance within the past 50 years

Areas of Significance

(Enter categories from instructions.)

MARITIME HISTORY

COMMERCE

ENGINEERING

ARCHAEOLOGY - HISTORIC

Period of Significance

1863-1865

Significant Dates

1863 (Launch)

8/9/1865 (Sinking)

Significant Person

(Complete only if Criterion B is marked above.)

N/A

Cultural Affiliation

N/A

Architect/Builder

Peck and Masters, Cleveland

Returned

Statement of Significance Summary Paragraph

The shipwreck of PEWABIC is of local, state, and national historical significance. PEWABIC is eligible under Criterion A for its role in carrying passengers and freight – including copper ingots from the Keweenaw smelters – in the early years of the Keweenaw copper boom in Michigan’s Upper Peninsula, a nationally significant industrial story recognized by the Keweenaw National Historical Park and the designation of two of the region’s key copper industry-related sites as National Historic Landmarks and the listing of many others in the National Register of Historic Places. Part of PEWABIC’s significance lies in the survival of part

PEWABIC Shipwreck Site

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of the cargo of Keweenaw copper ingots from its last voyage downbound toward Cleveland. PEWABIC is also eligible under Criterion C as a rare example of a unique Great Lakes vessel type, the wooden passenger/package freight propeller. The hull structure has the potential to yield important information about the Great Lakes' wooden passenger/package freight propeller vessels, once a prominent feature of Great Lakes shipping but now non-existent except for a very few preserved as shipwrecks in deep waters in the Great Lakes. PEWABIC is eligible under Criterion D for its potential to yield further information important to history.

Narrative Statement of Significance

Maritime History

PEWABIC and other commercial vessels were essential to the commerce and industrial development of the Keweenaw Peninsula, an isolated region with economic importance only accessible by water in the years before railroad connections were established. PEWABIC was one of the few vessels serving this northern maritime frontier and facilitating development along the southern Lake Superior coast. It connected urban America with the northern frontier by bringing tourists, immigrant laborers, and provisions north and returning with profitable copper and other cargoes in considerable quantities. Most importantly, PEWABIC made stops at both large (Houghton, Copper Harbor) and small (Ontonagon, Bayfield) ports, servicing the needs of both developed copper towns and rural hamlets.

On August 9, 1865, PEWABIC was steaming downbound off Alpena, Michigan, on its seventh trip of the summer season after a successful trip to the Lake Superior copper mining region, the Keweenaw Peninsula. First class excursionists were the primary passenger class on board. Beneath the first class cabins lay PEWABIC's mixed cargo of copper (131 tons from Quincy Mine, 45 tons from Ontonagon, 25 tons from Central Mine, 65 tons from the Portage Lake Smelting Works, 1 ton from Smith Harris), 179 tons of iron ore, half barrels of fish (202 from Detour, 20 from Ontonagon), 200 ships knees, 2 ½ tons of potash from Portage, and 27 rolls of leather from Ontonagon (Dismond 1955). The copper on board PEWABIC alone was worth \$195,000 in 1865. That evening PEWABIC collided with METEOR and dozens of passengers and the valuable mixed freight cargo were sent to the lake bottom.

Marine salvagers arrived in Alpena, Michigan, within months after the collision. Billy Pike was the first diver on scene but died from decompression illness after his surface crew rapidly brought him to the surface after a twenty-minute dive (Richards 1939). Pike was using traditional hard-hat dive equipment developed in the 1830s. Unfortunately for Pike, the general lack of knowledge surrounding deep diving and the effects of breathing air under extreme pressure were directly responsible for his death.

Pike's death left PEWABIC to itself until 1891, when inventor Oliver Pelkey revealed his patented dive-suit developed for the PEWABIC salvage. The suit was constructed of an inner

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layer of metallic armor rings, which were shaped to fit the contours of the body. Screws then attached metallic armor plates over the ring skeleton. Lastly, a thick outer layer made of vulcanized rubber covered the metallic skeleton (Pelkey 1889:3). Pelkey's strategy was to keep the diver dry, and be able to retain flexibility with the many moving parts. During his first dive, however, Pelkey became tragically entangled in the wreck. After not responding to surface signals on his umbilical hose, the surface crew cleated off his air supply line and wrenched him from the wreck. They quickly recovered the suit, and Pelkey died on the wrecking barge in front of investors.

One of Pelkey's rival marine inventors, E. H. Brault, arrived with his own patented dive-suit in 1892. PEWABIC had become a salvage training ground. With each fatality came more reward and glory for the inventor to reach PEWABIC first. Like Pelkey's suit, Brault's invention featured a layered design with an inner metallic skeleton, but the armor plates were fewer in number. Brault's patent illustrates the rising concern over pressure at depth. His breastplate and torso assembly is much stronger than Pelkey's, and was built with fewer interlocking pieces (Brault 1891:1). Additional upgrades include the helmet-mounted incandescent light and speaking tube. Brault became the first diver to see PEWABIC after a dive to 147 feet for 43 minutes but came up due to frigid water temperatures and a poor air-delivery system. Despite his success, Brault mysteriously disappeared days after the dive. Rumors hold financial complications between Brault and his chartered wrecking barge responsible. While Brault became the first diver to see PEWABIC, it remained unclear how salvagers were to extract the copper.

Gordon W. Smith is credited as the first person to salvage PEWABIC in an expedition during the summers of 1896, 1897, and 1898. Smith designed a two-person diving bell specifically for PEWABIC. Outfitted with grapple hooks, adjustable iron feet, and thick glass portholes, the bell successfully recovered 50 tons of copper. Smith used the bell as a director for clam-bucket operators at the surface. Smith watched the bucket descend on the wreck and guided the surface crew around different parts of the vessel. Smith's luck ended when one of the portholes cracked and flooded the bell (*Alpena Weekly Argus* 1898). The double fatality promptly ended the three-year expedition and PEWABIC remained in the shadows until high copper prices during World War I brought B. F. Leavitt to Alpena.

Benjamin F. Leavitt was PEWABIC's most enterprising suitor. In October 1916 he set the world diving record to 361 feet in Grand Traverse Bay in Lake Michigan (*Scientific American* 1920:46). Leavitt quickly received investor backing to head to Alpena. Nicknamed the "iron duke," Leavitt's suit was cast of manganese bronze and was a true one-atmosphere suit. The one-piece dive suit kept the diver inside at surface pressure, allowing him to remain at the lake bottom for extended periods. Leavitt also installed an air-recycling system mounted on the back of the suit; it operated similar to a modern-day closed-circuit rebreather. Exhaled air traveled through a caustic medium that absorbed carbon dioxide and the air mixture was then supplemented by oxygen stored in a small pony tank (Leavitt 1920). The rebreather system sustained life for four hours. Leavitt's suit was just the second one-atmosphere suit developed in the United States and represents a breakthrough in deep diving technology and understanding of pressure (Figure 1).

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Over the course of the summer 1917 Leavitt salvaged 70 tons of copper, 50 tons of iron ore, 140 sides of leather, and a vast collection of cultural material (*Alpena News* 1917f). Leavitt also utilized a clam bucket that was responsible for most of the recovered items. Leavitt used his success as a springboard into further salvage ventures and went on to conduct noteworthy cargo recoveries in deep waters off Alaska and Chile.

PEWABIC's longest dormant stage was between 1917 and 1974, when Michigan's Department of Natural Resources granted Saginaw resident Gregory Busch a salvage permit for PEWABIC (Busch 1975:75). Using modern scuba equipment Busch recovered most of the remaining copper and some significant artifacts including the anchor.

Since 1974 PEWABIC has been visited and occasionally pilfered by wreck divers. Maritime archaeologists became interested in PEWABIC as it lay within the boundaries of the Thunder Bay National Marine Sanctuary. Recent research efforts have focused on video, photo, and manual documentation, and remote sensing surveys (Figures 2, 3, 4, 5, 6). Sanctuary personnel visit the site every few years for additional monitoring, but its location near the western Lake Huron shipping lane presents additional problems for site visitation. Research has focused on monitoring site preservation and deducing effects of particular salvage expeditions from the status of the shipwreck.

Commerce

PEWABIC carried a variety of goods north bound and south bound. Its copper cargo on its final voyage was worth \$195,000 in 1865 alone. Coupled with the value of other cargoes such as iron ore, leather, ship knees, and barreled fish, PEWABIC was laden with market goods that facilitated continued growth along the Keweenaw Peninsula. PEWABIC contributed to the Great Lakes economy in less tangible ways as well. It brought numerous Finnish, Cornish, and Irish immigrants to the Copper Country to work in the region's mining operations. Profits were made from first class passengers as well, who stayed in hotels while at port. Unlike most vessels that specialized in carrying one type of good, whether iron ore, grain, or people, PEWABIC profited from many industries and carried a wide range of consumables and people on every voyage.

PEWABIC is nationally significant due to its role in facilitating copper transport for the Union. The metal was particularly used for canteens, buttons, pots and pans, and sheathing. Despite the geographical separation between the Keweenaw Peninsula and the front lines, copper's importance was so great that Confederate sabotage operations were a constant threat to merchant vessels on the lakes. Since railroads did not connect the Keweenaw Peninsula with the Lower Lakes until the 1880s, passenger/package freight propellers were one of few means for copper from the region to reach the mills and factories that produced goods for the Union war effort (Figure 7).

Engineering

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Because PEWABIC was going to be tasked with facilitating numerous cargoes and passenger types, builders Peck and Masters outfitted the vessel with cutting-edge technology and designed it to be easily loaded through the side gangways and with first class cabins resting above the main deck. Each square foot of the vessel was utilized by passenger accommodations, cargo space, or vessel equipment. Its dimensions were planned to permit PEWABIC to pass through the locks at Sault Ste. Marie connecting the lower Great Lakes with Lake Superior. Due to the increased risk of leaking, wooden vessels were rarely outfitted with twin screws, which PEWABIC features. To date, PEWABIC is the only known passenger/package freight propeller surviving with a centerline arch in a high level of historic preservation. These engineering features make PEWABIC exceptionally unique, and worthy of National Register nomination and further study.

Archaeology – Historic

Because of its long, documented salvage history PEWABIC is of prime interest to the archaeological community. The available salvage records allow the archaeologist to retrace significant events in PEWABIC's post-wrecking history. Plenty of artifacts remain buried in the silt on the wreck site as well, and particularly off the starboard side. Disarticulate boards, planking, and cabin remains suggest this debris pile was created by dynamite usage in the salvages of 1897 and 1917.

PEWABIC is also a gravesite. Conservative death estimates range between 33 and 40, while inflated numbers cite up to 125 persons died in the collision. Even the conservative estimates, however, give PEWABIC's collision with METEOR the title of "Lake Huron's Worst Maritime Disaster." Passenger remains and personal effects are likely buried under the debris pile beside the hull and would provide insights into the people that walked its decks on its last voyage in 1865. Champagne bottles, silver spoons, and elegant personal effects have already been recovered from PEWABIC (Figure 8).

Few examples of wooden passenger/package freight propellers exist because the vessel class was built during the transition from wood to metal hulls. They were made obsolete by 1900 and many were converted into barges, floating docks, or dismantled altogether. PEWABIC is a unique example of this vessel class, frozen in time by deep, cold water in excellent preservation. Its combination of rare structural features like the twin screws and centerline arch further elevate its importance in the catalog of nineteenth-century Great Lakes vessels.

PEWABIC Shipwreck Site
Name of Property

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Name of Property

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PEWABIC Shipwreck Site
Name of Property

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PEWABIC Shipwreck Site

Alpena, Michigan
County and State

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1996 *Guardian of the Great Lakes: The U.S. Paddle Frigate Michigan*. University of Michigan Press, Ann Arbor.

Scientific American

1920 Deep Sea Suits and Diving Records. *Scientific American* 122(1):46.

Smith, Gordon W.

1893 Diving Apparatus, Patent No. 503,753. Milwaukee, WI, August 22.

St. Mane, Ted

2010 *Lost Passenger Ships of Lake Michigan*. The History Press, Charleston, SC.

New York Times

1865 A Terrible Disaster, Collision of Two Propellers on Lake Huron. The Pewabic Run Into by the Meteor and Almost Instantly Sunk. From Seventy-five to One Hundred Lives Lost. The Collision's Result of Gross Carelessness. Partial List of Lost and Rescued Passengers. *The New York Times* 12 August 1865.

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 # _____

PEWABIC Shipwreck Site
Name of Property

Alpena, Michigan
County and State

Primary location of additional data:

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

Name of repository: Charles P. Labadie Collection at the Alpena County Public Library

Historic Resources Survey Number (if assigned): 20UH002

10. Geographical Data

Acreage of Property: 46.8 acres

Returned

Latitude/Longitude Coordinates

Datum if other than WGS84: _____
(enter coordinates to 6 decimal places)

- | | |
|--------------------------------|-----------------------|
| 1. Latitude: 44.965070 (Bow) | Longitude: -83.102430 |
| 2. Latitude: 44.964833 (Stern) | Longitude: -83.103933 |

Boundary Box Coordinates:

- | | |
|---|-----------------------|
| 1. Latitude: 44.966967 (Northwest Corner) | Longitude: -83.105267 |
| 2. Latitude: 44.962767 (Southwest Corner) | Longitude: -83.104650 |
| 3. Latitude: 44.963183 (Southeast Corner) | Longitude: -83.099450 |
| 4. Latitude: 44.967300 (Northeast Corner) | Longitude: -83.100233 |

Verbal Boundary Description

PEWABIC rests 18 miles east of the mouth of the Thunder Bay River in Alpena, Michigan and 6.5 miles southeast of Thunder Bay Island at a depth of 155-175 feet of water. The vessel's remains lie in United States' federal waters and are near the boundaries of the Thunder Bay National Marine Sanctuary. The bow is located at latitude 44.965070 longitude -83.102430 and the stern is located at longitude -83.103933 latitude 44.964833. The boundaries of the wreck site are defined by a rectangle with 1/8 mile sides (660 feet) extending out from the tip of the bow and stern and out from the edges of the vessel's sides amidships. This rectangle surrounds all sides of the main hull structure, encapsulates the

PEWABIC Shipwreck Site

Alpena, Michigan

Name of Property

County and State

vessel's original dimensions of 200' long by 31' of beam, and marks the entirety of the vessel's remains including hull structure, machinery, artifacts, and debris field associated with the sinking event. The area of the boundary box is 46.8 square acres. The northwest corner is located at longitude -83.105267 latitude 44.966967. The southwest corner is located at longitude -83.104650 latitude 44.962767. The southeast corner is located at longitude -83.099450 latitude 44.9631831. The northeast corner is located at longitude -83.100233 latitude 44.967300.

Boundary Justification (Explain why the boundaries were selected.)

The National Register boundaries of the PEWABIC shipwreck encompass the footprint of its articulated remains within the coordinates listed above to capture the wreck site, hull structure, machinery, associated artifacts, and debris field. Side scan sonar, remotely operated vehicle, and diver surveys conducted by the Thunder Bay National Marine Sanctuary revealed the extents of the PEWABIC's hull structure, machinery, and associated artifacts are centralized in the coordinates previously listed. The justification for the 1/8 mile rectangle surrounding the main hull structure is that the PEWABIC, like the majority of vessels involved in collisions that resulted in a sinking event, has a scattered debris field that disperses away from the main hull as the ship settled in deeper water. The examination of this debris field in the future may yield information important to history, and provide information about shipboard life, vessel design, use, adaptation, cargo stowage, and PEWABIC's wrecking event.

11. Form Prepared By

name/title: Philip A. Hartmeyer, M.A.
organization: Thunder Bay National Marine Sanctuary
street & number: 500 West Fletcher
city or town: Alpena state: Michigan zip code: 49707
e-mail: phil.hartmeyer@gmail.com
telephone: (925) 286-9648
date: July 30, 2014

PEWABIC Shipwreck Site
Name of Property

Alpena, Michigan
County and State

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A USGS map or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Additional items:** (Check with the SHPO, TPO, or FPO for any additional items.)

Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photograph/Figure 1	B. F. Leavitt, Historic Photograph Name of Photographer: <i>Thunder Bay Sanctuary Research Collection, Alpena, MI</i> Date of Image: 1917 Image Location: Patrick C. Labadie Collection, Alpena, MI MI_Alpena_Pewabic Shipwreck Site_0001
Photograph/Figure 2	PEWABIC, Site Plan Name of Author: Patrick C. Labadie Date of Image: 2009 Image Location: Thunder Bay National Marine Sanctuary, Alpena, MI MI_Alpena_Pewabic Shipwreck Site_0002
Photograph/Figure 3	PEWABIC, Side Scan Sonar Image Name of Author: National Oceanic and Atmospheric Administration Date of Image: 2013 Image Location: Thunder Bay National Marine Sanctuary, Alpena, MI MI_Alpena_Pewabic Shipwreck Site_0003

PEWABIC Shipwreck Site
Name of Property

Alpena, Michigan
County and State

Photograph/Figure 4

PEWABIC, Photo Mosaic
Name of Author: National Oceanic and Atmospheric
Administration
Date of Image: 2005
Image Location: Thunder Bay National Marine Sanctuary,
Alpena, MI
MI_Alpena_Pewabic Shipwreck Site_0004

Photograph/Figure 5

PEWABIC, Photograph of copper and human remains on
deck
Name of Author: National Oceanic and Atmospheric
Administration
Date of Image: 2005
Image Location: Thunder Bay National Marine Sanctuary,
Alpena, MI
MI_Alpena_Pewabic Shipwreck Site_0005

Photograph/Figure 6

PEWABIC, Photograph of fan-tail stern
Name of Author: National Oceanic and Atmospheric
Administration
Date of Image: 2012
Image Location: Thunder Bay National Marine Sanctuary,
Alpena, MI
MI_Alpena_Pewabic Shipwreck Site_0006

Photograph/Figure 7

PEWABIC, Historic Photograph
Name of Author: *Thunder Bay Sanctuary Research
Collection*
Date of Image: 1864
Image Location: Patrick C. Labadie Collection, Alpena, MI
MI_Alpena_Pewabic Shipwreck Site_0007

Photograph/Figure 8

PEWABIC, Excursion Advertisement
Name of Author: *Thunder Bay Sanctuary Research
Collection*
Date of Image: 1864
Image Location: Patrick C. Labadie Collection, Alpena, MI
MI_Alpena_Pewabic Shipwreck Site_0008

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.).

PEWABIC Shipwreck Site

Alpena, Michigan

Name of Property

County and State

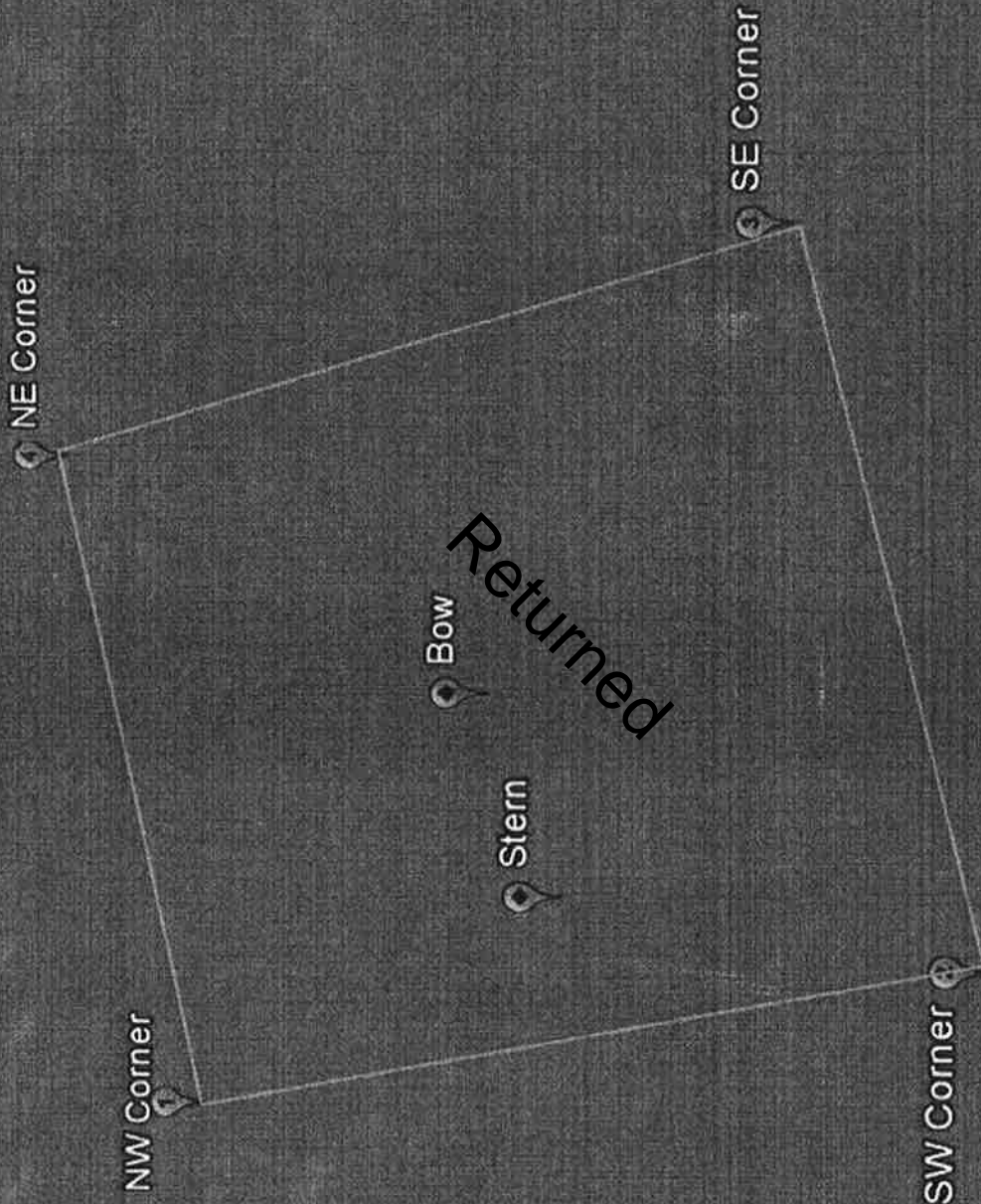
Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form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

Returned

Site: PEWABIC SHIPWRECK SITE, Alpena County (Lake Huron), Michigan

Stern: 44.964833 -83.103933

Bow: 44.965070 -83.102430



NW Corner (1): 44.966967 -83.105267

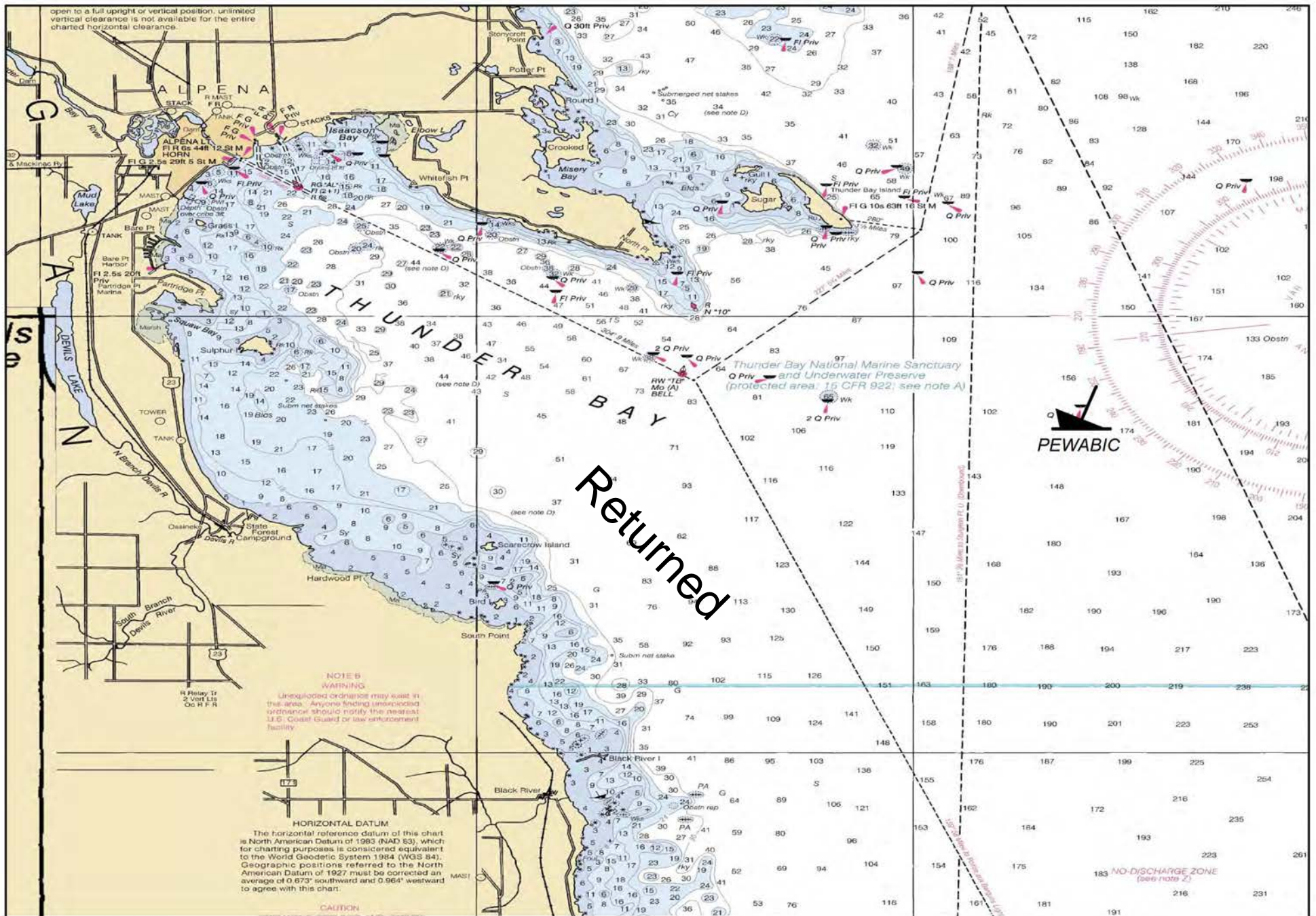
SW Corner (2): 44.962767 -83.104650

SE Corner (3): 44.963183 -83.099450

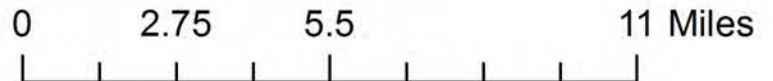
NE Corner (4): 44.967300 -83.100233

670 ft

Image NOAA



PEWABIC SHIPWRECK SITE Alpena County (Lake Huron), Michigan



Bow	44.965070	-83.102430
Stern	44.964833	-83.103933

NOAA Chart 14684

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY PEWABIC (propeller) Shipwreck Site
NAME:

MULTIPLE
NAME:

STATE & COUNTY: MICHIGAN, Alpena

DATE RECEIVED: 11/14/14 DATE OF PENDING LIST: 12/11/14
DATE OF 16TH DAY: 12/26/14 DATE OF 45TH DAY: 12/31/14
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 14001096

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: Y SAMPLE: N SLR DRAFT: N NATIONAL: Y

COMMENT WAIVER: N

ACCEPT RETURN REJECT _____ DATE

ABSTRACT/SUMMARY COMMENTS:

RECOM./CRITERIA _____

REVIEWER Subert _____

DISCIPLINE _____

TELEPHONE _____

DATE 12/30/14

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.

RETURNS

Michigan Shipwrecks:

M.F. Merrick, Presque Isle County

Etruria, Presque Isle County

Pewabic, Alpena County

Kyle Spangler, Presque Isle County

Review and Comment

Erika Martin Seibert

Archeologist

NR-NHL Programs

202-354-2217

erika_seibert@nps.gov

12/14

We were so excited to see these wonderful shipwreck sites come in as nominations to the National Register. However, each needs some technical and substantive information added to the documentation before we can proceed with evaluating the properties for listing. Two of the sites, M.F. Merrick and Etruria, came in before the Pewabic and Kyle Spangler, but all had similar issues so we have batched them together in a return for clarity and ease. In short, the documentation for all of the sites needs some additional historical and archeological context that will provide the justification for their significance and eligibility under the National Register Criteria. Further a comparative context will also help to justify the level of significance checked for each nomination.

As these sites appear to be on State bottomland, but co-managed by the State and NOAA, as evidenced by the surveys completed and documentation preparation by NOAA, we understand these to be concurrent nominations. Under our regulations, 36 CFR 60.6 (y) and 60.10, concurrent State and Federal nominations must be reviewed by both State and Federal agencies and the FPO and SHPO must both sign the nomination. You should send all of the documentation to NOAA's National/Headquarters office for review and signature prior to resubmitting the nominations to the National Register.

Each site is addressed below. Again, we think these sites may be eligible for the National Register and hope to see updated nominations again soon. Please do not hesitate to contact Erika Martin Seibert at the number or e-mail above with questions or concerns.

M.F. Merrick, Presque Isle County

Not for Publication/Redacting

Since the nomination is checked “not for publication,” it would be helpful if, at the beginning of Section 7, the documentation indicates what should be redacted or withheld from the nomination when it is scanned and put on-line or requested by the public. You can do this by putting in a sentence that reads, “information in the documentation in bold [or italics, or underlined, or capitalized, or specified in a certain paragraph] should be redacted or withheld under the NHPA Section 304.” All maps, photos or figures that should be withheld should also be clearly marked “Confidential under Section 304”, or with something similar so we know exactly what is sensitive information.

Applicable Criteria

With the exception of Criterion D, it is unclear what other, if any, Criteria you are nominating the property under. The first page notes Criteria B and D. Section 8 notes only Criterion D (page 7.6) and page 8.8 notes that additional documentation will help assist in assessing the importance of the vessel under Criteria A, B, and C. Currently, we believe the text supports only Criterion D.

Level of Significance and Criterion D

To be listed in the National Register under Criterion D a site not only has to have information, but that information needs to be important. This is generally done by providing an archeological as well as historic context that is then supported by the research agenda or important information the property can provide (and vice versa). In other words, a nomination should include information about the context that archeological data is going to provide information about as well as baseline information about archeological excavation of vessels associated with that context. The M. F. Merrick nomination has very good information about the Merrick’s career and sinking, but not much of a statewide context about cargo shipping and maritime transportation on the Great Lakes or about other sites like the Merrick that have been investigated. Level of significance is based on the questions asked. While information about the vessel design, use, adaptation, and social life aboard ship is important, this type of information would be considered locally significant. Questions that the property can answer regarding a larger body of data about cargo shipping on the Great Lakes would be information of statewide significance. In order to do that, the documentation would have to provide a context for that, as well as discuss how the property, like other properties, would contribute to that body of data.

Boundaries/Abandoned Shipwreck Act

The boundary justification includes a statement regarding an interpretation of the Abandoned Shipwreck Act of 1987 asserting title of the wrecks first to the United States and then transferring title/ownership to the state. While this is important for protecting the resource, a National Register nomination should not include an interpretation of the Abandoned Shipwreck Act. This should be removed from the documentation when it is resubmitted.

Etruria, Presque Isle County

Not for Publication/Redacting

As above for the M.F. Merrick, since the nomination is checked “not for publication,” it would be helpful if, at the beginning of Section 7, the documentation indicates what should be redacted

or withheld from the nomination when it is scanned and put on-line or requested by the public. You can do this by putting in a sentence that reads, "information in the documentation in bold [or italics, or underlined, or capitalized, or specified in a certain paragraph] should be redacted or withheld under the NHPA Section 304." All maps, photos or figures that should be withheld should also be clearly marked "Confidential under Section 304", or with something similar so we know exactly what is sensitive information.

Applicable Criteria

Like the M.F. Merrick, you should clarify what Criteria you are nominating the property under. The front page and Section 8 only checks Criterion D. However, the Statement of Significance Summary paragraph mentions both Criteria A and C. It appears that additional research would need to be conducted to write a justification for Criteria A and C, but if that is indeed, the case, please specify that the current documentation only seeks to list the property under Criterion D, and that an amendment can be prepared in the future if more research is done. Currently, we believe the text supports only Criterion D.

Level of Significance and Criterion D

Again, like the M. F. Merrick, the documentation currently provides questions that would be considered at the local level of significance. Further, a broader and more specific discussion of both local history (if you intend to list at the local level of significance) or statewide context should be provided. The questions the property can answer should related directly back to this context (local or state). A comparative context of local or similar types of wrecks (if you intend to list at the local level of significance) or of statewide wrecks (if you intend to list at the state level of significance) should also be provided. It does not have to be comprehensive, but rather it should show the types of questions archeologists ask of these wrecks, thereby justifying that the Etruria can provide information that is important about these contexts and to this body of archeological data.

Pewabic, Alpena County

Not for Publication/Redacting

As noted for the two sites above, since the nomination is checked "not for publication," it would be helpful if, at the beginning of Section 7, the documentation indicates what should be redacted or withheld from the nomination when it is scanned and put on-line or requested by the public. You can do this by putting in a sentence that reads, "information in the documentation in bold [or italics, or underlined, or capitalized, or specified in a certain paragraph] should be redacted or withheld under the NHPA Section 304." All maps, photos or figures that should be withheld should also be clearly marked "Confidential under Section 304", or with something similar so we know exactly what is sensitive information.

Level of Significance and Criteria A, C, and D

As above, the documentation for the Pewabic needs further discussion of the nationally significant contexts and nationally significant archeological questions. Again these questions must be directly related to the context. Simply because Pewabic is associated with the copper boom story recognized in Keweenaw National Historical Park and through NHLs does not make

it nationally significant. For instance, you note that part of Pewabic's significance lies in the survival of the cargo of Keweenaw copper ingots from its last voyage downbound toward Cleveleand, however, after reading the entire nomination I have no idea why that would be important or what important, and indeed, nationally significant information the wreck could impart about that copper, other than it can be found on the wreck. With regard to Criterion C, there should be a detailed discussion of why Pewabic is a rare example and a unique vessel with a comparison to other vessels and wrecks. Further, what important information can the site provide about wooden passenger/package freight propeller vessels? What is already known about them? How can Pewabic contribute to that data and why is that significant? Why would that be nationally significant? There is a short paragraph about this at the end of Section 8, but does not provide a detailed or specific context within which to evaluate national significance. Information found in the Maritime, Commerce, Engineering, and Archeology sections appears to support a local level of significance.

It might be helpful to reorganize Section 8. After the summary paragraph a detailed historic and archeological context, including comparative data could be presented. After that, a discussion of each individual Criteria would be helpful. That discussion should include justification by tying the Pewabic back to the overall context presented. Archeological questions under Criterion D should clearly show that the property can provide specific information about nationally significant issues through the data recoverable/investigated at the property. At the nationally significant level the Pewabic should be able to show that data found here can make a major impact on themes, theories or ideas related to this national significance or the nationally significant event. Under Criterion A and C a property cannot merely have information related to architecture or events, the property has to convey its significance. Often this means it should visually convey its significance under the National Registers' seven aspects of integrity. National significance often requires a high level of integrity. This is often difficult for archeological properties to do, considering that they are very often, not visible, but it is not impossible. A detailed discussion of the seven aspects of integrity and how they relate to archeological properties can be found in the National Register Bulletin, *Guidelines for Evaluating and Registering Archeological Properties*.

Kyle Spangler, Presque Isle County

Level of Significance and Applicable Criteria

The information provided in the Rationale for Eligibility section of this documentation is where we need to go with context development for all the nominations. This section should be further expanded to discuss the broad patterns of maritime commerce on the Great Lakes (what are they and how does this property relate to them and convey significance to them?), the engineering technologies employed at the time (and how the Kyle Spangler exhibits them), and the specific questions that the Kyle Spangler can answer (and how) about the work of William Jones and other issues. You note on page 8.12 that the Kyle Spangler can do this (and more!), but I'm not sure how or what the "more" is. The majority of the information presented in the historical context section appears to be of local significance. Perhaps this information can be tied to the context developed for the maritime commerce of the Great Lakes, engineering technology of the

period and what archeologists generally study about these types of sites or this specific type of vessel?



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY
STATE HISTORIC PRESERVATION OFFICE

KEVIN ELSENHEIMER
EXECUTIVE DIRECTOR

June 21, 2016

RECEIVED 2280

JUL - 8 2016

Nat. Register of Historic Places
National Park Service

Mr. J. Paul Loether, Chief
National Register of Historic Places
National Park Service
1201 Eye Street, NW, 8th Floor
Washington, DC 20005

Dear Mr. Loether:

The enclosed disk contains the true and correct copy of the nomination for the PEWABIC Shipwreck Site to the National Register of Historic Places.

The nomination was previously reviewed by Erika Martin Seibert and returned to us to address various deficiencies. Specifically, Ms. Seibert asked us to address:

Not for Publication/Redacting

As noted for the two sites above, since the nomination is checked "not for publication," it would be helpful if, at the beginning of Section 7, the documentation indicates what should be redacted or withheld from the nomination when it is scanned and put on-line or requested by the public. You can do this by putting in a sentence that reads, "information in the documentation in bold [or italics, or underlined, or capitalized, or specified in a certain paragraph] should be redacted or withheld under the NHPA Section 304." All maps, photos or figures that should be withheld should also be clearly marked "Confidential under Section 304", or with something similar so we know exactly what is sensitive information.

Level of Significance and Criteria A, C, and D

As above, the documentation for the Pewabic needs further discussion of the nationally significant contexts and nationally significant archeological questions. Again these questions must be directly related to the context. Simply because Pewabic is associated with the copper boom story recognized in Keweenaw National Historical Park and through NHLs does not make it nationally significant. For instance, you note that part of Pewabic's significance lies in the survival of the cargo of Keweenaw copper ingots from its last voyage downbound toward Cleveleand, however, after reading the entire nomination I have no idea why that would be important or what important, and indeed, nationally significant information the wreck could impart about that copper, other than it can be found on the wreck. With regard to Criterion C, there should be a detailed discussion of why Pewabic is a rare example and a unique vessel with a comparison to other vessels and wrecks. Further, what important information can the site provide about wooden passenger/package freight propeller vessels? What is already known about them? How can Pewabic contribute to that data and why is that significant? Why would that be nationally significant? There is a short paragraph about this at the end of Section 8, but does not provide a detailed or specific context within which to evaluate national significance.



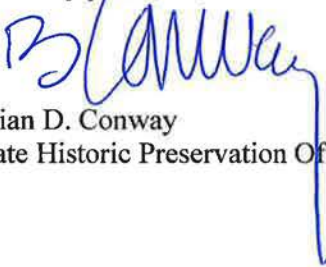
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In our opinion these issues have been addressed in full, and we are resubmitting the nomination for your review.

Questions concerning this nomination should be addressed to Robert O. Christensen, National Register Coordinator, at 517-335-2719 or christensenr@michigan.gov.

Sincerely yours,



Brian D. Conway
State Historic Preservation Officer

RETURNS

Michigan Shipwrecks:

M.F. Merrick, Presque Isle County

Etruria, Presque Isle County

Pewabic, Alpena County

Kyle Spangler, Presque Isle County

Review and Comment

Erika Martin Seibert

Archeologist

NR-NHL Programs

202-354-2217

erika_seibert@nps.gov

12/14

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Level of Significance and Criterion D

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Etruria, Presque Isle County

Not for Publication/Redacting

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or withheld from the nomination when it is scanned and put on-line or requested by the public. You can do this by putting in a sentence that reads, "information in the documentation in bold [or italics, or underlined, or capitalized, or specified in a certain paragraph] should be redacted or withheld under the NHPA Section 304." All maps, photos or figures that should be withheld should also be clearly marked "Confidential under Section 304", or with something similar so we know exactly what is sensitive information.

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Like the M.F. Merrick, you should clarify what Criteria you are nominating the property under. The front page and Section 8 only checks Criterion D. However, the Statement of Significance Summary paragraph mentions both Criteria A and C. It appears that additional research would need to be conducted to write a justification for Criteria A and C, but if that is indeed the case, please specify that the current documentation only seeks to list the property under Criterion D, and that an amendment can be prepared in the future if more research is done. Currently, we believe the text supports only Criterion D.

Level of Significance and Criterion D

Again, like the M. F. Merrick, the documentation currently provides questions that would be considered at the local level of significance. Further, a broader and more specific discussion of both local history (if you intend to list at the local level of significance) or statewide context should be provided. The questions the property can answer should related directly back to this context (local or state). A comparative context of local or similar types of wrecks (if you intend to list at the local level of significance) or of statewide wrecks (if you intend to list at the state level of significance) should also be provided. It does not have to be comprehensive, but rather it should show the types of questions archeologists ask of these wrecks, thereby justifying that the Etruria can provide information that is important about these contexts and to this body of archeological data.

Pewabic, Alpena County

Not for Publication/Redacting

As noted for the two sites above, since the nomination is checked "not for publication," it would be helpful if, at the beginning of Section 7, the documentation indicates what should be redacted or withheld from the nomination when it is scanned and put on-line or requested by the public. You can do this by putting in a sentence that reads, "information in the documentation in bold [or italics, or underlined, or capitalized, or specified in a certain paragraph] should be redacted or withheld under the NHPA Section 304." All maps, photos or figures that should be withheld should also be clearly marked "Confidential under Section 304", or with something similar so we know exactly what is sensitive information.

Level of Significance and Criteria A, C, and D

As above, the documentation for the Pewabic needs further discussion of the nationally significant contexts and nationally significant archeological questions. Again these questions must be directly related to the context. Simply because Pewabic is associated with the copper boom story recognized in Keweenaw National Historical Park and through NHLs does not make

it nationally significant. For instance, you note that part of Pewabic's significance lies in the survival of the cargo of Keweenaw copper ingots from its last voyage downbound toward Cleveleand, however, after reading the entire nomination I have no idea why that would be important or what important, and indeed, nationally significant information the wreck could impart about that copper, other than it can be found on the wreck. With regard to Criterion C, there should be a detailed discussion of why Pewabic is a rare example and a unique vessel with a comparison to other vessels and wrecks. Further, what important information can the site provide about wooden passenger/package freight propeller vessels? What is already known about them? How can Pewabic contribute to that data and why is that significant? Why would that be nationally significant? There is a short paragraph about this at the end of Section 8, but does not provide a detailed or specific context within which to evaluate national significance. Information found in the Maritime, Commerce, Engineering, and Archeology sections appears to support a local level of significance.

It might be helpful to reorganize Section 8. After the summary paragraph a detailed historic and archeological context, including comparative data could be presented. After that, a discussion of each individual Criteria would be helpful. That discussion should include justification by tying the Pewabic back to the overall context presented. Archeological questions under Criterion D should clearly show that the property can provide specific information about nationally significant issues through the data recoverable/investigated at the property. At the nationally significant level the Pewabic should be able to show that data found here can make a major impact on themes, theories or ideas related to this national significance or the nationally significant event. Under Criterion A and C a property cannot merely have information related to architecture or events, the property has to convey its significance. Often this means it should visually convey its significance under the National Registers' seven aspects of integrity. National significance often requires a high level of integrity. This is often difficult for archeological properties to do, considering that they are very often, not visible, but it is not impossible. A detailed discussion of the seven aspects of integrity and how they relate to archeological properties can be found in the National Register Bulletin, *Guidelines for Evaluating and Registering Archeological Properties*.

Kyle Spangler, Presque Isle County

Level of Significance and Applicable Criteria

The information provided in the Rationale for Eligibility section of this documentation is where we need to go with context development for all the nominations. This section should be further expanded to discuss the broad patterns of maritime commerce on the Great Lakes (what are they and how does this property relate to them and convey significance to them?), the engineering technologies employed at the time (and how the Kyle Spangler exhibits them), and the specific questions that the Kyle Spangler can answer (and how) about the work of William Jones and other issues. You note on page 8.12 that the Kyle Spangler can do this (and more!), but I'm not sure how or what the "more" is. The majority of the information presented in the historical context section appears to be of local significance. Perhaps this information can be tied to the context developed for the maritime commerce of the Great Lakes, engineering technology of the

period and what archeologists generally study about these types of sites or this specific type of vessel?