FREIGHTERS

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EDITOR'S PICK

SHORT ARTICLES ON HAPPENINGS AROUND THE LAKES

MARK W. BARKER GROUNDS IN DETROIT RIVER

MAY 17, 2023

The *Mark W. Barker* ran aground on the Detroit River just east of Belle Isle on the morning of May 17, 2023, at approximately 7:30 AM. The ship was heading up the river at the time when she lost steering control and veered to port, heading towards shore. The order was given to drop her anchor which helped to prevent a more severe grounding. The *Barker* came to rest with her bow close to the shore of Belle Isle. Reports indicate there was an equipment malfunction that contributed to a loss of steering.

The vessel was bound for Milwaukee, WI, with a cargo of 20,000 tons of salt from Cleveland, OH. *Mark W. Barker* was freed around noon with the assistance of the tugboats *Pennsylvania* and *Ontario*. There were no reports of injuries, vessel damage, or pollution at the time. After being released from her grounding the *Barker* went to anchor south of Belle Isle to undergo inspection of the issue in preparation of getting back underway.

Mark W. Barker was built in 2022 by Fincantieri Bay Shipbuilding Co. for Interlake Steamship Co., and is the newest self-powered bulk freighter currently sailing the Great Lakes. ◘

CUYAHOGA SUFFERS ENGINE ROOM FIRE ON LAKE ERIE

MAY 23, 2023

On the night of May 23, 2023, reports were received that the 1943-vintage *Cuyahoga* had an engine room fire while underway just north of Pelee Island on Lake Erie. *Cuyahoga* was sailing to Kingsville, ON, laden with stone from the quarry in Marblehead, OH. She stopped in the lake and dropped anchor shortly after the fire was reported.

Nearby freighters *Indiana Harbor* and *Radcliffe R. Latimer* were called upon for assistance until emergency responders could arrive on the scene. Shortly after the reports of the fire were received, the CCGS *Cape Dundas*, *Colchester Guardian*, USCG *CG45756*, and a US Coast Guard➲

(Left) *Mark W. Barker* aground on the Detroit River, May 17, 2023. Photo: Ethan Severson; (Right) Disabled *Cuyahoga* is assisted into Kingsville, ON, May 25, 2023. Photo: Ethan Severson

➲ helicopter came to assist. Life rafts were deployed onboard *Cuyahoga* and the crew was on standby if the order to abandon ship was given.

An issue with the CO_2 system prevented the fire from being extinguished right away, but was later resolved and the fire put out. A portion of the crew was taken off the ship at that time.

Two days later she was towed into Kingsville by McKeil tugs *Ecosse* and *Stormont.* Her anchor chain had to be cut since there was no power onboard to raise it. The tow briefly ran aground outside Kingsville but made it into port before dark. Mobile generators were brought in to allow *Cuyahoga* to unload her cargo of stone.

Her anchor and chain were retrieved on June 6 and the vessel prepared for tow to Ashtabula, OH. *Cuyahoga* departed under tow of the tugs *Ecosse* and *Molly M I* on June 8 and arrived at Ashtabula ➲the next day at Lower Lakes' parent company's repair yard. It is unknown what her future currently holds.

Cuyahoga was built in 1943 by American Shipbuilding Co. as one of the 16-member "Maritime class" and is the last one in active service. She is currently the oldest ship in the Canadian Great Lakes fleet.◘

ALGOMA ORDERS TWO TANKERS

JUNE 19, 2023

Algoma Central Corp. announced it has ordered two new ice-class product tankers from Hyundai Mipo Shipyard in South Korea at a cost of $127 million CAD. The announcement comes after Algoma entered a long-term charter agreement with Irving Oil to service the Irving refinery in Saint John, New Brunswick and sailing the Canadian and US East Coast. The tankers will be eco-friendly and equipped with methanol ready engines and equipment. The vessels are scheduled to be delivered in early 2025. ◘

SOURCES:

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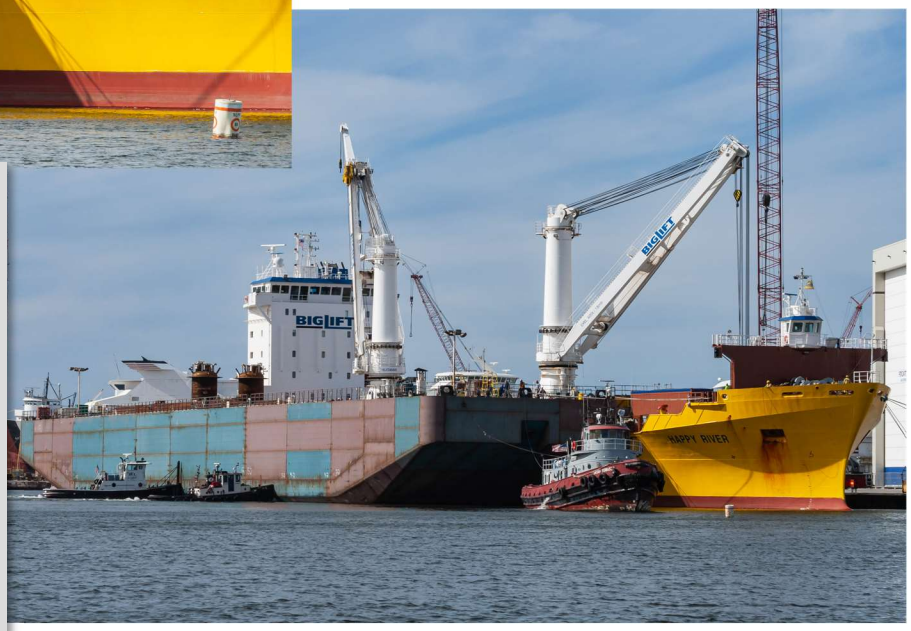
Happy River unloading her cargo of LNG tanks into the new barge at Sturgeon Bay, WI.

MOVING BIG CARGO

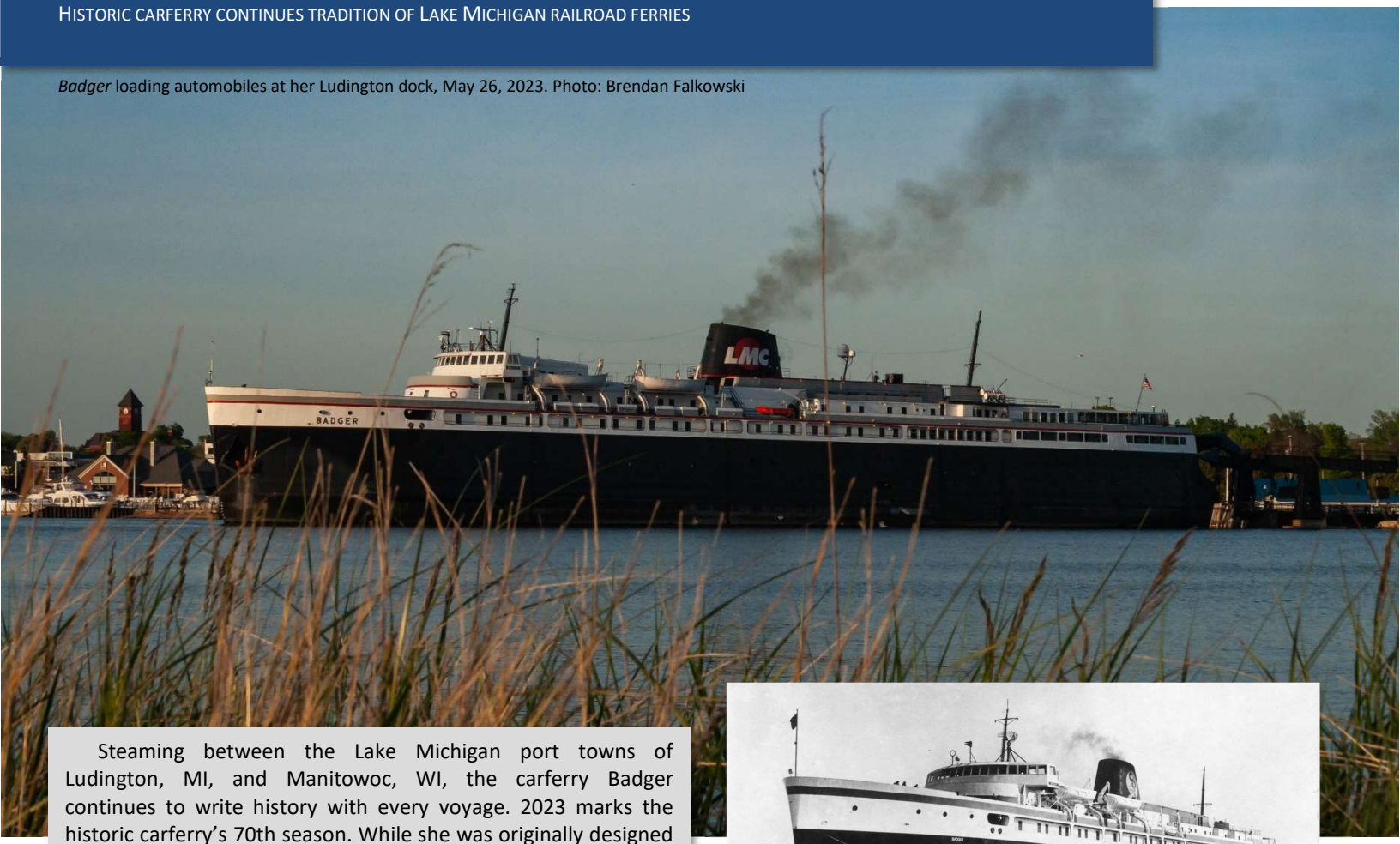


On May 23, 2023, BigLift's *Happy River* arrived in Sturgeon Bay, WI, with a unique cargo – two large LNG tanks. The tanks originated in Spain and were ordered for installation in Crowley's new LNG tanker barge which is currently under construction at Fincantieri Bay Shipbuilding in Sturgeon Bay, WI. Shortly after her arrival, yard workers began preparations to offload the large tanks from the *Happy River*. Tugs moved the partially-completed LNG barge alongside the heavy-lift ship, and *Happy River*'s crew skillfully used the ship's cranes to carefully lower the tanks into position onboard the new barge. Photos: Brendan Falkowski ☐

SS Badger marks 70th season

Historic carferry continues tradition of Lake Michigan railroad ferries

Badger loading automobiles at her Ludington dock, May 26, 2023. Photo: Brendan Falkowski



Steaming between the Lake Michigan port towns of Ludington, MI, and Manitowoc, WI, the carferry Badger continues to write history with every voyage. 2023 marks the historic carferry's 70th season. While she was originally designed to haul railroad cars, today the Badger provides cross-lake ferry service for both passengers and automobiles between Michigan and Wisconsin.

Badger early in her career, circa mid-1950s. Photo: MHSD Collection

Rich history stems from railroad days

While the Badger dates back to 1953, her roots can be traced all the way back to 1892, when the Ann Arbor railroad pioneered the cross-lake railroad carferry concept with their ferry Ann Arbor No. 1. The Flint & Pere Marquette Railroad, predecessor to the Pere Marquette Railroad and later absorbed by the Chesapeake & Ohio (C&O) Railroad, initiated their own rail car service in 1897. C&O purchased the Pere Marquette Line in 1929 and merged the line into the main company in 1947.

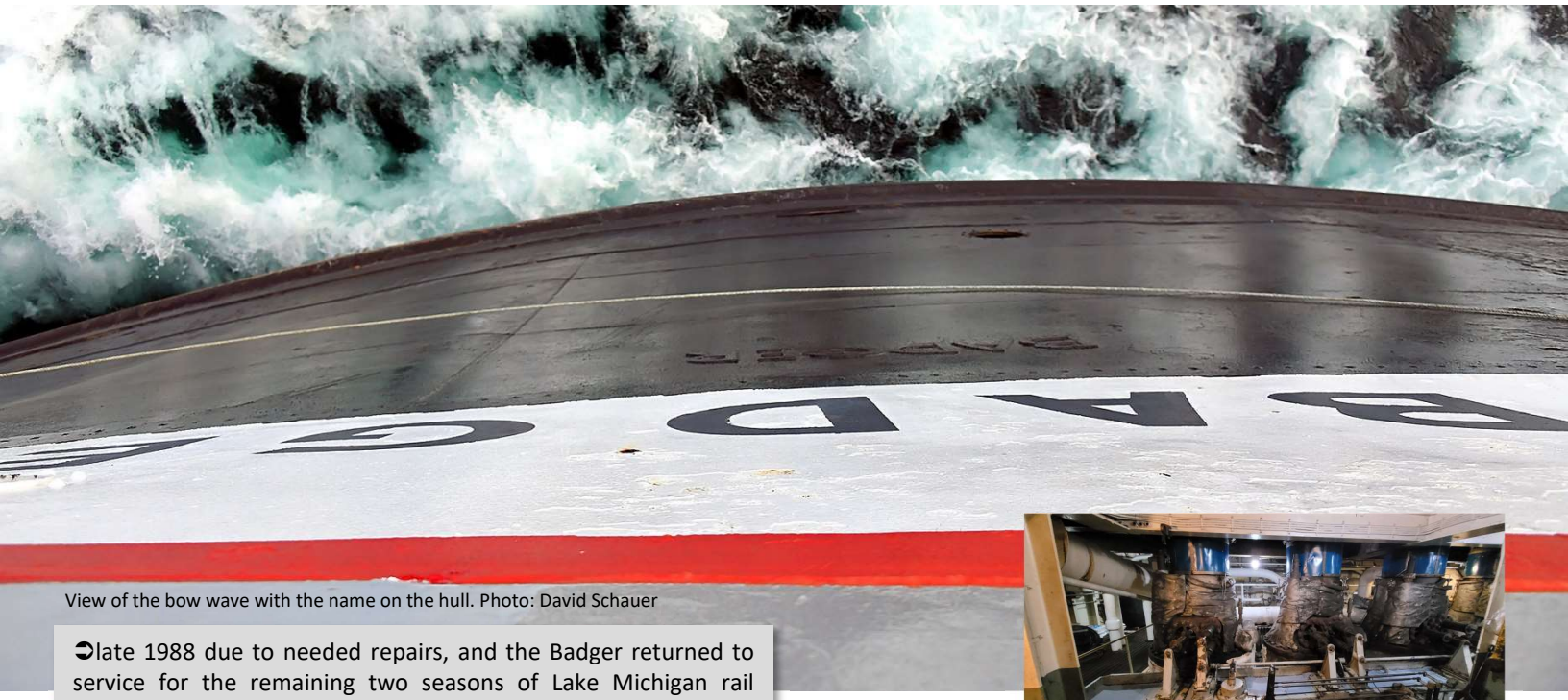
Soon after the merger, C&O marine superintendent L.H. Kent began work on an expansion project to update the ferry fleet and meet increased passenger demand. Kent drew up concept designs and hired notable naval architect R.A. Stern who prepared the detail design based off of C&O's City of Midland 41. The ferry design incorporated several improvements over the Midland, including a full-width pilothouse and gravity lifeboat davits. C&O let the contract for construction of the first vessel to the Christy Corporation of Sturgeon Bay, WI, with an option to build a second. Construction began on the Spartan, the first ferry. C&O would quickly exercise their option to build the second vessel, which became the Badger. Namesakes of the vessels were the mascots of Michigan State College (now University) and University of Wisconsin, respectively. The *Spartan* was christened and the *Badger* christened and ➲

➲launched in a joint ceremony on September 6, 1952. The *Spartan* was sponsored by Mrs. John A. Hannah, wife of the President of Michigan State College, and the *Badger* sponsored by Mrs. Walter J. Kohler, wife of the Governor of Wisconsin. *Spartan* entered service on October 23, 1952, while the *Badger* underwent final construction and fit-out over the winter and entered service on March 2, 1953.

Badger got right to work hauling railroad cars across Lake Michigan from Ludington to Milwaukee, Manitowoc, and Kewaunee, WI. The trip to Milwaukee was about 6 hours and Manitowoc and Kewaunee around 4 hours.

In the mid-1970's the C&O Railroad was merged with several railroads to form Chessie System. During this time rail traffic and demand for the ferry service began to diminish. Chessie petitioned the federal and state governments to abandon service, and was granted permission in 1978 to systematically abandon service which would conclude in 1983.

Following the conclusion of service, three investors formed the Michigan-Wisconsin Transportation Co. and purchased the *Badger*, *Spartan*, and *City of Midland 41* from Chessie and placed the *Badger* and *Midland* back in service. As the trend was before, traffic continued to diminish and the *Badger* was laid up at the end of the 1984 season. The *City of Midland 41* was retired in➲



View of the bow wave with the name on the hull. Photo: David Schauer

➲late 1988 due to needed repairs, and the Badger returned to service for the remaining two seasons of Lake Michigan rail service. Michigan-Wisconsin Transportation officially terminated service on November 16, 1990.

The three ships were sold again in 1991 to businessman Charles Conrad through his company Lake Michigan Carferry Service. Badger was refurbished for seasonal passenger and automobile service with pavement on the car deck and renovated passenger accommodations while the Spartan and Midland continued their slumber in Ludington. Passenger service resumed on May 16, 1992 between Ludington, MI, and Manitowoc, WI. The City of Midland 41 was converted into the self-unloading deck barge Pere Marquette 41 as part of spin-off Pere Marquette Shipping. Born out of a need to make more money to operate the Badger, the Pere Marquette 41 is considered to be the most versatile vessel on the Great Lakes. The Spartan remains in layup.

The service was a hit and has continued to grow and thrive. Due to her historical significance the Badger has received several recognitions and unique designations. On September 7, 1996, the American Society of Mechanical Engineers designated the Badger's propulsion system a mechanical engineering landmark. The ship itself was designated an official continuance of U.S. 10 in 2015 and a National Historic Landmark in 2016. In December 2020 Interlake Maritime Services purchased Lake Michigan Carferry and Pere Marquette Shipping and their vessels. The SS Badger season runs between the third Thursday in May and the second Monday in October. She continues to capably serve her normal passenger commitments throughout the season as she enters her 70th season and her 31st season of passenger and automobile service.

BIG SHIP, MORE FUN!

Measuring in at 410'06'' long, 59'06'' wide, with a depth of 24', the Badger was one of the two largest railroad carferries for the Chesapeake & Ohio Railroad (C&O). She has always operated on Lake Michigan, calling on Ludington in Michigan and Milwaukee, Manitowoc, and Kewaunee in Wisconsin. Her hull was strengthened and constructed with extra-thick steel to handle operating in extreme winter conditions, as the rail ferries operated year-round. When built, she had a capacity for up to ➲

(Above) Cylinder heads on the port engine. (Left) View of the engine room looking forward towards the engines. Photos: Brendan Falkowski

➲32 railroad cars on her four-track car deck. Cars were loaded at the stern of the vessel to the enclosed car deck using a special ramp from shore. Her car deck was raised by 18'' in 1964 to carry taller railroad cars. This was done by cutting the ship in half horizontally and adding additional framing and plating. Following her conversion to an automobile ferry, she can carry up to 160 vehicles. A partial upper deck was added on the forward end of the vessel in 1996 to increase her automobile capacity.

The Badger's engine room is a step back in time. She is still powered by her original two Skinner Unaflow four-cylinder steam engines which produce a combined 7000 IHP. The engines are steeple-compound reciprocating. While steam turbines were the preferred power plant at the time, Chesapeake & Ohio opted to install these Skinner Unaflow engines onboard their new ferries as they boasted a two-second delay switching from forward to reverse, among the fastest of available engines. The engines are tied directly to the propeller shafts, turning a pair of 13'10'' diameter fixed-blade propellers and propelling the ship at a speed of 14.7 knots.

Steam is provided by four coal-fired water tube boilers, built by Foster-Wheeler. Coal is loaded onboard the ship through hatches on her car deck, hopper trucks refuel the vessel while she is docked in Manitowoc. Badger is equipped with automatic stokers for the boilers with a feeder conveyor to supply coal from the bunkers. Ash from the boilers is collected using a special conveyor system that stores the ash in bins on the car deck to be unloaded on shore in Ludington.➲

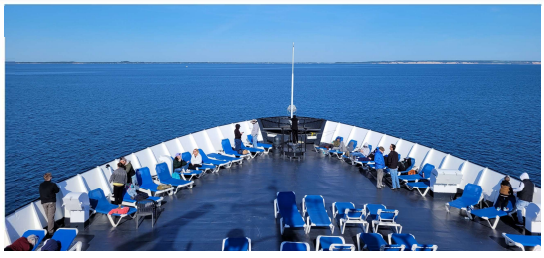
(Main) Looking aft over the lifeboat deck. (Inset) View across the pilothouse while underway. Photos: Brendan Falkowski

Operations

Keeping the old girl out on the water and moving is no small task, and takes a large team both on the boat and on shore. Badger typically carries a compliment of about 50-60 crew, with about 200 total staff during the peak of the season on land and shore teams.

For a normal sailing day, the deck crew reports at around 7 AM (EST/Michigan time) to get the ship ready for passengers. Car runners – the crew responsible for loading vehicles on the ship – begin loading vehicles on around 8 AM for the 9 AM departure in Ludington. The Badger is fitted with an upper car deck in her cargo hold, allowing for extra vehicle accommodations onboard. Vehicles are driven onboard on the starboard side and off on the port side. Larger vehicles, such as semi-trucks, campers, etc., are backed in on the fantail before the sea gate is closed for departure. The Captain, Wheelsman, and Mate get things ready on the bridge while deckhands handle final preparations and even help park cars. Hospitality staff ensure the main passenger areas are ready for the day. Passenger areas are cleaned after the last sailing of the day.

Most deck and engine crew work four hours on, eight hours off. Crew rotations are three days on and three days off. In the engine room there are five crewmembers on watch at a time with about 15 total crew members in the department. The engineering staff works to ensure the ship and her engine operate smoothly. ➲



Looking over the foredeck and the Michigan shoreline from the pilothouse. Photo: Brendan Falkowski

➲The Badger makes daily sailings between Ludington and Manitowoc from May through October. For the first time since before the pandemic, the Badger is resuming dual sailings later this season. During the single sailings season, most of the crew gets off the ship after arriving back in Ludington, with just a few crewmembers remaining onboard to maintain the boilers overnight. Over the span of 24 hours, the ship will sail across Lake Michigan, load, and unload four times each. Work shifts are staggered to keep staff going throughout the day.

In the case of severe weather, the SS Badger crews work together to make a decision on cancelling a scheduled sailing as soon as possible with the information at their disposal. Usually, trips will be canceled when the waves on Lake Michigan get to 12-15' high. The Badger was built to handle heavy weather, but cancellations are done more with passenger comfort in mind. After the call is made the shoreside crew works to notify ticket holders as soon as they can.

Without the assistance of the shoreside team the ship would not be able to sail. The Badger has around 10 year-round employees who handle the office and management tasks behind the scenes. The shore staff is also composed of members of the car runner crew, who help to check in passengers and take care of other odds and ends around the dock. Some might fill in as deckhands if needed.

In the off-season the engine department reports around January or February to begin maintenance work and get things prepared for the upcoming season. The ship lays up in Ludington, MI, during the off-season. The deck crew and other departments begin reporting back in March and April. Many of the crewmembers onboard are retirees or college students or other seasonal workers like teachers.

Challenges of operating a 70-year-old steamer

Operating a piece of history poses a unique challenge: many of the parts onboard are no longer manufactured. These parts➲

Close-up of the stack herald. Photo: Brendan Falkowski

(Left) *Badger* crew waits for her to dock in Manitowoc. Photo: David Schauer; (Right) *Badger* departs Ludington, September 2019. Photo: Daniel Lindner

➲can range from engine components to light fixtures and door handles. Many of these parts are picked off the Badger's sister ship Spartan, which is laid up alongside the ferry dock in Ludington. Parts can only be picked once though. If the Spartan "store" doesn't have the parts they need, then components have to be reverse engineered and machined to create duplicates. The goal is to keep as many parts of the ship in their original appearance as possible. Sometimes authentic-appearing components cannot be found, then more modern parts are used. The engineering crew onboard conducts lots of maintenance both during the sailing and off-seasons. During the off-season, portions of the crew return to conduct seasonal maintenance on just about everything as well as conduct any outstanding repairs that cannot not be done during the regular season. Other projects such as renovations to passenger areas are done at this time as well.

The Passenger Experience

When the Badger was built in 1953, passenger accommodations came second to handling railcars. Even then the old Pere Marquette and C&O rail ferries were renowned for their dining and staterooms. When she was renovated for passenger service in the early 1990s the passenger accommodations were updated to put passenger comfort at the forefront. Some of the accommodations and features onboard include a museum, movie theater, kids room, galley and bar, and the most popular feature of them all – Badger Bingo. Passengers can play Bingo for prizes during the whole trip across the lake.

While the Badger is mainly promoted as a family friendly ferry boat ride, it is a very practical short-sea shipping route for oversized components and trucks. Since the ferry service offers a convenient shortcut across Lake Michigan that bypasses the crowded highways of Chicago, the Badger has carried many special and unique cargoes over the years. If it has wheels and goes down the road, chance is it has probably been aboard the Badger. Some notable riders include the Oscar Meyer wiener mobile, a circus, a detachment of Army Reserve Training Unit vehicles, a banana car, the LL Bean boot mobile, tiny houses, planes, farm equipment, wind turbine components, antique and sports cars, car clubs, and even the Budweiser Clydesdales, which will be back onboard this summer.

Future of the Badger

The future of the Badger always starts with the ship´s propulsion system. A potential repowering has been in discussion in recent times. It is currently only in exploratory phases as Lake Michigan Carferry and parent company Interlake Maritime Services are working to find the best alternative possible. The Badger has a bright future ahead, since being acquired by Interlake in 2020 the company has been taking steps to ensure the ship is fit to stay in service well into the future. Whether steam powered or something else, the Badger continues on the legacy of the Lake Michigan carferries.□

Special thanks to the crew of the SS *Badger* for making this article possible! Thank you to Shelby Soberalski, Chief Engineer Andy Vervelde, Captain Mike Martin, Mate Charlie Arnott and Wheelsman Joe Debusk.

DESIGNED WITH THE CARGO IN MIND – STONE, SAND, AND SALT

HIGHLIGHTING CARGOES THAT HAVE INFLUENCED GREAT LAKES SHIP DESIGN

Cuyahoga unloads stone at Ferrysburg, MI, May 3, 2017. Photo: Sam Hankinson

BACKGROUND

Among the iron ore veins in the Great Lakes region there are plentiful deposits of limestones, sand, and salt. These geological formations have contributed large amounts to the Great Lakes shipping and surrounding industries, providing the necessary materials for the growth of these sectors in the region. Large limestone formations are found all across northern lower Michigan and the eastern portion of the Upper Peninsula, northeastern Wisconsin, as well as northwestern Ohio. Quarries across the region load ships with millions of tons of varying grades of stone for use in the steel and construction industries. Sand is found in plentiful amounts on the shores of west Michigan and the southern Upper Peninsula and is mined for use in the steel making process. Sand has been historically mined throughout West Michigan but is now primarily mined and shipped from Brevort, MI. Giant salt beds lay far beneath most of the Great Lakes region, with the largest salt mining operations are in Goderich and Windsor, ON, Detroit, MI, and Cleveland and Fairport, OH. Salt mined at these locations is transported by ship to docks across the Great Lakes for use as ice melt or in the food industry.

CARGO CHARACTERISTICS & SHIP DESIGN

Stone, sand, and salt all are often delivered to smaller ports, meaning these cargoes are typically handled by smaller vessels designed for river trades. Stone cargoes designated for taconite and steel production are often handled by larger self-unloaders and even 1,000-Footers, while the river boats handle the majority of construction stone.

Stone is unique and is considered an in-between cargo. It is heavy similar to taconite but it will fill the cargo hold by volume before weight like coal. When loading vessels with stone it is important to keep a close eye on the stillwater bending moment, how the ship reacts to forces applied to the hull, and the ➲ stresses on the hull as to not overload a certain part of the ship. Localized framing in the cargo hold will be sturdy in order to handle the weight of the stone.

Since sand is carried in considerably smaller volumes vessels are rarely designed to specifically handle it, with the exception of dredging vessels and sandsuckers. Sand is commonly carried on hopper barges or deck barges but can be handled with conventional self-unloading technology.

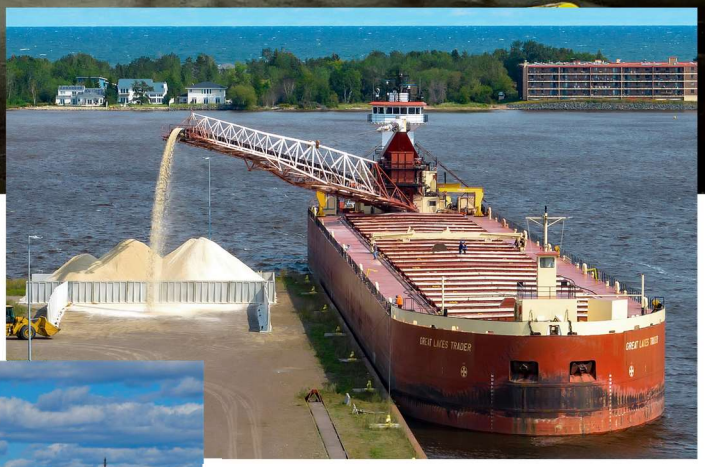
Of all the cargoes handled on the Great Lakes, salt is by far the most unforgiving. Salt is heavily corrosive to steel, so frequent salt hauling can eat away at a vessel from the inside and outside. This is typically why the oldest ships in the fleet are exiled to the salt trade towards the end of their life and is very uncommon for newer ships to handle salt cargoes. Ships designed to serve the salt trade, such as the *Pathfinder* and *Mark W. Barker*, have coatings on almost any surface imaginable, from the hull, deck, cargo hold, ballast tanks, and the unloading tunnel and elevator casing. While the cargo hold, deck, and tunnel are normally cleaned in between handling different cargoes, it is especially critical after handling salt in order to rid the ship of corrosive dust and residue.

LOADING AND UNLOADING

On deck, vessels intended to serve the stone trades will often have long hatch openings stretching the majority of the beam of the ship to allow for the cargo to be spread across the width of the vessel. Limestone in particular has a high angle of repose, meaning it is more susceptible to shifting in the cargo hold. It is best to disperse the cargo transversely, hence the wide hatches. Loading docks usually consist of a single extending-conveyor arm that is either fixed at the dock or capable of moving along the length of the pier.

Self-unloading technology was originally conceived to serve aggregate markets. Self-unloaders were able to easily handle the weight of stone cargoes on their unloading belts and were able➲

American Mariner unloading stone at Superior, WI, October 28, 2021. Photo: Daniel Lindner



(Clockwise from bottom right) *John G. Munson* was one of many ships designed and built for the stone trades. Photo: Jack Hurt; Unloading salt in the hold of the *Mark W. Barker*; *Pathfinder* loaded with treated (teal) and untreated (white) salt; *Great Lakes Trader* unloading sand at Duluth. Photos: David Schauer

➲ to deliver to hard-to-reach docks without shoreside equipment, making them attractive for moving aggregates early on. Early self-unloaders used scrapers to move the cargo to a forward bucket elevator that took it to the boom on deck. These scrapers were eventually replaced with conveyor belts, and the bucket elevator replaced with incline belts and C-Loop belts. In one case a bucket-elevator system has been replaced with a pocket belt, which is a more modern version of the bucket elevator. C-Loop belts have proven to be quite utilitarian amongst cargoes. A C-Loop elevator pinches the cargo on the way up to the main deck, preventing the possibility for roll-back that may occur on bucket elevators or incline belts. Inside the hold of earlier self-unloaders, it was quite common to see two or three hold conveyor belts running the length of the hold rather than a single belt. These systems allow for greater cubic capacity inside the cargo hold as less area is taken up by ballast tanks.

Sand cargoes have an identical process for loading and unloading. Sand and fine aggregate are often loaded at the same docks that stone is handled, and can be carried on traditional-style self-unloaders as well as self-unloading deck barges like the *Pere Marquette 41*.

Salt is typically loaded using a conveyor arm, just as stone and sand. Since salt can be very dusty the loading conveyor arm is typically fitted with a chute that is lowered into the cargo ➲ hold of the ship to minimize extra dusting on deck.

Salt comes in several forms, as a solid sodium chloride or as a liquid brine solution of sodium chloride or calcium chloride. Solid sodium chloride is handled by self-unloading bulk carriers, and can be broken down into two main types, “sticky” and “dry”. Sticky salt is a treated salt and is much more difficult to handle as it can bridge, meaning it will create its own localized sinkholes around the opened unloading gates rather than flow entirely down towards the gates. When it does bridge it must be broken up from above to get it to flow. Dry salt is untreated and handles much easier, but requires large volumes in the cargo hold and is very dusty.

Future

As commodities, stone, sand, and salt all have secure futures with demand from the construction, manufacturing, and transportation industries. As long as these materials are still available in plentiful amounts in the Great Lakes region, ships will have a secure future moving them in the most efficient and cost-effective way possible. ◘

Special thanks to the naval architects who provided their time and resources to assist in the writing of this article. Thank you to Travis Martin, Fred Koller, and Nicholas Posh from Bay Engineering, and Nick Hunter from NETSCo.

VESSEL FEATURE

MESABI MINER

Mesabi Miner downbound on the St. Marys River, June 26, 2020. Photo: Daniel Lindner

With the encouragement of government-guaranteed financing and tax benefits to invest in new or upgraded tonnage from Title XI of the Merchant Marine Act of 1970, shipping companies on the Great Lakes invested in ambitious fleet renewal programs to update their fleets. In the early 1970s Pickands-Mather & Co. won contracts to supply iron ore for Youngstown Sheet & Tube and Jones & Laughlin Steel. On November 19, 1973, officials at Pickands-Mather & Co. announced a contract with American Shipbuilding Co. (AmShip) of Lorain, OH, to design and build a pair of 1,000-Footers for their Interlake Steamship Co. at a cost of approximately $75 Million. The sister ships would be the first two 1,000-Footers built completely on the Great Lakes. Concept drawings for the ships initially portrayed them as having forward pilothouses with an unloading boom located aft. The final design of the ships looked starkly different than what the preliminary drawings portrayed, with all accommodations located at the stern, featuring an elevator, air-conditioned cabins, and guest quarters. The ships measured 1004' long, 105' wide, and 50' deep with a capacity of 63,300 tons. The unloading system consists of an aft C-loop elevator that feeds a 265' deck boom and a cargo hold designed for maximum cubic dimensions to make the vessel efficient in both the coal and ore trades. The hold makes up a large portion of the middle of the ship's midship section, sandwiched between ballast tanks on either side with a triple-belt conveyor system running beneath. It was later found that this design was not as effective for handling low-density cargoes like coal as was the design of the *Paul R. Tregurtha* with a single hold belt system and 6' deeper hull. The new sister ships are powered by twin Pielstick 16PC2-2V-400 diesel engines, with a combined 16,000 BHP that turn two controllable-pitch propellers.

The first of the two sisters were delivered in 1976 and christened *James R. Barker*. The second vessel, Hull #906, was constructed as part of an effort by AmShip's three Great Lakes➲

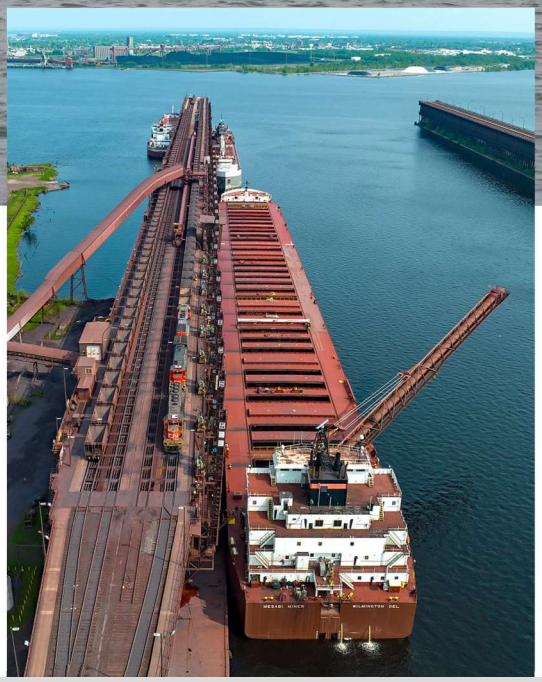
Comparison of conceptual drawing of the *James R. Barker* and *Mesabi Miner* (MHSD Collections) to the *Mesabi Miner*, 1977 (Photo: Roger LeLievre)

➲ shipyards. A portion of the midbody was built by their Toledo, OH, shipyard, and towed to the main yard in Lorain, OH, in September 1976. The deckhouse structures for both the first and second vessel were constructed by the South Chicago, IL, yard and transported to Lorain in sections on the deck of the Kinsman steamer *George D. Goble*.

The completed hull of the second was launched on February 14, 1977, and sailed on her maiden voyage bound for Duluth, MN, for christening ceremonies. She was officially christened *Mesabi Miner* on June 11, 1977 by Mrs. Hubert H. Humphrey. The *Miner* was named after the miners of Minnesota's Mesabi Range. The name was suggested by Pickands-Mather President and CEO Elton Hoyt III, who declined to have the ship named after himself. *Mesabi Miner* loaded her first cargo at the Burlington Northern #5 dock in Superior, WI, on June 14, 1977, becoming the first 1,000-Footer to load there.

Mesabi Miner had the honor of taking a number of firsts ➲

Mesabi Miner backing into the Cleveland Bulk Terminal as high school sailors compete inside the harbor, May 20, 2023.
Photo: Brendan Falkowski



(L to R): *Mesabi Miner* loads ore at CN Duluth #6 with the *Michipicoten* and *Joseph L. Block*, June 17, 2023. Photo: David Schauer; *Mesabi Miner* unloads coal at Monroe, MI, June 28, 2022. Photo: Sam Hankinson

➲ following her first cargo. In 1978 she loaded the first cargo at the Duluth, Missabe & Iron Range railroad's ore shuttle loading facility in Two Harbors, MN. The *Miner* loaded coal at Conneaut, OH, for Port Washington, WI, becoming not only the first 1,000-Footer to load at the Conneaut coal dock, but also the first to visit Port Washington. In July 1983 the *Miner* was laid up alongside her sister *James R. Barker* at the Pickands-Mather coal dock in DeTour, MI, due to an economic slowdown. She returned to service in October that season. The *Miner* was also the first 1,000-Footer to visit the Saginaw River when she delivered coal to the Consumers Energy power plant at the mouth of the river on June 15, 1985.

Interlake Steamship Co. was purchased by James R. Barker (the person) in 1987 and transitioned to a private company. *Mesabi Miner* ran aground in the St. Marys River on March 27, 1989, while downbound with iron ore for Lorain. It took two days for tugboats to free her. She ran aground again in the river on July 13, 1992, requiring drydocking for repairs.

On December 12, 1992, *Mesabi Miner* made her first trip to Marquette, MI, to load taconite at the LS&I ore dock. Since she has a 105' beam, the loading chutes at the LS&I Dock were not long enough to load her evenly. The crews had to load one side of the vessel and turn the ship around in the harbor, then load ➲the other side. The *Miner* opened the Twin Ports of Duluth-Superior for the 2007 season on March 16, 2007, and opened Marquette, MI, on March 17.

In the late 2000s Interlake began exploring conversion of several of their vessels to Liquified Natural Gas (LNG) power. *Mesabi Miner* was to be the first vessel converted, but the project was put to rest after the fuel supplier backed out. *Mesabi Miner* collided with the USCGC *Hollyhock* while in a convoy in heavy ice conditions on January 5, 2014. She was unable to stop in the ice and made contact with the *Hollyhock*, causing minor damage to both vessels. The *Miner* was outfitted with special diesel exhaust scrubbers as part of a fleet modernization program prior to the 2017 season. The scrubbers remove nearly all SOx emissions from the engine exhaust. *Mesabi Miner* continues to actively serve the iron ore and coal trades on the Great Lakes, proudly honoring the past, present, and future miners on the Mesabi Iron range. ◘

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Cover Photo: *Badger* approaching the piers at Manitowoc, WI, August 25, 2019. Photo: David Schauer