FREIGHTERS

Bi-Monthly Periodical on the Latest Great Lakes Shipping News
Edition #54 – November-December 2020
Official newsletter of Shipwatcher News – Since 2014 – Written by Brendan Falkowski – www.shipwatcher-news.com

VanEnkevort introduces latest vessel

Editor's Pick

Short Articles on various happenings around the lakes

Scrapping begins on M/V Paul H. Townsend

November 29, 2020

The *Paul H. Townsend* was towed to the scrapping berth at Marine Recycling in Port Colborne, Ontario. She has been laid up at the scrapyard since 2017 awaiting her fate. She was towed to Port Colborne from Muskegon, Michigan, where she was inactive since 2005. During her time at the scrapyard so far, her interior has been gutted and she has been prepped for scrapping. The *Townsend* was built in 1945 as the ocean ship *Hickory Coll*, being converted into a self-unloading cement carrier in 1953. ◘

Two Canadian fleets welcome new vessels

December 2, 2020

Algoma Central Corporation and McKeil Marine recently welcomed a new vessel to each of their respective fleets. The *Algoma Intrepid*, recently completed in Croatia, made her maiden voyage onto the Great Lakes after arriving at Montreal, Quebec, on November 10, 2020. She is the latest ship in Algoma's Equinox class. *Algoma Intrepid* was reflagged and registered Canadian in Montreal while Algoma crews prepared the ship to enter service. After unloading her cargo of ballast stone at Port Colborne on November 17, she entered regular Great Lakes service, serving the stone, salt, and grain trades.

McKeil's *Harvest Spirit* arrived on the Lakes in mid-November 2020, heading to Hamilton, Ontario, for final preparations and a christening ceremony. She was constructed overseas in 2012, serving on the oceans and Great Lakes before being acquired by McKeil in mid-2020. Of note, the *Harvest Spirit* ran aground in the Livingstone Channel on the Detroit River on December 2, 2020. She was freed the next day with the assistance of four tugboats.◘

Brock (Left) and Brendan at Sault Ste. Marie for the final delivery, December 13, 2020. Photo by Roger LeLievre

Packages stacked up and awaiting delivery. Photo by Brendan Falkowski

Brendan (Left) and Brock at the Soo Marine Supply warehouse with the last packages. Photo by Roger LeLievre

Michigan Teens Deliver Caring for our Sailors Care Packages

December 13, 2020

On December 13, 2020, Brendan Falkowski and Brock Johnson delivered the last shipment of Care Packages from the Shipwatcher News Caring for our Sailors program to the Soo Marine Supply warehouse in Sault Ste. Marie, Michigan. The final delivery consisted of 11 care packages for ships in the Interlake Steamship Company and VanEnkevort Tug & Barge fleets, which would be delivered directly to the ships by Soo Marine aboard their supply boat *Ojibway*.

The two high schoolers partnered together in early November 2020 to provide holiday care packages to the sailors on Great Lakes freighters. ➲

➲In total, packages were sent to 29 ships with gifts for 565 sailors working aboard ships from the Grand River Navigation, Inland Lakes Management, Interlake Steamship, Lower Lakes Towing, Port City Marine Services, and VanEnkevort Tug & Barge fleets. Gifts inside the boxes consisted of hot cocoa packets, granola bars, cookies, and other snacks.

Both the J. W. Westcott Company in Detroit and Soo Marine Supply in Sault Ste. Marie agreed to deliver the packages from their warehouses to the ships. Shipwatcher News delivered the packages to the warehouses.

With the COVID pandemic in 2020, everyday life has been made especially difficult for those on Great Lakes ships, who are onboard for a month or more at a time, and confined to the ship. This project was meant to share some joy during the holiday season, and has turned out to be a huge success!◘

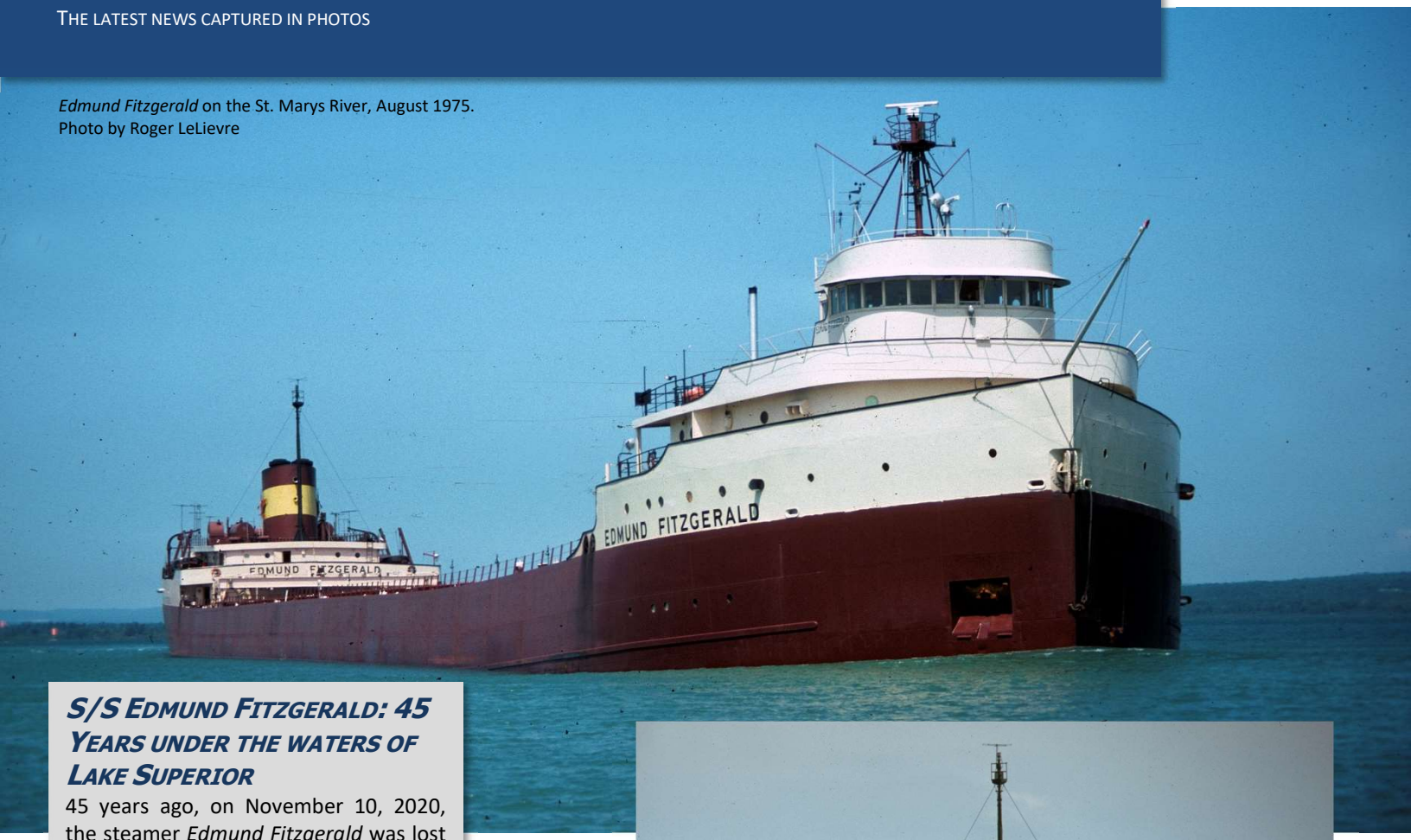
Sources:

"Boatnerd Shipping News". Great Lakes and Seaway Shipping Online, Boatnerd.com, http://boatnerd.com/news/

News in Photos

THE LATEST NEWS CAPTURED IN PHOTOS

Edmund Fitzgerald on the St. Marys River, August 1975.
Photo by Roger LeLievre



S/S Edmund Fitzgerald: 45 Years under the waters of Lake Superior

45 years ago, on November 10, 2020, the steamer *Edmund Fitzgerald* was lost on Lake Superior with all hands. The cause of her sinking will forever remain a mystery, and she will live on as a legend of Great Lakes shipping history. Read more about her history at https://greatlakesships.wordpress.com/edmund-fitzgerald/. Other famous November shipwrecks include the *Carl D. Bradley* on November 18, 1958, and the *Daniel J. Morrell* on November 29, 1966. ◘

Edmund Fitzgerald on the St. Marys River, 1975. Photo by Roger LeLievre

Edmund Fitzgerald on the St. Marys River, August 1968. Photo by Roger LeLievre

Introducing Michigan Trader & Dirk

VanEnkevort Tug & Barge's latest addition enters service

November 20, 2020

Michigan Trader / Dirk S. VanEnkevort downbound on the St. Marys River on her maiden voyage.
Photo by Roger LeLievre

Loading ore at Duluth, MN, on their maiden voyage. Photo by Gus & David Schauer

The latest addition to the VanEnkevort Tug & Barge fleet, the newly-constructed barge *Michigan Trader* and recently-renovated *Dirk S. VanEnkevort*, entered service on November 20, 2020. The pair departed Fincantieri Bay Shipbuilding (FBS) in Sturgeon Bay, WI, bound for Duluth, MN, to load her maiden cargo of taconite pellets.

The *Michigan Trader* was completed in early October 2020 by FBS, measuring up at 740' long and 78' wide with a cargo capacity of 37,000 tons. The barge is equipped with a loop-belt self-unloading system with a single belt cargo hold layout, feeding cargo to an aft-mounted 265' unloading boom. The keel for *Michigan Trader* was laid on May 10, 2019, being floated from the graving dock just over a year later.

Michigan Trader is paired with the tug *Dirk S. VanEnkevort*, which was built in 1990 as the *Joseph H. Thompson Jr.* The *Dirk S.* was rebuilt over 2019-2020 by Donjon Shipbuilding & Repair in Erie, Pennsylvania, and departed the shipyard in mid-November to link up with *Michigan Trader*. Renovations onboard the *Dirk S.* include the raising of her upper pilothouse, reconfiguring the lower pilothouse into cabins, the addition of more cabins on the after deck, and refurbishment of the vessel systems.

Since entering service in November, the pair have carried several cargoes, loading ore at Duluth and Silver Bay, MN, and delivering at Indiana Harbor, IN, and Cleveland, OH, so far. ◘

Dirk S. VanEnkevort heading to pair with her barge. Photo by Don Detloff

In the Rock Cut, with their first cargo. Photo by Roger LeLievre

INTERLAKE PURCHASES S/S BADGER AND AN ATB

INTERLAKE STEAMSHIP PURCHASES LAKE MICHIGAN CARFERRY ASSETS, INCLUDING S/S BADGER AND BARGE PERE MARQUETTE 41

DECEMBER 30, 2020

S/S *Badger* departing Ludington, Michigan, September 28, 2019. Photo by Daniel Lindner

Interlake Holding Company, an affiliate of Interlake Steamship Company, announced on December 30, 2020, that they had entered into an agreement to purchase the assets of Lake Michigan Car Ferry Company and Pere Marquette Shipping Company. This acquisition includes the historic Carferry S/S *Badger* and ATB *Pere Marquette 41 / Undaunted*.

"This is an exciting day for us and we are thrilled to be welcoming new employees into our Interlake family, new vessel lines into our Great Lakes operations, and new customers and cargoes into our portfolio of business," says Mark W. Barker, president of Interlake Holding.

Interlake Maritime Services was created to manage the new additions to the Interlake fleet, as well as the Interlake Steamship Company. Interlake plans to continue operating the *Badger* in her Ludington-Manitowoc Carferry run. The *Pere Marquette 41 / Undaunted* will add a new level of versatility and diversity to the Interlake fleet. Coming in at under 500' overall in length, the ATB duo can access smaller Great Lakes ports, reaching docks not accessible by larger ships.

Both ships are former Lake Michigan railroad Carferries, the *Pere Marquette 41* being constructed in 1941 as the *City of Midland 41* for the Pere Marquette railroad, later the Chesapeake and Ohio, and the *Badger* constructed in 1953 for C & O Railroad. ◘

Pere Marquette 41 / Undaunted on the St. Marys River. Photo by Roger LeLievre

PM 41 / Undaunted at Menominee. Photo by Daniel Lindner

"Interlake Holding Company Secures Two Great Lakes Vessels in Asset Acquisition". Interlake Steamship Company, 30 December 2020. Accessed 4 January 2021. http://www.interlake-steamship.com/media/newsroom/interlake-holding-company-secures-two-great-lakes-vessels-in-asset-acquisit

NAVAL ARCHITECTURE & MARINE ENGINEERING

IN THE DESIGN: STERN DESIGN

A LOOK AT THE DESIGN OF THE STERNS OF GREAT LAKES SHIPS

The elliptical stern on the *Ojibway* is shown in this photo.
Photo by Roger LeLievre

EVOLUTION OF STERN DESIGN ON THE GREAT LAKES

Throughout the last century, stern design of Great Lakes ships has evolved drastically. Ships constructed in the early 20th century featured what is known as a counter or elliptical stern, consisting of a rake up and aft above the waterline, exposing the top of the rudder post. This design carried over from previous practices of constructing wooden sailing vessels. Elliptical sterns were very expensive to construct, with more curvature in the hull. Counter sterns remained dominant in Great Lakes ship design up until the early 1940's with the introduction of the Cruiser stern on the Great Lakes.

Cruiser sterns, sometimes referred to as "wineglass" sterns, were fuller aft, with a similar shape to the counter sterns, but with the rake being carried closer to the waterline. The rudder was protected underneath the hull, and the steering gear to turn it was dropped one deck lower on the plans. Cruiser sterns provided a longer waterline length, which decreased resistance and increased speed, with better waterflow to the propeller. They were also very expensive to construct with extensive curved hull plating.

With the shipbuilding boom in the 1970's came the desire for operators to find a more modern, efficient design that was cost effective to construct. This led to the introduction of the raked or transom stern, found on almost all Great Lakes ships constructed since the early 1970's. Transom sterns have a higher block coefficient, with the beam of the vessel being carried further aft. This allows the ship to carry more deadweight. With a larger ➲beam aft, it also allows for larger aft deckhouses, or the entire accommodations block setup to be aft, allowing for better stability onboard, as well as additional cost savings. Transom sterns are able to be designed for twin screws and skegged propellers, allowing for better waterflow.

DESIGN ELEMENTS

During the design process, several things must be taken into account for the stern portion of the ship. Modern ships often have the engine room, accommodations, and sometimes the self-unloading system all located in the stern portion of the ship. Space is critical, and must be used effectively, while at the same time creating a hull shape that will be able to operate efficiently. One major goal is to keep the engine room space as reasonably small as possibly, as to not take away precious cargo area. Vessels with self-unloading equipment aft also influence a fuller aft section, in order to push the machinery spaces as far aft as possible to maximize cargo capacity.

Probably one of the most important parts of the design of the stern section is waterflow to the propeller. The propeller must get adequate water flow, which can't be very turbulent, or else vibration issues will occur. On ships with transom sterns, one issue is transom immersion, and the tradeoff between a longer waterline with more displacement, or less transom immersion, a shorter waterline, and greater speed. The waterline shape cannot be too sharp into the propeller in order to decrease turbulence in the waterflow. The transition between the midbody to the raked stern also must be gentle enough to ➲

Counter – elliptical stern on *Alpena*.; Cruiser stern on *Cason J. Callaway*. Photo by Isaac Pennock; Transom – raked stern on *Edwin H. Gott*. *Alpena* and *Gott* photos by Brendan Falkowski

Drydock view of *Edgar B. Speer*. Visible is the port propeller and rudder (left), skeg (center right), and starboard rudder (right). Photo by Roger LeLievre

Drydock view of *Edgar B. Speer*. Visible is the port rudder and propeller, viewed from the centerline underneath the vessel. Photo by Roger LeLievre

➲allow good waterflow while at the same time not too gentle as to eat into available cargo and machinery spaces.

There are several designs that have been developed to maximize waterflow to the propeller. Found on a few modern Great Lakes ships, the Hogner stern design consists of a large bulb that a propeller runs through, in order to duct waterflow up and around the Hogner "bulb" and to the propeller from above. This design is classified as an open type stern, because of the fact that it ducts waterflow to the propeller from above. A test on American Steamship Company's American Mariner found that the Hogner stern can create more equal wake velocities and allow better waterflow to the propeller.

Other things to help increase flow to the propeller include appendages, from fins and skegs to tunnels. As stated before, waterflow to the propeller is very important to designing and efficient ship. Things such as Kort Nozzles, Pre-Swirl Staters, and ducting fins can help improve waterflow. Kort Nozzles appear as a small tunnel around the propeller and act as a large funnel to duct the waterflow. Kort Nozzles are often used on ships that need large, open propellers, but are not large enough to handle such, so a Kort Nozzle is used with a smaller prop to make up for it. Pre-swirl staters and ducting fins are usually located just forward of the propeller and are there to help increase waterflow to open propellers. Pre-swirl staters consist of a large ring with fins in the middle, and act to turn water before it reaches the propeller to increase thrust. Ducting fins do a very similar thing.

Increasing Maneuverability

Hull shape, propellers, rudders, and thrusters all can play a large part in increasing the maneuverability of a ship. Good waterflow to a propeller is key throughout the entire design of a ship's stern. Propellers and appendages can also help increase thrust and operating maneuverability. Controllable pitch ➲ Propellers make it possible to change the angle of the propeller blade to achieve maximum efficiency and control with a change in speed.

Rudders, located aft of the propeller, are used to steer and direct the ship on course. It must be positioned properly underneath the vessel in order to keep it close to the thrust from the propellers and out of the turbulent waters that follow the vessel. Many different rudder designs can be used depending on what is required by the vessel on its trade routes and operating conditions. Flap rudders, can be used to help increase maneuverability at slow speeds, with its flexible trailing end, similar to a mini-rudder on the aft end of the main rudder. Twist and twisted trailing edge rudders can also help with maneuverability. The Promas rudder design has a large bulb on the forward end of the rudder that directly follows the propeller, and decreases drag while increasing speed.

ATB's

Articulated Tug-Barge units have long been subject to hydrodynamic inefficiency due to poor waterflow and drag from the tugboat in the notch. In more recent years, design innovations such as tunnels forward of the notch and skegs alongside the notch have helped improve waterflow around the tugboat in the notch.

Overall, the design of the stern on Great Lakes ships have truly evolved from tradition to innovation, and still continue to improve. For numerous reasons, the design of the stern of a ship is very vital to its efficiency operating performance, and improvements in directing waterflow and increasing propeller efficiency continue to push marine shipping into the future. ◘

Special thanks to the naval architects who provided their time and resources to help me write this article. Thank you to Nicholas Posh and Fred Koller from Bay Engineering, Eric Helder from Interlake Steamship Company, and Nick Hunter from NETSCo. –Brendan Falkowski

WILFRED SYKES

Wilfred Sykes arriving at Grand Haven, MI
Photo by Sam Hankinson

HISTORY

In 1947, Inland Steel contracted the American Shipbuilding Company of Lorain, Ohio, to design and build a gearless bulk carrier for the iron ore trade. The design staff at American Shipbuilding were given simple instructions – to design the largest possible ship to navigate the Great Lakes at the time, without consideration of past design practices. This would lead to the building of one of the most innovative, and possibly most influential ship designs in Great Lakes shipping history. Her design introduced a number of innovations, and would have influence over ship design on the Great Lakes for the next two decades.

The $5 Million ship, known at the yard as Hull #866, was 678' long, 70' wide, and 37' deep with a cargo capacity of over 20,000 tons. She was powered by a single Westinghouse cross compound steam turbine providing 7700 SHP, with steam pressure produced by a pair of oil-fired water tube boilers. She was the first steamship on the Great Lakes to burn Bunker C heavy fuel oil. New features incorporated into the design included an aft deckhouse extended to the limits of the hull at the stern, with a poop deck house and sleek stack on top. A raked stem and flowing lines in her forward deckhouse helped add to her appearance. Belowdecks, a tunnel running the length of the ship below the spar deck, allowing the crew to travel anywhere onboard without stepping outside.

The keel for this groundbreaking ship was laid on November 1, 1948, at the AmShip yard in Lorain, Ohio. Construction was overseen by Inland Steel Senior Fleet Captain Henry Kaizer, who was to bring her out on her maiden voyage, but unfortunately passed away beforehand. The ship was christened *Wilfred Sykes* and launched into the waters of the Black River on June 28, 1949. After final preparations and finishing touches put on over the winter, she sailed on her maiden voyage on April 19, 1950, under the command of Captain George Fisher.

Wilfred Sykes set several cargo records in her early years, notably loading 19,120 tons or iron ore on November 7, 1950, at Superior, Wisconsin, and 21, 223 tons ➲

Departing Lorain on maiden voyage. Roger LeLievre Coll.

St. Marys River, July 1974. Roger LeLievre

St. Marys River, July 1972. Roger LeLievre

Wilfred Sykes launched at Lorain, Ohio, June 28, 1949. Photo from Roger LeLievre Collection

➲of ore on August 27, 1952, also at Superior, Wisconsin. The *Sykes* assisted in rescuing the crew of the steamer *Henry Steinbrenner*, which sank on Lake Superior, May 11, 1953. Her crew was awarded for their brave efforts.

In 1957, management of the *Wilfred Sykes* and her fleetmates was transferred to the newly-formed Inland Steel Marine Department. Prior to 1957, the fleet was managed by Hutchinson & Company of Cleveland, Ohio. *Wilfred Sykes* ran aground at Thunder Bay, Ontario, on August 5, 1973, damaging 150' of hull bottom.

Wilfred Sykes laid up for the winter in late 1974 at Fraser Shipyards, Superior, Wisconsin, where she would be converted into a self-unloader. A sloped cargo hold bottom and single tunnel belt were installed in her hold, while a loop belt casing and mount for her 250' unloading boom were constructed on a trunk deck forward of her aft accommodations. She was the first stern-mounted self-unloader conversion on the Lakes and the second U.S.-flagged loop-belt installation, the first being the *Henry Ford II*. *Wilfred Sykes* loaded her first cargo as a self-unloader on July 9, 1975.

On the night of November 10, 1975, the *Sykes* assisted in search operations for the missing *Edmund Fitzgerald* on Lake Superior. During the economic downturn of the 1980's, *Wilfred Sykes* began to stray from her usual taconite trades, hauling more stone and coal cargoes.

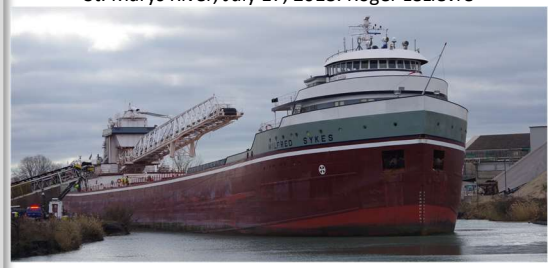
In 1998, Inland Steel was purchased by the Dutch steelmaker Ispat International. As a result, the Inland fleet was sold to Indiana Harbor Steamship Company to keep the ships Jones-Act compliant. The vessels were operated by Central Marine Logistics under a cargo contract charter. Since the 2005 season, she has been largely dedicated to the Lake Michigan stone trade, visiting norther Lake Michigan & Huron ports to load.

Ispat was involved in a large European steel merger, being absorbed into Arcelor Mittal in 2008. The cargo contract charter was continued by ArcelorMittal. *Wilfred Sykes* loaded the last cargo of taconite pellets out of the Escanaba, Michigan ore dock on April 18, 2017, which closed permanently after loading the *Sykes*.

During the 2018 season, the *Sykes* made multiple unusual trips to Lake Superior and the Port Huron/Detroit region, with a few more in 2019 as well. *Wilfred Sykes* entered temporary layup on May 11, 2020, due to the economic downturn brought on by the COVID-19 pandemic. It is hoped that she will return to service in 2021.□

Loading at Escanaba, December 2016. Logan Vasicek

St. Marys River, July 17, 2018. Roger LeLievre



Loading at Detroit, November 22, 2019. Isaac Pennock

Arriving at Sturgeon Bay, May 11, 2020. Daniel Lindner

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Brendan Falkowski

Is a Great Lakes ship enthusiast who shares his passion for the freighters through his newsletter and his artwork. He is currently pursuing his high school education in mid-Michigan before graduating and moving on to college, where he plans to attend to the University of Michigan to study Naval Architecture and Mechanical Engineering. Brendan is an avid musician, and is a drum major in his high school marching band. He enjoys sailing and spending time with his friends and family.

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Cover Photo: VanEnkevort Tug & Barge's newest unit, *Michigan Trader / Dirk S. VanEnkevort* arriving at Duluth, Minnesota on their maiden voyage, November 23, 2020. Photo by Gus Schauer

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