FREIGHTERS

THE GREAT LAKES SHIPPING INDUSTRY PERIODICAL | EDITION #80 — FALL 2025

OFFICIAL NEWSLETTER OF SHIPWATCHER NEWS | EDITED BY BRENDAN FALKOWSKI | WWW.SHIPWATCHER-NEWS.COM

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LAKER REPORTS

UPDATES FROM THE LAKES

BIG CRANE SHIPMENT FROM MANITOWOC

| NOV. 18, 2025

One of two large cranes constructed in Manitowoc departed by barge on November 18, 2025. Konecranes' Crane 70 was loaded onto a barge and towed out of Manitowoc by the tug *Ocean Tower*, bound for Washington State. Crane 70 is the first of two cranes being built by Wisconsin Heavy Fabrication under license from Finnish company Konecranes. Both cranes were built for the U.S. Navy, the first for Pudget Sound Naval Shipyard in Washington state, and the second for Pearl Harbor Naval Shipyard in Hawaii. Both voyages will transit the Panama Canal on their way to the Pacific-coast shipyards. ***OCEAN TOWER towing Crane 70 loaded on a barge, Detroit River, November 21, 2025. Photo: Sam Hankinson.*** ☐

NOVEMBER DETROIT RIVER GROUNDINGS

| NOV. 27, 2025

Within the span of three weeks, two vessels ran aground in the stretch of the Detroit River between the Renaissance Center and William Milliken State Park. On November 7, 2025, the *Rt. Hon. Paul J. Martin* ran aground while attempting to drop anchor to disembark an ill crewmember. She was freed with the assistance of several tugs the next day. Later in the month, on November 27, the *Robert S. Pierson* dragged anchor in high winds and drifted into shallow water. The *Pierson* was released later with tug assistance later in the day. There was not any damage or environmental concerns in both cases. ***(Above) Tugs working to free ROBERT S. PIERSON after running aground, November 27, 2025. (Left) Tug ONTARIO leads RT. HON. PAUL J. MARTIN down the Detroit River after assisting in freeing the MARTIN, November 8, 2025. Photos: Ethan Severson.*** ☐

FACILITIES LEAD TO SHIPS

INVESTMENT IN INFRASTRUCTURE WILL USHER IN NEW TONNAGE—PART ONE: DRY BULK

Written by SAM HANKINSON

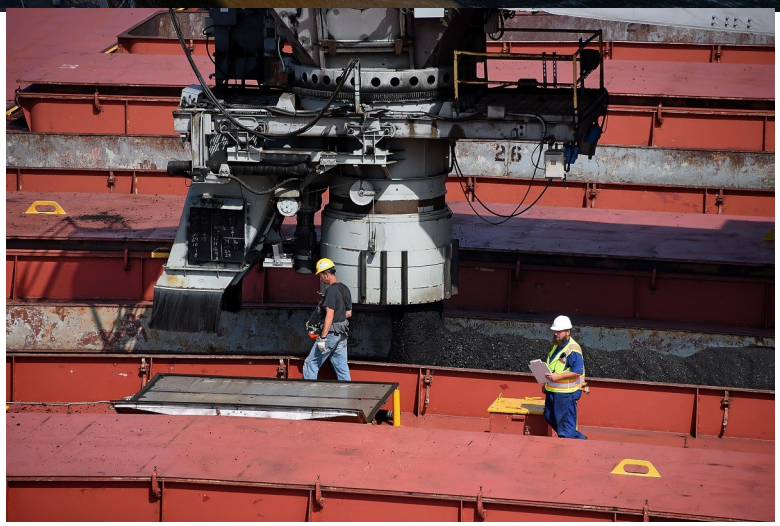
CSL ASSINIBOINE preparing to load coal at the SMET Terminal in Superior, WI, November 2, 2024. (Below): Crew load coal onboard WALTER J. McCARTHY JR. at SMET, August 2, 2016. The SMET Terminal will be closing in 2026. Photos: David Schauer

This is part one of two articles that focus on the transformation of bulk and multimodal facilities in the Great Lakes region, focusing on changes that are currently taking place and reflecting on changes that could be made in the future.

In Fall 2025, news came from Superior, Wisconsin that the Superior Midwest Energy Terminal (SMET) would be closing at some point during the 2026 shipping season. This closure will be a big hit for the Twin Ports, and have ripple effects throughout the Great Lakes system. SMET is not closing because it is outdated. In fact, it is one of the most modern terminals on the Great Lakes, capable of berthing thousand-foot freighters and efficiently handling bulk cargo. It is closing because the trade it was built to serve no longer exists. SMET was built to supply coal to power plants in Michigan, and those plants are closing.

For decades, the Great Lakes region was a global center of steelmaking and power generation. It made sense to build steel mills and power plants on the waterfront, and use freighters to deliver the raw materials to feed these industries. Dedicated bulk facilities- ore docks and coal terminals- followed behind, and for years it was the unquestionable heartbeat of Great Lakes shipping.

The relationship between the Great Lakes fleet and those industries showed in times of both economic prosperity and hardship.



Last month, United States Steel (USS) announced plans to build a new direct reduced iron (DRI) plant at its Big River Steel complex along the Arkansas River. This investment, part of billions USS plans to spend in the wake of its sale to Nippon Steel, is good for domestic steel production. It's great for the iron range in Minnesota because it ensures pellets continue to be produced.

But it is not good for Great Lakes shipping. Why? It means that iron ore pellets that could have moved by vessel will instead

JOSEPH L. BLOCK unloading iron ore pellets at the Cliffs IronUnits HBI facility in Toledo, OH, August 31, 2023. The Cliffs facility is one of few facility investments in the Great Lakes region in recent years, and has been a tonnage driver for shipping. Photo: Sam Hankinson

leave the region entirely by rail. This shows that processing has moved elsewhere, and infrastructure on the Great Lakes has not followed. We are losing tonnage, not only what is moving on the water today, but what could have moved if a new facility was strategically located to capitalize on maritime transportation in a region that has done nothing but prove it can move raw materials, year in and year out, in the midst of world conflicts, upticks, downturns, and even pandemics.

The new DRI plant in Arkansas is similar to Nucor's facility at Convent, Louisiana on the Mississippi River. That facility primarily imports iron ore pellets from overseas with supplemental deliveries from the iron range as needed.

Voestalpine's hot briquette iron (HBI) plant in Corpus Christi, Texas is also importing iron ore pellets, and almost all of their finished product is going directly to Big River steel. The HBI plant at Corpus Christi (now owned by ArcelorMittal) was the first of its kind in the US, and the second is in the Great Lakes.

Cliffs opened the Toledo IronUnits facility in Ironville in 2020, fed by a new low-silica pellet from the Peter White Mine and exported from Silver Bay. Ships deliver the pellets, but most of the finished product goes by other modes. Cliffs built their plant on the lakes. Nearly every other investment has been further south, outside of the Great Lakes footprint, but still fed in some respect to raw materials that come from our backyard.

Of note, Mesabi Metallics is developing a new mine on the Mesabi range. The project itself was acquired by Essar from another firm out of bankruptcy, and if completed will produce 7 million tons of Direct Reduction (DR) grade iron ore pellets.

Algoma Steel's location near the Soo Locks has guaranteed a steady supply of coal, iron ore, and other products throughout its history, but the company's transition to an electric arc furnace (EAF) has already created ripples. EAF furnaces use scrap as its primary feedstock rather than the traditional iron ore pellets.

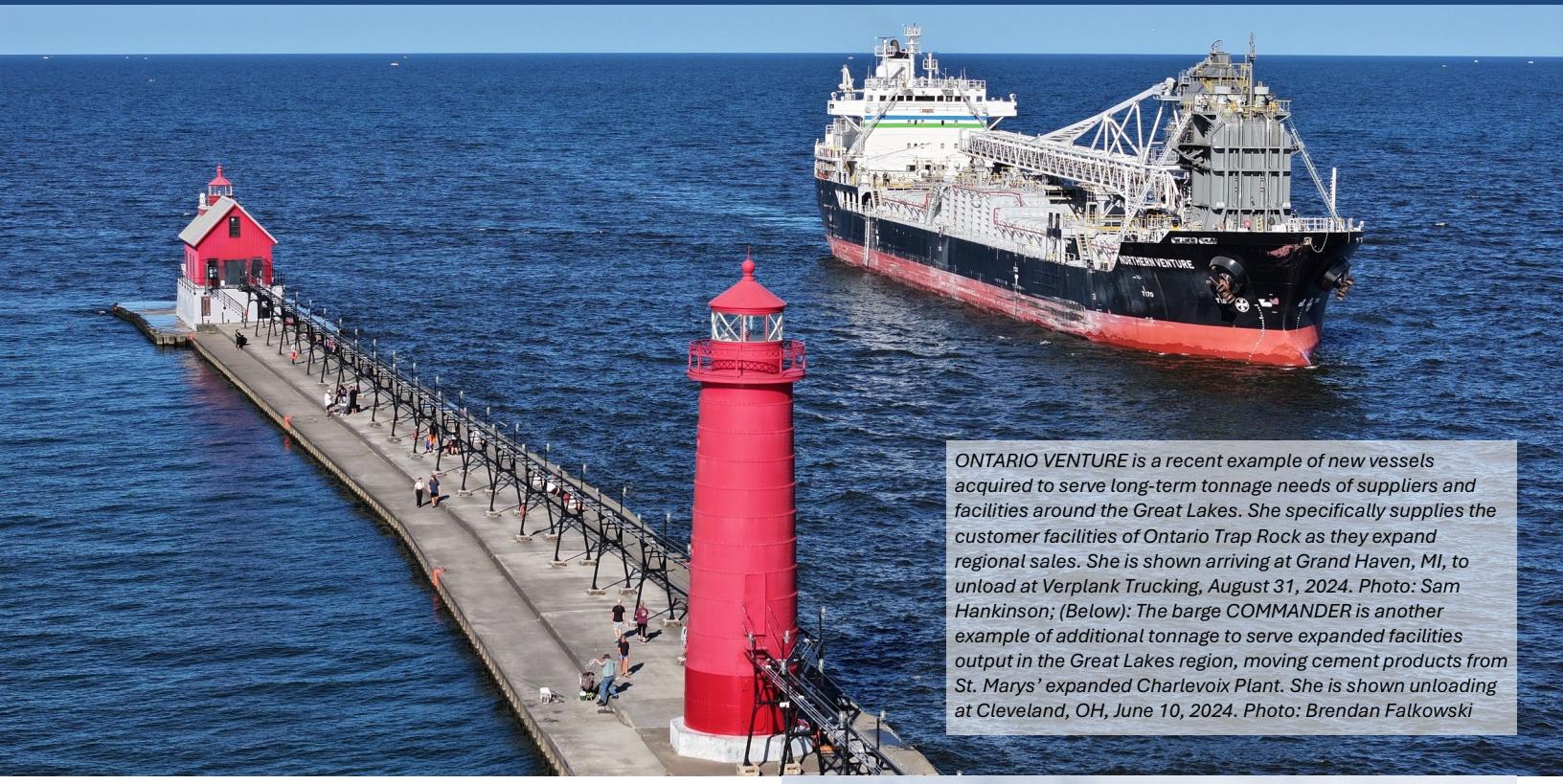
In 2024, U.S. Steel filed a lawsuit against Algoma alleging that the company refused to accept additional iron ore pellet deliveries under an existing supply contract, with Algoma citing the economics of its shift to EAF steelmaking. While the case centers on contractual obligations, it underscores a broader structural change: as Algoma moves away from blast furnace operations, demand for traditional Great Lakes iron ore pellet movements is expected to decline sharply.

The lawsuit adds an uncomfortable layer of irony. USS has accused Algoma of walking away from pellet contracts as it shifts to an EAF, yet USS is investing billions in new inland production, detached from the Great Lakes. Each of these decisions siphons volume away from the lakes, not because ships are inefficient, but because facilities are being built where ships cannot serve them.

Somewhere along the line there needs to be advocacy from Great Lakes shipping that the best investment for a facility like that is within a region where maritime transportation, efficient transport of high volume products, is the primary seller. When facilities are built here with long-term prospects in mind, the results look very different.

Port City Marine invested in a new tug-and-barge unit only after St. Marys Cement committed $130 million to expand its Charlevoix plant. The *Mark W. Barker*—the first new U.S.-flagged laker in over four decades—was launched with a long-term contract to haul salt already secured. The *Northern Venture* is the product of an agreement between McKeil Marine and Ontario Trap Rock to haul product from the latter's quarry at Bruce Mines, Ontario, strong enough that a second self-unloader, the *Ontario Venture*, will be added in 2026.

Investments in new grain terminals at Picton, ON (Parrish & Heimbecker), Milwaukee, WI (DeLong), and Oswego, NY (The Andersons) help offer additional backhaul opportunities to



ONTARIO VENTURE is a recent example of new vessels acquired to serve long-term tonnage needs of suppliers and facilities around the Great Lakes. She specifically supplies the customer facilities of Ontario Trap Rock as they expand regional sales. She is shown arriving at Grand Haven, MI, to unload at Verplank Trucking, August 31, 2024. Photo: Sam Hankinson; (Below): The barge COMMANDER is another example of additional tonnage to serve expanded facilities output in the Great Lakes region, moving cement products from St. Marys' expanded Charlevoix Plant. She is shown unloading at Cleveland, OH, June 10, 2024. Photo: Brendan Falkowski

international fleets calling on the Great Lakes, most of which are investing in new lakes-fitted vessels.

These recent investments in new tonnage capacity in the fleet have shown that new facilities, or at least a commitment to the long-term transportation of raw materials, is the trigger to investment in new ships. The new ships bring new jobs along with them, while transporting material in a more efficient and environmentally-friendly manner.

In a time when shipbuilding is dominating national conversations, we need to connect the dots between facilities and ships. We need to take the necessary steps to ensure those facilities and supply chains are built to support shipbuilding, and advocate for the Great Lakes over other regions. Once a new steel mill is built outside of our region, there is little that a Great Lakes freighter can do. ☐

Part II of this story will be published in the Winter 2026 Issue.

FRIGATE HULLS CANCELLED FOR WISCONSIN YARD | NOV. 25, 2025

The U.S. Secretary of the Navy announced that the Navy would be cancelling hulls 3-6 of the Constellation-Class Frigate program on November 25, 2025. Work will continue on the first two ships of the class, which are already under construction at Fincantieri Marine Group's shipyard in Marinette, WI. The frigate program has faced numerous delays since the contract was awarded in 2020 and is reportedly three years behind schedule, with the first hull now projected for delivery in 2029. The Navy cited the delays, and a "strategic shift" in procurement for the cancellation of the additional hulls. Fincantieri Marine Group does not expect layoffs at the Marinette yard at this point in time, and is currently constructing four Littoral Combat Ship-variant Multi-Mission Surface Combatant vessels for the Saudi Arabian Navy as well as the first two Constellation hulls. Fincantieri also announced the Navy has committed to sending additional work to the yard in lieu of the cancelled frigate orders. Just under a month later on December 22, the Navy announced a contract had been awarded to Huntington-Ingalls Industries to build a new class of frigates based off of the Legend-Class National Security Cutter built for the U.S. Coast Guard. This program is intended to replace the Constellation-Class Frigate program, and is expected to deliver the first hull in 2028. ***View of the Fincantieri Marinette shipyard, 2024. Photo: Brendan Falkowski*** ☐

NEW VESSEL PROCUREMENT

BUILDING NEW SHIPS FROM CONCEPT TO CUTTING STEEL

The barge MICHIGAN TRADER was built for VanEnkevort Tug & Barge by Fincantieri Bay Shipbuilding and delivered in 2020. Shown on the St. Marys River, June 8, 2022. Photo: Brendan Falkowski

Gone are the days when all that was needed to build a ship was a simple drawing, an agreement stating the ship would be X feet long and Y feet wide, and a handshake. The acquisition process is a highly complex procedure involving many parties representing the shipowners, designers, and shipbuilders.

American cargo ships are built as a result of securing new business or choosing to replace an existing (and often outdated) asset. The decision to build is then weighed by the marketing, management, and engineering staff from the shipowner. The shipowners will develop a basic set of design requirements, typically size constraints, an ideal deadweight, and what cargo the vessel will be handling. Once the shipowner has determined the base requirements for the vessel, they will reach out to a design agent to begin work of the conceptual plans.

There are generally three phases of the design process. Concept design is where the main bones of the ship are laid out, a test of the feasibility of the ideas presented in the earlier stages. The next phase is contract design, where the big-picture components of the vessel are laid out and major calculations performed. The contract design is used for awarding the construction contract for price estimation or establishing the fixed-cost contract. Detail design is where the small manufacturing details are worked out to establish how each part of the ship is constructed and provide guidelines for the shipbuilders when building the vessel. The detail design agent is typically selected by the shipyard, and may be a different design agent than who completed the concept and contract design. This is often the safest route in terms of risk management as it distinguishes which designer is working for the shipowner and which is working for the shipyard.

If the shipowner has not fully determined if building a new ship is feasible, they will initiate a design of a pared-down concept to get what is called Rough Order of Magnitude (ROM) pricing to get an idea of construction costs. The design agent will prepare a general arrangement, midship section, basic lines plans, a simplified machinery arrangement, and scope of work during this phase. The shipyard will develop pricing based on parametric methods and previous similar projects. The shipowner will typically foot the costs for the early-stage design of the ship. ROM quotes are quite common.

If the design proves feasible, or if the shipowner has already decided to proceed with the project, the design agent will prepare the contract design – high-level drawings and calculations for the ship design to develop the idea for the ship and eventually bid out to shipyards.

Design of a commercial ship typically follows the design spiral methodology – a systematic cycle to designing a ship. The design will go through several iterations until converging on a design. Sometimes, several design options will be going through the spiral process simultaneously, for example a shipowner may be comparing a powered vessel and articulated tug-barge option side-by-side to determine the best option for them. The primary challenge faced in this phase is determining the ship characteristics and constraints and converge on a design early on.

Key partners will be brought in during the contract phase of design, for example U.S. Coast Guard, ABS or another classification society, and propulsion system integrators. These key regulators and vendors will provide input throughout the design and greatly influence certain aspects of the final design for approval.

The shipowner will open discussions about financing when preparing to engage with shipyards about contracting to construct the new vessel, working with lenders to secure funding for the project. Secured contracts with customers of the shipowner aid in securing financing, and can act as a sort of guarantee that the value of the loan will be able to be paid off. Shipowners may also apply for grants to aid in offsetting construction cost, several programs in the US and for other flags offer grants and incentives for incorporating certain technologies.

Procurement of the vessel is handled in one of three ways: design/build, design/bid/build, and construction manager at risk (CMAR). Each method varies slightly in how the design, construction, and risk, and collaboration are each handled.

The design/build method contracts a single entity or team responsible for designing and constructing the vessel, applying collaboration in the design from the beginning between the

MARK W. BARKER sails on sea trials, July 8, 2022. Photo: Chris Knight, courtesy of Interlake Steamship. (Inset): Mark W. Barker signs the contract for construction of the vessel that became the MARK W. BARKER, March 26, 2019. Photo courtesy of Interlake Steamship.

design agent and shipyard to optimize the design for the yard's production capabilities. Most of the risk in the process is placed on the design/build team.

The design/bid/build method contracts the design agent and shipyard to complete their functions separately. Contract design work is completed by a design agent and a contract to build the design is bid out to shipyards for completion. The shipyard will contract its own design agent to complete detail design. Collaboration between the different entities is minimal in this process, and risk is managed by the shipowner.

The CMAR method contracts a design agent, or construction manager, to manage completion of the contract design of the ship and manage almost all aspects of the construction of the ship. The contract manager is the single point of contact for the shipowner and assumes the majority of the risk. This method is beneficial for clients who don't have much preference in the design and construction of the ship.

Dependent on which contracting method is selected, yard selection will depend on owner preference. Bids will often go out to multiple yards following the concept phase to feel out pricing and construction timelines. Each yard will be evaluated not only by cost but also the construction backlog, yard capabilities, yard location in proximity to where the ship needs to be delivered, and even prior working relationships with the yard.

Once the design is complete and the contract for construction is signed, the shipyards will begin building the new ship. The shipyard will break the entire design down into smaller modules, or blocks, to simplify construction of the vessel. These blocks will be further broken down for cutting steel and eventually assembly inside the fabrication areas, and eventually total-vessel assembly in drydock. Large vessels will be constructed in blocks, while smaller vessels such as tugboat and ferry hulls will be built by "turtling" – building the hull upside down during the fabrication process and flipping it prior to final assembly.

Long-lead-time equipment will be ordered by the shipyard soon after the construction contract is awarded. Oftentimes the owner will furnish major equipment items, such as main engines or unloading equipment. These items will be delivered to the shipyard and stored until they are to be installed. As the bill of materials for the design is prepared, shipyards may even order parts ahead of time as a hedge against schedule delays later on.

The final – and one of the most expensive – step in procurement is the commissioning process. While commissioning may take up only 10% of the construction timeline it can account for up to 25% of the construction budget. At this point in the process the owner and engineers are all looking to complete the project, which is also likely over time and over budget. Technicians for all pieces of equipment will be onsite for commissioning and testing all systems onboard. Rework is often identified in substantial quantities in this part of the process. Initial testing and commissioning of equipment is done during dock trials, testing to ensure everything works before taking to the water for the first time. Following satisfactory completion of dock trials, the vessel will sail on sea trials. Owners, technicians, and regulatory authorities will all be present for sea trials.

The ship is able to sail on its maiden voyage after satisfactory completion of commissioning and dock and sea trials. Vendors and a shipyard team may stay onboard for the first voyage to ensure everything functions correctly.

From design to delivery, it will take about three years to acquire a small ship, and five or more for a medium-to-large ship such as the *Mark W. Barker*. The new vessel procurement process is long and highly complex, with many hands working to ensure a safe, efficient, and effective design for the client. ☐

Special thanks to Travis Martin and Fred Koller from Bay Engineering, Nick Hunter from EBDG, and Eric Helder from Interlake Maritime Services for contributing their professional insight for this story.

VESSEL FEATURE

EDWIN H. GOTT

EDWIN H. GOTT downbound on the Detroit River, July 18, 2025. Photo: Sam Hankinson; (Inset): EDWIN H. GOTT on her maiden voyage, 1979. Photo courtesy MHSD Collection.

The massive "Tin Stacker" fleet, United States Steel, was a fleet of over fifty ships in the 1960s at the time when construction of a new lock at Sault Ste. Marie was announced. The new Poe Lock was designed to accommodate vessels in excess of 1000' long, ushering in a new era of lake freighters to take advantage of the larger size restrictions at the chokepoint of US-flagged shipping on the Great Lakes. U.S. Steel responded by building the *Roger Blough* in 1972. Executives at U.S. Steel were concerned the *Blough* would not be able to make the turn at Johnson's Point in the St. Marys River, and elected to build the ship at 858-feet-long, not 1000'. Her entry into service was delayed due to an engine room fire in 1971, and she entered service shortly after Bethlehem Steel's 1,000'-long *Stewart J. Cort* proved the turn at Johnson's Point could be made by the longest of super ships.

Eager to have a 1,000-footer of their own, U.S. Steel officials signed a contract with Bay Shipbuilding of Sturgeon Bay, WI, to construct a super ship in April 1974. U.S. Steel and R.A. Stearn design staffs put together plans for a modern, safe, and efficient ore carrier for the fleet, featuring a strengthened hull for ice operations and all accommodations and mechanical spaces aft. The keel was laid on November 9, 1977, and the ship was floated from drydock on July 19, 1978. She was christened *Edwin H. Gott* at Sturgeon Bay on October 31, 1978. After sea trials, she sailed to Milwaukee, WI, for final fit-out and engine adjustments.

Edwin H. Gott departed Milwaukee on February 16, 1979, empty on her maiden voyage bound for Two Harbors, MN. At the time U.S. Steel was conducting winter navigation experiments to test the feasibility of year-round navigation on the Great Lakes, and she sailed in a convoy with her fleetmates *Philip R. Clarke*, *Cason J. Callaway*, *John G. Munson*, as well as the USCGC *Mackinaw*. The convoy ran into some of the heaviest ice conditions experienced on Lake Superior during the winter navigation experiments and the brand-new *Gott* suffered heavy damage, with several holes punctured in her hull, and frozen ballast tanks. The ship handled so well the wheelsman did not even notice a missing rudder! *Edwin H. Gott* spent the winter at Two Harbors for repairs, and loaded ore for Gary, IN, on April 21, 1979.

The *Gott* is 1004' long, 105' wide, and 56' deep, with a capacity of 74,100 tons at her maximum summer draft of 32'01". She was similar in design to the *Belle River* and *Lewis Wilson Foy*, other 1,000-Footers designed by R.A. Stearn and built by Bay Shipbuilding. Her design differed in that her cargo hold volume was significantly lower than her near 'sisters' to maximize capacity for taconite pellets. Since taconite is much more dense than other cargoes such as coal or stone, it does not require as much volume in the cargo hold. Her midship section was divided into approximate thirds, with the middle third of the hold being the cargo hold, and the outer compartments designated for ballast. Cargo was originally unloaded via a short shuttle type unloading boom mounted forward of her accommodations block

(Clockwise from top): Loading ore at CN, Duluth, MN, December 8, 2025. Photo: David Schauer; Downbound at Sault Ste. Marie, spring 1979. Photo: Tom Manse, courtesy MHSD; On the St. Marys River, August 6, 2016. Photo: Isaac Pennock

that extended about 50' to either side of the ship. With this arrangement, she was only capable of unloading at Gary, IN, and Conneaut, OH. The *Gott* was originally powered by a pair of Enterprise (General Motors) DMRV-16-4 diesel engines, with a combined 19,500 BHP. Her engines were each linked to controllable pitch propeller through a reduction gearbox.

U.S. Steel's marine operations underwent several organizational changes throughout the 1980s. Marine operations were consolidated into USS Great Lakes Fleet, a separate entity owned by U.S. Steel, in 1981. Majority stock in USS Great Lakes Fleet was acquired by Blackstone Capital Partners in 1988. Trade patterns remained the same through these transitions, the only changes being the addition of a black and grey diagonal stripe to either side of her bow at the beginning of the 1990 season.

The *Gott* suffered a broken crankshaft in one of her engines in early 1990. She docked in Duluth harbor on April 23, 1990, for preparations to operate on a single engine for the remainder of the season. She departed May 3, 1990. She was required to have a tugboat escort while transiting the St. Marys River for the remainder of the season.

On April 3, 1992, the *Edwin H. Gott* lost one of her rudders while backing out of the Duluth Port Terminal slip when departing winter layup. The rudder was replaced with the spare and she was on her way again on April 12.

Edwin H. Gott laid up at Bay Shipbuilding in Sturgeon Bay, WI, at the end of the 1995 season to have her shuttle unloading boom replaced with a conventional tubular boom. Her new boom was 280' long, making it the longest unloading boom equipped on a Great Lakes self-unloader. This made her much more versatile, expanding the variety of ports she was able visit.

Blackstone Capital Partners sold their stake in the fleet to Canadian National Railway in 2004. The company name was changed to Great Lakes Fleet, Inc. Great Lakes Fleet remains US-based to retain Jones Act status of the fleet.

Over the winter of 2010-2011, *Edwin H. Gott* was reengined by Bay Shipbuilding in Sturgeon Bay, WI. Her original Enterprise details were removed and replaced with a pair of MaK 8M43C diesels, with a combined 19,300 BHP.

Edwin H. Gott is an active member of Great Lakes Fleet, supplying taconite to steel mills across the Great Lakes. ◻

Scott Bjorklund Photo

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Front: HON. JAMES L. OBERSTAR arriving at Superior Midwest Energy Terminal (SMET) in Superior, WI, December 10, 2025, to load coal. She will be among one of the last vessels to load at the terminal, as it is scheduled to close in 2026. Photo: David Schauer