



NORTH STAR PORT

SUMMER 2019



A PUBLICATION OF THE



**Duluth Seaway
Port Authority**

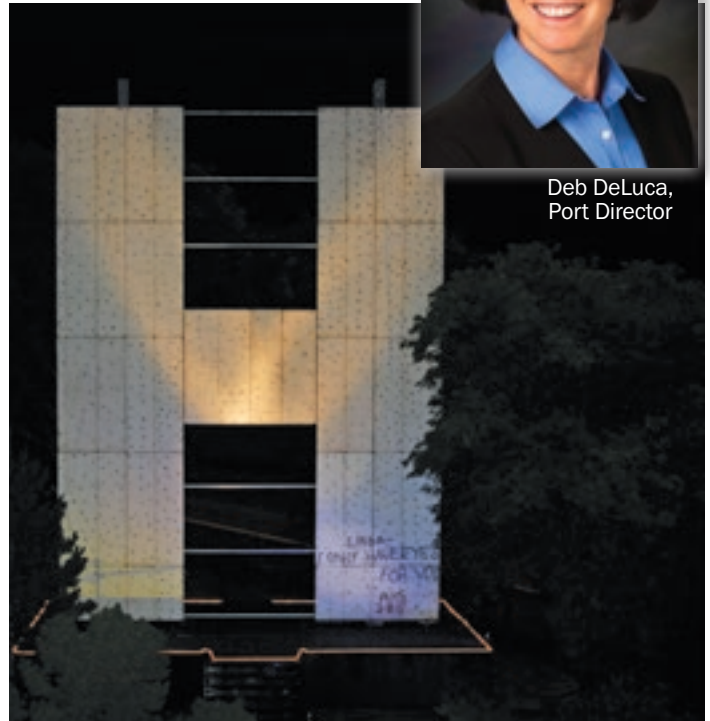
www.duluthport.com

Niche cargoes remain part Duluth-Superior's spice

August in Duluth—sun, warmth, the long dog-days of summer, and, this year, a particularly busy harbor as well as the Festival of Sail tall ships event. Seven tall ships and one rubber duck graced our harbor Aug. 11-13 as part of the festival. One of those ships, the S/V *Dennis Sullivan*, featured design inspired by Great Lakes cargo-schooners of the mid-to-late 1800s. A gaff-rigged wooden ship with three masts, she was a sight to behold against the blue of Lake Superior's waters. Just imagine when the Duluth-Superior harbor was filled with the sails of similar schooners. These ships were built to carry heavy loads in and out of shallow harbors. While their principal cargo was lumber, they often delivered Christmas trees during the holiday season!

It is both fun and instructive to observe historical trends and cargo oddments through the years. From roughly 1880 to 1900, logs moved on rafts towed by tugs from river mouths along the north and south shores of Lake Superior to the Duluth-Superior harbor, much to the consternation of Great Lakes carriers for whom the rafts were treacherous navigation obstacles. Log-rafting across Lake Superior would continue into the 1970s, as this edition of *North Star Port* mentions on Page 10. Logs and lumber were once the principal cargoes through the Port of Duluth-Superior, and still comprise a shipload from time to time. African coffee beans sailed here in the 1950s. In the 1960s, the Clure Terminal received cars from Europe. In the 1970s, at the height of the "Food for Peace" program, sunflower seeds were exported through our harbor. In the 1980s, slide projectors and movie cameras traveled from Italy to the Clure Public Marine Terminal. In the 1990s, Anheuser-Busch sent more than 10,000 tons of malting barley from our port to England, spurring then-Port Authority Marketing Director Sam Browman to write, "We need more of this niche trade." The 2000s saw the peak of coal tonnage through the Port, and in 2018, the "H" from the original 1923 HOLLYWOOD sign passed through the Clure Terminal on its way to London to kick off a world tour.

In general, the Port of Duluth-Superior is a non-hazardous, bulk, natural resources port. From our early years to the present day, cargo tonnage has been dominated by raw materials, such as wood and wood products (in the early years), aggregate, coal, grain, salt, and, starting in 1892, iron ore. The transport of these materials ensures that populations are fed, highways are kept safe, homes



Deb DeLuca,
Port Director

are kept warm, steel is manufactured, and factories remain in operation. In addition to these bulk cargoes, the Duluth Seaway Port Authority's Clure Public Marine Terminal handles high-value general and oversized project cargo, such as the wind turbine components featured on Page 12. With the advent and expansion of the CN Duluth Intermodal Terminal at the Clure (Page 8), the Twin Ports can now boast the movement of containerized cargo of all types via road and rail, inclusive of domestic moves and moves to and from coastal ports for import and export. Cargo diversity is important to any port and its catchment area. A mix of cargo spells economic stability.

Our team at the Duluth Seaway Port Authority, in tandem with our terminal agent, Lake Superior Warehousing, is constantly seeking to expand the variety of cargoes through our terminal. Members of our team attend trade conventions, track trends, explore markets, and improve our service offerings and infrastructure in order to keep our terminal and Duluth-Superior as a whole vibrant and thriving as Mid-America's world port.

While the kinds of cargo may change through the years, our commitment to being the Upper Midwest shipping and transportation nexus—for all cargoes—never wavers. Every ton of cargo, every single job, is of the highest importance. They all get our best, and with continued investment in our working waterfront, our best keeps getting better.

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About North Star Port

This magazine was produced by the Duluth Seaway Port Authority, Jayson Hron, publisher. Editorial assistance provided by Julie Zenner; graphic design by Erin Makela.



Charles Howard Smith

CORRECTION:

The Spring 2019 edition of *North Star Port* included a story about the Twin Ports Interchange. The story erroneously stated that MnDOT had secured \$603 million of the \$342 million project. That number should have been \$303 million.

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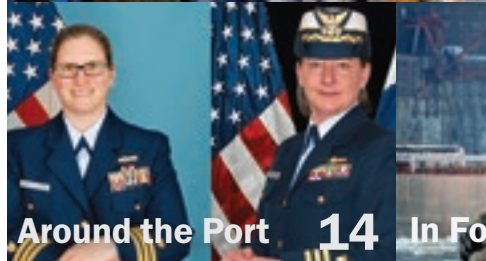
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On the covers



Jayson Hron

On the front:

Legendary *Arthur M. Anderson* sailed July 25, leaving long-term layup in Duluth and taking on a load of iron ore in Two Harbors.

On the back:

Built in 2017, the *Algoma Sault* fills with iron ore at the CN Duluth Dock on July 3, during her first-ever visit to the Twin Ports.



David Schauer

Printed on 10% post-consumer waste paper.



All Hands on Deck

Students embark on the St. Louis River Quest, an exploration in learning

BY KELSEY ROSETH

Surviving rip currents. Cleaning up oil spills. Bringing piping plovers back to our beaches. During the 27th annual St. Louis River Quest, 1,500 sixth-grade students studied issues facing the Duluth-Superior Harbor and St. Louis River Estuary.

“The St. Louis River has a long, storied history in terms of major impacts,” said Doug Jensen, the Aquatic Invasive Species Program coordinator for Minnesota Sea Grant. He noted how pollution, non-native species and overfishing contributed to the river being listed as an Area of Concern in 1987 under the United States-Canada Great Lakes Water Quality Agreement.

Since then, multiple government, nonprofit and volunteer agencies have worked hard to clean and restore the river.

“It’s slated to be delisted by 2025, which means the impairments for the river [will] have been remediated and restored,” Jensen said.

Students participated in 12 hands-on learning stations at the Duluth Entertainment Convention Center and aboard the *Vista Star*. Armed with a River Quest passport to document their adventures, students studied hypothermia, life jackets and boating safety, as well as pollution prevention, aquatic invasive species, fish physics and piping plover habitat.

In addition, the sixth-graders learned about industrial water reuse, sustainable forestry, oil spill response, hydroelectric power, commercial shipping and more—including the important role bacteria plays in waste water treatment within the Western Lake Superior Sanitary District (WLSSD).

“The bacteria was cool, [and we learned] how they cleaned the water,” said Sadie Gamble, a student at Lincoln Park Middle School. “It changed how I look at the lake.”

At one of the stations, “We learned how to not die, and stay out of a rip current,” said Tabitha King, a student at Lincoln Park Middle School. Conducted by Twin Ports Rip Currents Workgroup, the station taught students about the strong, narrow channels of water which flow away from shore. Students joined in for an interactive rip current example, using chairs and student movement to show how rip currents take hold. They were introduced to resources, both at Park Point and online, to understand the risk of rip currents each day.

Prior to the experience, lead program educators work with station sponsors to ensure that the education experience aligns with state learning standards. After the event, students participate in the program’s writing contest, with original essays or poems about what they learned.

“Visionary leaders launched this program a quarter century ago to help young people become more civically engaged in our working waterfront,” said Adele Yorde, River Quest board member. “We continue to build on that momentum by helping students understand the impact we each have on the environmental vitality of this estuary... and that thoughtful partnerships between industry, government and the public can result in safe, productive use of our natural resources.”

More than 25,000 students have participated since River Quest’s inception in 1993. This year, the event ran from May 13 through 16, with 13 schools from across the region participating.

“We have more schools wanting to be a part of it than what we can accommodate. We have built something that Duluth-Superior can really be proud of,” Jensen said.

For more information or to get involved, visit: seagrant.umn.edu/riverquest/



Bryonna Persing, Minnesota DNR SNA naturalist, guides students through causes of beach erosion during River Quest at the DECC.

LAKE SUPERIOR

Today we went to the estuary itself
To learn about the body of water's health
We learned a lot of interesting things
From things that are invasive to things with wings

U.S. Coast Guard works on an oil spill
If it's your fault, you'll get a big bill
They either absorb or do what's called skimming
Thanks to them, I easily can go swimming

Another thing was rip tides
The current's not wide, so swim to a side
At the Park Point beach website
It will tell you when swimming is
safe and rip tides are out of sight

Tree roots help the water stay clean
As it flows so softly down a stream
Twenty million seedlings planted each year
After they cut, the trees reappear

A pipe with water must be two times wider
But a bridge makes the stream an easier glider
River moves rocks and sand
It will keep our earth a better land

After that, the *Vista Star*
Looking out of binoculars to see what is afar
It was calming and cool
Watching the lakes out of the propeller spool

A life jacket is safe for water activities
If you don't agree, you'll have unwanted festivities
Depending on buoyancy, things float
Wear one always, because "they float you don't"

Invasive species include goldfish
Zebra mussels, and rusty crayfish
They get here by boat or ship
These things take over and native species amounts dip

Piping plover nests are being crushed
The amount of them is being flushed
Keep your dog on a leash to prevent consequences
And stay away from the nests in fences

Through the binoculars I saw an eagle nest
I saw many other cool things as we progressed
The people around me were fascinated too
As we looked at the river natural zoo

To stop hypothermia, go to position H.E.L.P.
Try not to lose energy on a yelp
If others are there, make a group
For all body heat will stay in the human coop

Pollution is a big problem
Trash and waste is in this column
Pesticides, salt, and manure don't do any good
We all could help, yes we should

What I can do for myself
Is to help the good ol' lake itself
Remember cold, clean, and clear
To keep all our native species here

I'm glad to have all this information shared to me
It's important for us all as you can see

by Sarah Stolp, North Shore Community School



WATER IS THE SPIRIT OF THE WORLD

by Azalea Steffes, North Shore Community School

Water is important to everything on our planet and it's important we do our best to take care of it. Without water Earth wouldn't even be. Sadly, due to globalization and the use of modern machinery, humans have been polluting the water and the ecosystem around it. It's also important to know how to be safe around water whether you live right next to it or miles away from it. It still affects you and everything around you.

Did you know the average temperature on Lake Superior is around 39 degrees Fahrenheit? Brrr, that's cold! Cold enough to get hypothermia! Hypothermia is when your body starts shutting down to conserve heat. People get hypothermia all the time whether it's falling through the ice and not being able to get back out or even just being in the water for too long. There are ways to protect yourself from hypothermia and it's as easy as just wearing a life jacket. If you wear a life jacket, you have a better chance of survival. Life jackets are buoyant so they float. You're not buoyant so you won't. Your life jacket will help you so that you don't have to waste your energy by keeping your head above the water. It will also assist you when get into the H.E.L.P position. H.E.L.P stands for heat emitting lessening position. Did you know that 10 people die every day due to water related accidents and 88% aren't wearing a life jacket? I know I'll remember to wear my life jacket when I'm canoeing, paddle boarding, tubing, and kayaking. I hope you follow suit and stay safe by wearing a life jacket.

Did you know even Olympic swimmers can't swim against a rip current? I don't know about you, but I'm sure not stronger than an Olympic swimmer. What really is a rip current? A rip current is a narrow current going away from the shore and around 100 people die because of rip currents per year. There's a way to get out of a rip current. You can swim to either side of it. Also try to wait a little bit longer to swim out. That way, the current will be weaker. Never try to swim against it...

Read more at seagrant.umn.edu/riverquest/



Azalea Mae Steffes



Sarah Stolp

VENERABLE VESSEL SAILS AGAIN

BY JAYSON HRON

In 1952, neither knew they'd become ageless wonders, though they were both built to survive the long haul.

One was lifting his first silver chalice alongside the Detroit River. The other was hefting her first crimson ore across Lake Superior.

Of course we're talking about Gordie Howe and the *Arthur M. Anderson*.

Howe eventually played more National Hockey League games than anyone else, skating his last at age 52. By then, the *Anderson* was already five years into her second act on the Great Lakes, lengthened 120 feet in 1975 to a 767-foot span at Fraser Shipyards in Superior, Wisconsin. Later that year, she'd become the last ship to have contact with the *Edmund Fitzgerald* and the first to search in vain for survivors.



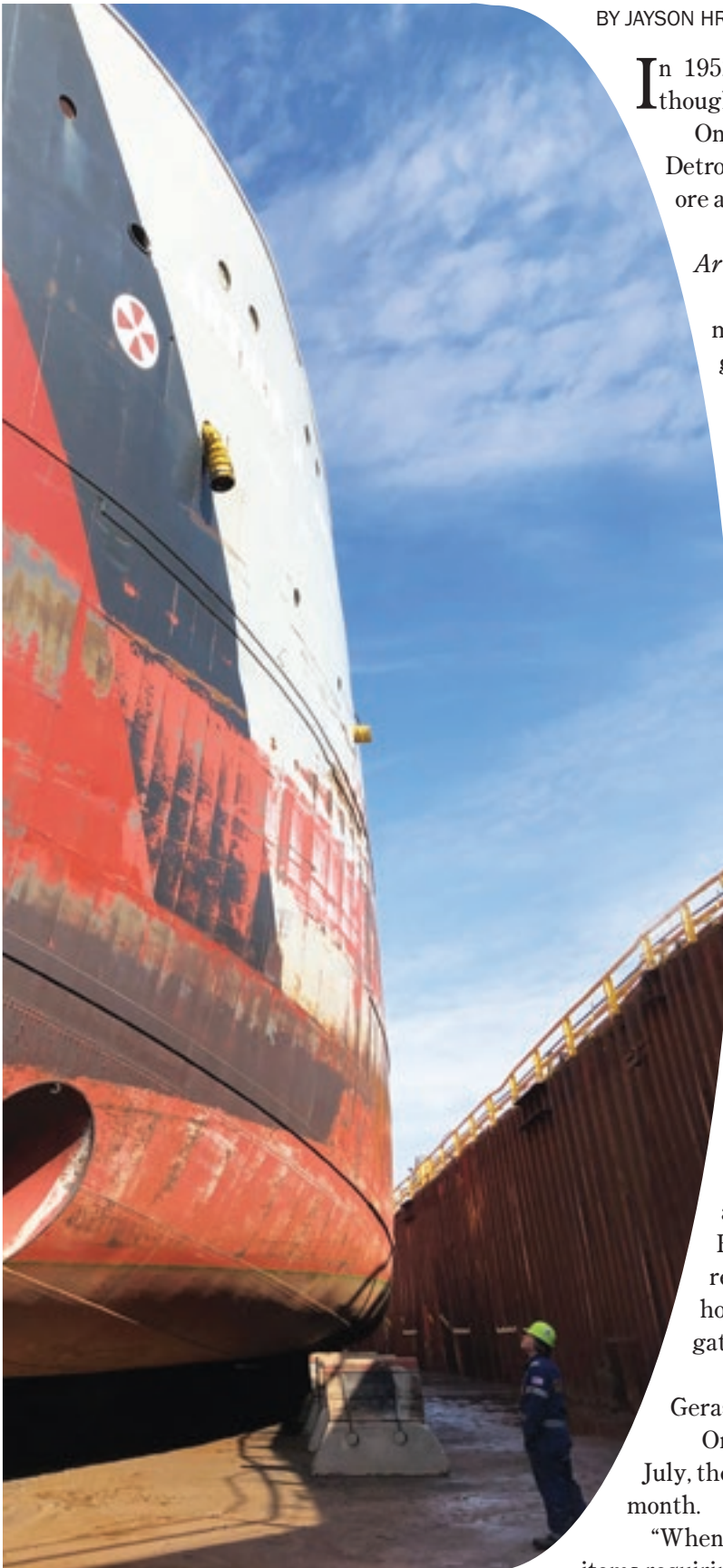
Gordie Howe

In 1982, the *Anderson* returned to Fraser Shipyards, where she was fitted with a 250-foot self-unloading boom for her 30th birthday. Seven years later, she received a stern thruster to augment the bow thruster added in 1966. Through it all, her steam turbine engine remained, making the *Anderson* one of only nine steamers still plying the Great Lakes in 2017, when she settled in for winter layup. When that layup extended into 2019, speculation spread that the *Anderson* might finally be hanging up the blades and retiring the axe, to borrow a hockey phrase. But in the spring of her 67th year, an uptick in iron ore demand lured her across St. Louis Bay and back into Great Lakes service after another Fraser facelift. This one included extensive steel replacement involving bulkheads within the cargo holds and the pointed razorbacks on the unloading gates.

"She's not the same ship she was in 1952," said Ken Gerasimos, Great Lakes Fleet general manager.

Originally slated to be back on the water by early July, the refortified *Anderson* wasn't ready until later in the month.

"When a ship sits as long as she sat, there are a great many items requiring replacement and repair," explained Gerasimos. Refurbished and ready, the *Anderson* departed July 25 for her



The *Arthur M. Anderson* rests in dry dock at Fraser Shipyards.

first load of iron ore at Two Harbors, Minnesota.

“She can still haul 25,300 long tons at summer draft,” said Gerasimos, who last sailed on the *Anderson* in 2004 and 2005 before transferring into an office position. “The best efficiency for this ship is to haul both ways to fully utilize this asset because she is limited and cannot carry as much as a 1,000-footer, but it’s good to have her back on the lakes.”

How long the *Anderson* might continue her encore is anyone’s guess. Market conditions will play a role, as will the amount of investment it took to make her once again seaworthy. With that said, Gerasimos thinks there’s a strong possibility that she’ll celebrate her 70th birthday sailing the now-familiar route between Duluth-Superior and Lake Erie.

After all, Gordie Howe came out of retirement after a two-year hiatus to score more than 500 points over a seven-season farewell tour. Who says the *Anderson* can’t author her own storybook ending?



Chris Mazzella

Partnership, collaboration bring AgriGrowth to port

More than a million metric tons of grain move through the Port of Duluth-Superior each season, a menu typically comprised of spring and durum wheat, beet pulp pellets, soybeans and canola.

It arrives by truck or train and departs by ship or sack, flowing through the Twin Ports’ multimodal distribution hub to the world.

This summer, Minnesota AgriGrowth Council board members and staff followed grain’s path to the Port for their quarterly meeting, an event hosted by the Duluth Seaway Port Authority.

“The Duluth-Superior seaport is so important to agriculture, agribusiness and ag transportation in Minnesota and beyond,” said Tamara Nelsen, AgriGrowth executive director. “We were thrilled to see the Port first-hand and talk with a variety of industry and business interests in the area.”

AgriGrowth is a nonprofit, nonpartisan member organization representing Minnesota’s agriculture and food systems industry. Advocating and collaborating on behalf of those interests is a key AgriGrowth priority, and the board enjoyed an attentive audience in Duluth with representatives from BNSF Railway, Enbridge, the Iron Mining Association of Minnesota, Minnesota Power and the



Port Authority.

“It’s clear that partnerships and collaboration created the iconic history and ongoing economic diversification in the Port of

Duluth-Superior,” said Jake Hamlin, government affairs director, CHS Inc., and also AgriGrowth treasurer. “As goes the Arrowhead Region, so goes Minnesota’s economy. The organizations and companies that joined us for our meeting in Duluth are economic engines for the Arrowhead Region.”

United States Congressman Pete Stauber also shared his thoughts with the group, discussing agricultural priorities in Washington, including passage of a new trade agreement with Canada and Mexico.

Following a full day of presentations and dialog, meeting attendees stepped aboard the *Vista Queen* for a picture-perfect harbor tour of the working waterfront. CHS Terminal Facility Manager Richard Carlson helped provide commentary during the cruise, detailing the world-wide connection of his terminal and contextualizing the Port’s presence. “Our infrastructure network, including the waterways, rail and truck terminals, is clearly a strategic asset for the Upper Midwest,” he said. “And it’s a key gateway to the world.”

Intermodal rail spur expansion keeps cargo rolling



Hailed by Port officials as a “modern miracle of planning and engineering” when it opened in the late 1950s, one could argue that Duluth’s Clure Public Marine Terminal has, like a fine wine, only improved with age. But unlike that bottle of burgundy, the terminal doesn’t thrive on neglect. Quite the opposite, in fact. Continued use, upkeep and investment make it shine. With that in mind, the Duluth Seaway Port Authority, with MnDOT and administrative support from the City of Duluth, gave the terminal a \$3.1 million boost this summer, unveiling a rail spur expansion in time for Clure’s 60th birthday.

The project included new yard lighting, 2,600 feet of railroad track and four acres of asphalt along the southeast corner of Rice’s Point.

“It’s a solid, well-designed space tailored for the intended purpose of intermodal container handling,” said Jonathan Lamb, president of Duluth Cargo Connect. “It’ll help us increase capacity and efficiency as we continue to grow traffic volume at the CN Duluth Intermodal Terminal.”

The rail spur expansion comes on the heels of a 2016 pier redevelopment project that added three new berths and 28 acres of lay-down space to the terminal as part of the Port Authority’s long-term plan. Altogether, those efforts have dramatically increased Clure’s cargo-handling capacity and efficiency, bringing it boldly into its second half-century. That’s a good thing, because Clure isn’t easing into it. Business has never been brisker at the facility, which serves as Mid-America’s multimodal hub with direct service to four Class I railroads, free-flowing major highways and a waterway to the world through the Great Lakes St. Lawrence Seaway.



Seaway locked and loaded with hands-free mooring

Hands-free mooring (HFM) technology installed at St. Lawrence Seaway locks is being called the most important technological advance since the Seaway's opening in 1959, but some are taking a hopeful wait-and-see approach.

"This new technology is a significant modernization of the St. Lawrence Seaway's infrastructure and will enhance workplace safety, lower operating costs for carriers and decrease vessel transit times through the locks," said United States Transportation Secretary Elaine L. Chao in announcing the project's completion.

The St. Lawrence Seaway Development Corporation (SLSDC), a wholly owned government entity, invested \$23 million to install HFM in the U.S. Snell Lock and the U.S. Eisenhower Lock. The Seaway project is the first use of this technology for an inland waterway in the U.S.. The HFM system uses vacuum pads, each of which provides up to 20 tons of holding force. They are mounted on vertical rails inside the lock chamber to secure the ship as it is raised or lowered, while keeping it a fixed distance from the lock walls. Once proper water levels are reached, the vacuum is released and pads are retracted so the vessel can sail safely out of the lock.

Steve Sydow, a vessel agent with Daniel's Shipping Services in Duluth, said improved efficiency and safer passages through the locks for vessels and those who work around the ships are positive goals.

"If it can help in those areas and make ship owners feel happy and confident, I think we have to look at hands-free mooring as a good idea," Sydow said. "But my mind also goes to the ice and cold and whether it will perform in those conditions. Time will tell."

Discussions are currently underway regarding potential installation of HFM technology at the Soo Locks in Sault Ste. Marie, Michigan. It's likely that the U.S. Army Corps of Engineers will include HFM in its design of the New Soo Lock, which is estimated to cost nearly \$1 billion and could be completed in as few as seven years.



Cort debut signals sea change in Great Lakes shipping

BY JAYSON HRON

Evening dipped the whole enterprise into risky, dusky doubt.

Timberland, a tender boat, sailed at the rear as a navigational aid. Several thousand feet ahead, *John Roen III*, a tugboat, pulled the load.

In between, 4,000 cords of pulpwood floated in a Sitka spruce necklace.

A freighter tangled amidst this web of lines and logs would be humiliating. It might also be life-threatening. And that would be no way to end an era. After 50 years, this was the company's last raft; the last sunset for pulpwood rafting on Lake Superior. The crew was determined to make it a safe passage.

But somewhere in the darkness sailed the very vessel they sought to avoid.

Like Longfellow's ships in the night they would pass, representatives of two eras ever so briefly at a confluence; one closing and one opening.

Great Lakes Game-Changer

The 1960s were gloomy for domestic ship-building on the Great Lakes. Only two new hull bottoms joined the bulk fleet and even those were limited to carrying 26,000 tons, a pittance more than previous ships. But pallid as it was, the decade ended in higher hopes, buoyed by the new Poe Lock opening at Sault Ste. Marie, Michigan.

Constructed at a cost of \$40 million, the massive structure stretched 1,200 feet long, 110 feet wide and 32 feet deep. It dwarfed the previously built Soo Locks, which accommodated nothing longer than 730 feet. Deep-drafting 1,000-footers could navigate the new Poe, and Bethlehem Steel Corporation was racing to christen the first.

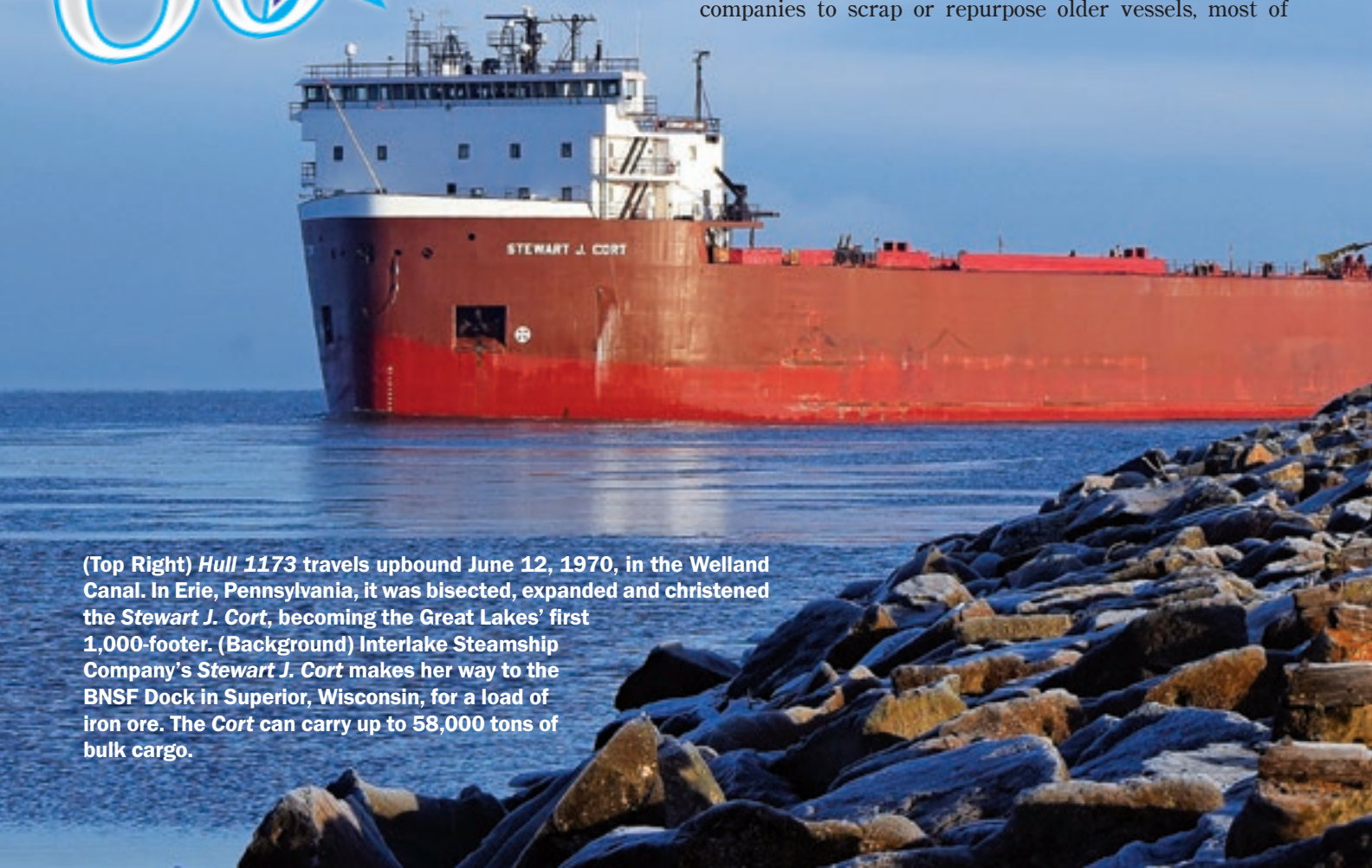
Hull 1173

Stubby *Hull 1173*, consisting of only the bow and stern sections, incubated at Ingalls Shipbuilding in Mississippi. Sailing in 1970 at a length of 182 feet, she went through the Welland Canal en route to Pennsylvania's Erie Marine. Transmogrified in Erie, *Hull 1173* was fitted with an 818-foot midbody, reconnected, and christened the *Stewart J. Cort* on May 4, 1971. Bow to stern, she was nearly as long as the Eiffel Tower was tall, becoming the first of the Great Lakes 1,000-footers, a quantum leap in shipping with almost double the capacity of any other vessel on the unsalted seas.

"The increased capacity of the 1,000-footers enabled companies to scrap or repurpose older vessels, most of



(Top Right) *Hull 1173* travels upbound June 12, 1970, in the Welland Canal. In Erie, Pennsylvania, it was bisected, expanded and christened the *Stewart J. Cort*, becoming the Great Lakes' first 1,000-footer. (Background) Interlake Steamship Company's *Stewart J. Cort* makes her way to the BNSF Dock in Superior, Wisconsin, for a load of iron ore. The *Cort* can carry up to 58,000 tons of bulk cargo.



which were steam-powered with large crews, and haul the same amount of cargo in a season with fewer ships,” said Dr. Richard Stewart, professor of transportation and logistics at the University of Wisconsin-Superior. “This also meant fewer mariners, fewer docks and fewer ship chandlers.”

Air pollution dwindled as well, thanks to the 1,000-footers’ fuel-efficient, diesel-powered engines.

A New Era

Despite hopes that she would be operational by August 1971, the *Cort* waited until May 1, 1972, to begin her working career on the lakes. According to *The Scanner*, a Toronto Marine Historical Society newsletter, Bethlehem Steel “refused to accept delivery of the vessel” until Erie Marine made “satisfactory alterations to several systems which have yet to satisfy Bethlehem management.”

Finally underway, the *Cort* sailed to Minnesota’s Taconite Harbor for her initial load, hauling a then-record 49,343 tons of iron ore across Lake Superior, through the Poe Lock and on to Burns Harbor, Indiana. Her second load topped 50,000 tons, limited only by the ship master’s desire to learn more about the vessel before venturing at full capacity, according to the Society of Naval Architects and Marine Engineers. But even loaded to less than her limits, the *Cort* smashed records and ushered in a new era of Great Lakes shipping, one based on entirely new economies of scale.

The Seaway Seventies, an era marked by rapidly



Photo by A.F. Sagon-King, courtesy Toronto Marine Historical Society

escalating tonnages, was officially underway. Within a month of the *Cort* inauguration, Interlake Steamship debuted its lengthened *Charles M. Beeghly* at 806 feet. Soon after, United States Steel sailed a new 858-foot self-unloading vessel, the *Roger Blough*. Within a year, Fraser Shipyards in Superior, Wisconsin, had contracts to lengthen five bulk carriers, a blitz that ignited the busiest period of major vessel reconstruction in the shipyard’s history.

By 1975, the fleet of Great Lakes ships in the 800-to-1,000-foot range bulged to 10, with eight more under construction or planned. Dimensional lock limits not reached in a span of 17 years, from 1943 to 1960, were suddenly met by an entire fleet of new or expanded ships.

“The *Stewart J. Cort* transformed Great Lakes shipping,” said Dr. Stewart. “Her cargo capabilities became the model for building new lakers, and 1,000-footers helped make Great Lakes commercial shipping cost-competitive.”

Photo by David Schauer



1959

Ramon de Larrinaga arrives in Duluth as the first-ever first ship after the opening of the Seaway

1972

Stewart J. Cort arrives as the Great Lakes’ first 1,000-footer

1979

Ingrid Wells becomes president of Port Authority Board

1987

Duluth completes the largest, heaviest cargo lift project on the Great Lakes

SEASON UPDATE

Summer Sailings: Full loads, fast currents, foggy follies

Twelve years ago, in August 2007, Lake Superior's mean water level dipped to 600.43 feet, a record low for the month. This year, the great *gichi-gami* is again setting records, but for high water rather than low. The difference—three feet—is a matter of perspective. For Boniface Kongin, who won Grandma's Marathon in June, it's merely half of a running stride. But for an ore-filled laker, when every extra inch of draft can be worth more than \$25,000 per load, it's a bountiful boost of profitability. That's been the story this summer, with many vessels taking advantage of extraordinarily high water levels throughout the Great Lakes Basin.

In the Port of Duluth-Superior, iron ore tonnage remained ahead of the five-year average and only slightly below last season's pace, which was a 23-season high. Overall tonnage for the Port year-to-date was comparable to last season and slightly ahead of the five-year average, thanks in part to a fast start for coal and an early-summer grain surge, plus a procession of wind energy cargo

expected to continue into early fall. Total vessel visits remained close to last season's pace. In sum, it was anything but a summer swoon.

But while high water levels made for some extra profitable loads, they also threatened in late June as Lake Ontario swelled to extreme highs. Pressure mounted on the International Lake Ontario-St. Lawrence River Board to increase outflow rates at the Moses-Saunders Dam beyond record levels in an attempt to lower the lake. Some scenarios under consideration could have halted commercial shipping, crippling the flow of North American commodities and cargo. Ultimately board members eschewed those potentially disastrous scenarios and chose instead a plan that provided help to flooded Lake Ontario landowners while also protecting Great Lakes shipping and the natural environment.

"It was a compromise that made the best of a difficult, complex situation," said Deb DeLuca, executive director of the Duluth Seaway Port Authority.



Bryan J. Howell

Rescue freighter

It's said the Ojibwe term *michipicoten* translates to “big bluffs.” A 42-year-old from Washington, D.C., made a different kind of big hubris-filled bluff July 8 when he tried to pilot a Jet Ski from Grand Portage, Minnesota, to Isle Royale and back on Lake Superior. Departing at approximately 4 p.m., he eventually made it to Isle Royale (illegally, since the National Park Service bans personal watercraft at Isle Royale), but he became disoriented upon his return trip amidst an evening fog. Low on fuel and stranded on the lake as temperatures dropped, he climbed

into a cubby hole on the Jet Ski for warmth and called for a rescue. His salvation came in the form of Lower Lakes Towing freighter *Michipicoten*, a regular visitor to the Twin Ports. The vessel happened to be nearby and, upon receiving the wayward man's coordinates from the U.S. Coast Guard, was positioned to perform the rescue after 11 p.m. Both the man and his Jet Ski survived, but they stand as yet another reminder to respect the laws and the lake—and the lake's freighters.



Paul Schinocca

Sailing in the evening sun, *American Integrity* departs the Port of Duluth-Superior fully loaded with iron ore on July 6, 2019. A day later, she broke the Soo Locks' tonnage record by carrying more than 76,000 tons downbound. High water levels on Lake Superior and beyond typically allow ships to carry more cargo, making it likely that tonnage records will continue falling in 2019.



Change of command for Duluth's Marine Safety Unit

Duluth's Marine Safety Unit (MSU) of the United States Coast Guard has a new commander. Frances Smith took over the post formerly held by Commander Erin Williams in a change-of-command ceremony June 19. It marked the first time for the Duluth unit that a woman commander took over from another woman commander.

Commander Smith was stationed at MSU Pittsburgh, Pennsylvania, which primarily handles river traffic such as domestic boats and barges. As commanding officer at MSU Duluth, captain of the port and officer-in-charge, marine inspection, Smith now oversees the inspections for commercial vessel safety and security and waterfront facility safety and security as well as port security, environmental response and waterways management.

"I'm honored to take command of such a distinguished unit," said Smith, a native of St. Louis, Missouri. "We've received a warm welcome, and what I've seen of the area so far is stunning. We're so happy to be in Duluth."

During the change-of-command ceremony, departing Commander Williams received a meritorious service medal for her efforts in Duluth, especially during the 2018 grounding of the freighter *American Spirit* inside the Duluth Harbor.

"It was a job very well done under the watch of

Commander Williams," said Captain Patrick S. Nelson, U.S. Coast Guard Sector Sault Ste. Marie. "Duluth's Marine Safety Unit covers a lot of territory and has a lot going on, not the least of which is preventing marine casualties. We'll never know the full impact of MSU Duluth, but it certainly saves lives and safeguards the Great Lakes economy."

Colleagues described Williams as a unifying force who works to make the Coast Guard more welcoming and inclusive. She carries those traits to her new post at the Coast Guard's Leadership Development Training Center in New London, Connecticut.

Reflecting on her tenure, Williams shared her love of the Twin Ports and the welcoming atmosphere she and her family found when she took the post in 2016.

"Ten years ago, Neal and I decided to put Duluth at the top of our list of assignments," said Williams, whose professional journey included posts as executive officer at Coast Guard Activities Europe in Schinnen, Netherlands, and executive officer for the MSU in Valdez, Alaska. "We discovered a wonderful sense of community here that extended into the schools and the maritime sector. We've loved our time here, and I truly appreciate all the collaboration to keep the Western Lake Superior Region safe and secure."

UW-Superior reopens ballast water treatment research facility

BY JULIE ZENNER

Strolling the maze of industrial pumps, color-coded pipes and assorted holding tanks at a specialized research facility on Superior's waterfront, Kelsey Prihoda feels right at home. Prior to its shuttering in 2017, she and other University of Wisconsin-Superior research scientists spent years at the facility, testing systems designed to prevent non-native aquatic species from spreading through the Great Lakes in the ballast tanks of ships. A recent agreement once again gives UW-Superior's Lake Superior Research Institute (LSRI) access to the high-tech facility and its equipment. That is welcome news to Prihoda and her colleagues at the university.

"It feels like coming home," said Prihoda, who oversees ballast water system testing as program manager of LSRI's Great Waters Research Collaborative. "We've had a lot of inquiries about reestablishing land-based testing of ballast water management systems on the Great Lakes over the past year and a half. Luckily everything worked out, and we were able to acquire the facility."

The land-based research facility opened in 2007 as part of the Great Ships Initiative and was managed by the Washington, D.C. based nonprofit Northeast-Midwest Institute (NEMWI). NEMWI ended its ballast water testing program two years ago and no longer needed the facility.

UW-Superior entered into a cooperative agreement with the U.S. Maritime Administration in 2017 to continue ballast water system testing through its newly created Great Waters Research Collaborative. It has been conducting "bench level" testing in laboratories on campus, but the large-scale, land-based testing facility was closed while UW-Superior worked to acquire it.

The acquisition is good news on several fronts according to Prihoda. Land-based testing is the middle step between laboratory testing and full-scale shipboard testing of ballast water management systems. A number of promising technologies tested in the labs at UW-Superior could be scaled up once the waterfront facility is back in business.

"This facility was designed to mimic the ballast water system onboard a ship," Prihoda said. "We draw water from the harbor and can test ballast water management systems that are in development or market ready at flow



Kelsey Prihoda, a University of Wisconsin-Superior research scientist, once again has access to the ballast water testing facility.

rates and holding times that are comparable to a shipboard environment but under very controlled conditions."

The next several months will be spent checking equipment, making repairs and validating that existing systems can meet U.S. Coast Guard testing standards.

Prihoda said U.S. Coast Guard regulations require vessel owners to install treatment systems with demonstrated effectiveness in the waters they ply. Vessel owners need performance documentation before installing new technologies aboard their fleets. That is something many vessel owners and operators would like to see before committing to installation of new technologies aboard their fleets.

In addition to filling the need for ballast water management system testing at a land-based facility on the Great Lakes, there are other benefits to rebooting the Superior facility. It will provide undergraduate students working for the LSRI at UW-Superior with nontraditional applied learning experiences, and it could offer shared research space for institutions involved in freshwater research.

"We happen to have this very unique facility that can do a lot of different things," Prihoda said. "This could be an opportunity to collaborate with the University of Minnesota Duluth as well as other universities and organizations around the Great Lakes with researchers looking for the types of flow rates, resources and capabilities available at this facility. It is all very exciting!"

Projects shore up roads, bridges serving Duluth Port

City streets used to transport cargo in and out of the Duluth Port are among local roads getting shored up this summer as the Minnesota Department of Transportation (MnDOT) prepares to begin the Twin Ports Interchange (TPI) project next year. The improvements will ensure detours are in good shape to handle rerouted traffic during TPI construction. They include pavement and traffic control upgrades on Garfield Avenue and Railroad Street, among others.

The \$342 million TPI project will reconstruct the interchange where Interstate 35, Interstate 535 and U.S. Highway 53 converge in Duluth, locally known as the “can of worms.” It will improve safety by eliminating left exits and blind merges, while widening lanes, softening curves and replacing numerous bridges to accommodate heavy, oversized loads traveling to and from the Port. Improving truck routes for large dimensional cargo has been a high priority for Port officials as plans for the project developed.

“It’s an important project for moving freight throughout our region,” said Kate Ferguson, Duluth Seaway Port Authority director of trade and business development. “We appreciate MnDOT’s collaborative approach to design throughout this process to ensure that our largest cargoes can pass smoothly through the highway system.”

In the meantime, challenges remain.

“This year, we are sending wind turbine loads onto city streets because those bridges are not capable of handling either the weight or length of the loads,” MnDOT TPI Project Manager Roberta Dwyer told stakeholders at a monthly update in June. “We want to get those big trucks from the Port off of the city streets and onto the interstates where they belong.”

The TPI project will be completed prior to replacing the Blatnik Bridge, which carries I-535 and US 53 over the St. Louis Bay and connects Duluth and Superior. That major project is slated for 2028. Earlier this year, the Minnesota and Wisconsin Departments of Transportation posted weight restrictions on the Blatnik Bridge, jointly setting the maximum vehicle weight at 40 tons.

“The bridge is safe,” MnDOT District Engineer Duane Hill said in a news release. “We are taking this step to ensure the bridge remains serviceable until we can replace it.”



Jayson Hron

Duluth-Superior sets the pace for international cargo

A pacesetter takes the lead or sets an example. That defines the Port of Duluth-Superior, which registered an 11.5 percent season-over-season gain in international cargo tonnage during the 2018 shipping season.

The Saint Lawrence Seaway Development Corporation (SLSDC) presented the Port with a 2018 Pacesetter Award on National Maritime Day (May 22). The annual Pacesetter Awards salute U.S. ports on the Great Lakes St. Lawrence Seaway System that register international cargo tonnage increases over the prior year.

“In terms of total tonnage, the 2018 season was Duluth-Superior’s best since 2014, so it was a solid season overall,” said Duluth Seaway Port Authority Executive Director Deb DeLuca, who accepted the award on the Port’s behalf. “International shipping, the Pacesetter Award criterion, certainly played a role in that success, with a slight uptick in the number of international vessels and a double-digit increase in the percentage of international tonnage shipped through the Port.”

Eight ports earned 2018 Pacesetter honors in a season that saw the highest cargo tonnage on the Great Lakes St. Lawrence Seaway System in more than a decade. Nearly 41 million tons of cargo were shipped through the System, a



Jayson Hron

seven percent increase over 2017.

“Our ports are making great contributions to the region, the nation and the world,” said Craig Middlebrook, SLSDC deputy commissioner. “We’re certainly pleased to recognize Duluth-Superior among the eight Pacesetter Award recipients.”

This is the 17th time the Port of Duluth-Superior has earned the honor since the award was established in 1992, second only to Toledo (18).

Fleet Anniversaries

One hundred and twenty years ago this month, the Algoma Central Railway Company was incorporated in Ontario. The Algoma Central fleet of vessels emanated from those origins. What began as four turn-of-the-century steamships is now the largest fleet of dry and liquid bulk carriers operating on the Great Lakes St. Lawrence Seaway, according to *Know Your Ships*. The *Algoma Buffalo*, built in Sturgeon Bay, Wisconsin, is among the fleet's regular visitors to the Twin Ports.

Also celebrating 120 years this summer is the Great Lakes Towing Company, founded in July 1899. The red and green G-tugs are a familiar sight throughout the Great Lakes.

Last but not least, Montreal-based Fednav is feting a longevity feat this season with its diamond jubilee. Seventy-five years ago next month the company was formed in Toronto. Today it stakes a claim as Canada's largest bulk shipping company. The *Federal Mackinac* visited CRH in Duluth earlier this summer, with an assist from G-tugs *Missouri* and *Arkansas*, to unload cement.



David Schauer



Gus Schauer

Christening of the USS *Minneapolis-St. Paul*



Ray Klosowski

The USS *Minneapolis-Saint Paul* awaits christening June 15 alongside the Menominee River in Marinette, Wisconsin. In July, U.S. Navy Deputy Under Secretary Jodi Greene and Duluth Mayor Emily Larson announced that the vessel will be commissioned in Duluth sometime in 2020 or 2021.

Port's environmental performance earns high marks

The Duluth Seaway Port Authority and its terminal operations earned high marks among port authorities in the latest Green Marine report on environmental performance. The report ranks participants in seven categories: air emissions, community impacts, dry bulk handling and storage, environmental leadership, spill prevention, underwater noise and waste management.

Forty-two North American port authorities participated in the 2018 evaluation. Participants conduct self-evaluations which are verified by a third party. The Duluth Seaway Port Authority ranked among the top five participating U.S. port authorities and tenth overall. It was No. 1 among participating port authorities that manage their own dry bulk handling and storage. The Port Authority's ongoing investments in industrial storm water management helped boost its rating in several Green Marine categories this year.

"We're proactive about minimizing environmental impact," said Jeff Stollenwerk, Duluth Seaway Port Authority director of government and environmental affairs. "The Green Marine program helps guide those efforts, while also giving participants a tangible scoreboard for environmental stewardship."

The Duluth Seaway Port Authority has participated

in the voluntary Green Marine certification program since its inception in 2007. The program now includes nearly 150 participating ship owners, port authorities, seaway corporations, terminal operators and shipyard managers, including another local notable, The Great Lakes Towing Company. All have committed to adopting practices and technologies that reduce their environmental footprints on land, air and sea.

"Our Port benefits from having a unique, diverse community group—the Harbor Technical Advisory Committee—which, among other things, provides a forum for discussion of environmental topics in the Port of Duluth-Superior," said Stollenwerk. "The Port Authority chaired that committee in 2017-18, so we're active in those efforts, and we also chair the Great Waters Research Collaborative Advisory Committee, which finds solutions for minimizing impacts of ballast water discharge. We're all working to protect our environment here in the Twin Ports and beyond."



PORT PASSINGS

Kelvin "Kelly" Reeves Herstad, 83, of Duluth, passed away June 14, 2019. Herstad was an entrepreneur and visionary, who owned and operated United Truck Body in Hermantown for many years. He also co-owned the former NorStar Products International, a manufacturer of truck-mounted hydraulic equipment located on Duluth's Port Terminal Drive. It was formed after Herstad and three others purchased the aerial bucket portion of the defunct Reach All Manufacturing, restoring production lines and preserving well-paying jobs on the industrial waterfront. Altec Industries acquired the assets of NorStar Products International in 2002 and continues to grow its Duluth operations on the Clure Public Marine Terminal. Herstad was a member of the National Federation of Independent Business, National Truck Equipment Association, and a charter member of Skyline Rotary, among many other affiliations. He is survived by his wife, Phyllis, three daughters, a son, a stepson, nine grandchildren and two great grandsons.

George Thomas LaTour, 70, died July 30, 2019, at home in Fredenberg Township, Minnesota. The lifelong Duluth-area resident was a Vietnam veteran who served in the U.S. Air Force as a C-130 crew chief from 1968 to 1972. He went on to work 40 years for The Great Lakes Towing Company as a tugboat captain in the Duluth harbor and retired in 2015. LaTour is survived by his wife, Betty, three adult children, six grandchildren, one great-grandson, and other special cousins and friends.



Paul Schinocca

IN FOCUS: Charles Howard Smith

When Charles Howard Smith is not driving bus for the Duluth Transit Authority, he often can be found on the Duluth-Superior waterfront with his trusty camera and trusted canine companion, Frankie. The rescued German shepherd-husky mix is his partner in adventure. Here Charles shares insights into capturing powerful images of the working waterfront.



Charles Howard Smith

Website: charleshowardsmith.smugmug.com

How did you first get into photography, specifically shipping? Is this your primary job?

I have always been interested in ships. My dad worked at Peavey Elevator for many years, so my brother and I always gravitated toward the boats. I left Duluth and lived in South Dakota for 25 years, but when Destination Duluth (www.destinationduluth.org) launched in 2013, it pulled at my heartstrings. I moved back and picked up photography. People always said I had a good eye.

What draws you to Great Lakes shipping and the working waterfront for images?

It is pretty awe-inspiring to have salties from all over world visit the Twin Ports. We are a long way from the coasts, and they carry a variety of cargoes. Yesterday, I caught one with windmill parts and one loaded with grain.

Do you have other specialty focus areas, as well?

Northern lights. That is probably my favorite subject matter. I've chased them all over northern Minnesota, and, someday, I'd like to go to Iceland and Alaska.

How would you describe your approach to photography?

I have always wanted to share the beauty of the Duluth area. My goal is to share my love of this area in ways that help others enjoy, visit or even move here. Most of my shots are spontaneous. I love the fall season. I'm not a morning person, but I love to shoot a good sunrise. We have some of the best in the world here.

Do you know immediately when you get a great one?

Yes. I can see when something awesome is developing, and I do a little happy dance.



Photos by Charles Howard Smith



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