



THE HARBOR LINE

Winds of change bring challenges and celebration to start of shipping season

In Duluth, the first days of spring are not a celebration of greening yards and budding trees, but rather, a trudge of fresh snow and mud. However, mid-to-late March does invariably signal the start of the Great Lakes and St. Lawrence Seaway shipping seasons. Inevitably, the opening weeks on Lake Superior feature stalwart icebreaking services from the United States Coast Guard. While these linked spring harbingers always garner notice and celebration, they warrant special notice this year.

The opening of the St. Lawrence Seaway's 2019 navigational season on March 26 marked the binational waterway's 60th anniversary. A great pride of Dwight D. Eisenhower's presidency, the Seaway's creation in 1959 linked the North American heartland and the Great Lakes region to the global marketplace. As you'll read on Page 12, the first ship to transit the entire Seaway entered the Duluth-Superior harbor May 3, 1959, and docked at the Peavey Terminal in Duluth to load grain. The following day, *Duluth*

News Tribune headlines trumpeted: "Twin Ports Linked to Atlantic Ocean." Indeed, that first ship, the Ramon de Larrinaga, had departed Liverpool roughly three weeks earlier. For the first time, the Twin Ports were linked to the world via deep-sea shipping channels.

This year's first saltie, the *Maria G*, arrived April 15 at the Riverland Ag/Duluth Storage terminal (just a few docks away from the former Peavey dock on Rice's Point) to load spring wheat for Italy. Now as in 1959, grain is the No. 1 overseas export through our harbor. This year, the Duluth Seaway Port Authority anticipates receiving many salties at our Clure Public Marine Terminal, and perhaps even a record number. Some will carry large industrial machinery and components, others will carry kaolin clay for use by paper mills, and many will carry wind energy project cargo to help generate clean energy throughout the Upper Midwest. Activity like this, dependent on our robust marine highway to the salted seas, underscores our role as Mid-America's world port.

At the time of the Seaway opening in 2019, lakers had already been plying their routes for three weeks, primarily hauling iron ore from Minnesota and Michigan to steel mills on the lower lakes. This early start was facilitated by the Coast Guard's "Operation Taconite," an equipment-

intensive effort that involves breaking through the ice within commercial ports and shipping channels of Lake Superior, Lake Michigan, and northern Lake



Deb DeLuca, Port Director

Huron, the St. Marys River and the Straits of Mackinac. This year was challenging for two reasons, one an act of nature and one mechanical.

First the act of nature: An unusually extensive ice cover slowed the start of the season. According to the National

Weather Service, on March 7,75 percent of the Great Lakes and 93 percent of Lake Superior were covered with ice, well above historical averages. Not only was the ice coverage substantial in area, it was also substantial in thickness. The U.S. and Canadian Coast Guards' battle against this obstinate ice led to mechanical failures on multiple icebreakers, which limited their effectiveness and removed some from service until repairs were completed.



Ramon de Larrinaga, the first first-ship.

It's no secret that the U.S. Coast Guard is challenged by a lack of icebreaking resources dedicated to Lake Superior and the Great Lakes. The *Alder's* home port is Duluth-Superior, but *Alder* isn't a heavy icebreaker. Only the *Mackinaw* can serve a heavy icebreaking role, and the demands on that one vessel are extensive.

Given that the demand for iron ore remains strong, the decrease in March's iron ore shipments on the Great Lakes was indicative of the icebreaking problem: down 34 percent compared to one year ago and 19.7 percent below the March five-year average, according to the Lake Carriers' Association. This decrease was tied closely to threat of challenging ice and limited icebreaking resources.

The U.S. Coast Guard deserves our huge appreciation and extra kudos for getting the 2019 season underway given these difficult conditions; they did so through shrewd deployment of available resources, careful sequencing, and long hours. But beyond the appreciation, they also deserve our support in asking Congress for funding for Great Lakes icebreaking resources. Shipping is a key driver of these regions' economies, an opportunity just waiting for an open lane to flourish. We're hopeful that, with more robust icebreaking resources, our Coast Guard can open that lane and keep it open with even greater success in the future.



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About North Star Port

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Hon. James L. Oberstar

CORRECTION:

The Winter 2018-19 edition of North Star Port included a story about the mid-October soybean shipment from the Port of Duluth-Superior to Lisbon, Portugal. The story erroneously stated the weight of that bulk shipment. It was actually 23,586 metric tons.

Inside your

NORTH STAR PORT

Spring 2019 / Volume 51, Number 1



On the covers _____



On the front:

The BigLift Happy River arrived in late April with wind energy project cargo.

On the back:

The CSL Tadoussac makes its way through the Superior entry in mid-April to load at BNSF Dock 5.



Corn Belt Fleet: An unlikely duo on Lake Michigan

BY JERRY SANDVICK

The first six months of war between the United Unfortunately, in 1942, the Navy had few aircraft States and Japan clearly established that the carriers, and because all were needed for combat operations, aircraft carrier had eclipsed the big-gun battleship as none could be assigned to train pilots. the primary weapon in the Pacific. Before the war Commander Richard Whitehead, the chief aviation ended, the U.S. launched dozens of carriers officer for the Great Lakes area, proposed a solution. and built thousands of aircraft to fly from Modifying a Great Lakes steamer with a flight deck them, but the new aircraft were only would be a quick way to acquire a training carrier. His idea as effective as the men who flew generated little interest at first, but once the U.S. was at them. Those men had to learn war, the concept was put on the fast track. to take off and land on Converting an existing vessel to a makeshift carrier carrier decks, so Naval and basing it in Chicago had several benefits. pilot training It could be put it into service more quickly and at was a high less cost than new construction. The waters of Lake Michigan were more benign priority. than those of the ocean. Photos courtesy of Jim Dan Hill Library, Maritime Collections, University of Wisconsin, Superior Chicago was near the Great Lakes Naval Training Base, and airfields at Glenview and Libertyville, Illinois, were nearby. The main advantage, though, was that a ship on Lake Michigan would be safe from enemy action. U-Boats were present on Atlantic and Gulf Coasts and the West Coast could be reached by Japanese subs-serious threats

(Left) The SS *Greater Buffalo* was the last word in luxury cruising with a well-appointed lounge and 625 staterooms. Replacing the upper works with a flight deck took some serious shipbuilding. (Second from left) A Grumman F4F Wildcat comes to grief aboard the Sable, May 1945. A number of aircraft went over the side and are still at the bottom of Lake Michigan. The student pilots were usually hauled back aboard after a brief swim.

that would necessitate anti-submarine escort vessels. A Lake Michigan carrier could go about its tasks and not have to rely on escorts that were badly needed elsewhere. A final, obvious factor was that, even if an aircraft carrier could have been spared for training, there was no way of bringing it into the Great Lakes because it simply would not fit through the St. Lawrence River locks.

Two training carriers were planned. The first was the USS Wolverine; Navy hull number IX-64, which meant she was an "unclassified auxiliary vessel." Originally the Cleveland and Buffalo Transit Company's old luxury passenger Seeandbee (C & B), she had entered service in 1913 doing cruises on the Lakes but was now surplus. In early 1942, Commander Whitehead arranged a survey of the Seeandbee, the inspecting officers reported her condition to be sound, and the Navy offered a price of \$756,500, which was accepted in March 1942.

The Seaandbee went to Cleveland for the first phase of modification. It involved nothing less than removal of all five upper decks that housed the luxurious passenger accommodations. The hull was then towed to the American Shipbuilding Yard in Buffalo, N.Y., for completion. Work was done afloat as no dry dock was large enough, and upwards of 1,250 workers rushed the job in the spring and summer. The main construction was a 550-foot flight deck, along with a surrounding catwalk, an island to house the bridge and flight control center, and rerouting of the smokestacks. Crew quarters and galley areas were designed for stays of a few days—no need for long voyage accommodations. Air operations would be pilots flying from shore to do landings and takeoffs, so arrester cables were fitted, but no hangar spaces, aircraft elevators,

catapults, armament or radar were necessary. Propulsion was supplied by the original triple expansion coalfired steam engine of 12,000 horsepower, and this led to some training for crew as coal passers, which was no longer a trade in the Navy. Keeping an even burning coal fire in the boiler took some practice. The biggest shock to the modern eye was that Seaandbee was a paddle wheeler, the engine turning a 32-foot, 9-inch wheel on either side of the ship. One other noticeable difference was that she sat much lower in the water. The flight deck was 26 feet above the waterline, much less than that of a fleet carrier.

Commissioned on August 12, 1942, she was now the USS Wolverine, honoring the State of Michigan, and now carrying a crew of 22 officers and 300 men. Such was the demand for pilot training that another old cruise ship was converted and joined the "Corn Belt Fleet." Officially, it was the Carrier Qualification Training Unit (CQTU), but Corn Belt Fleet had a nicer ring to it.

The USS Sable began life as the SS Greater Buffalo in 1925. The conversion of the *Greater Buffalo* began before the Seeandbee had left the shipyard, and her conversion progressed in similar fashion. The superstructure of the passenger ship was removed and the rebuild was similar to that of the Wolverine. The principal difference was the flight deck material—wood planks for Wolverine, a steel deck on which various non-skid coatings were experimented with for the Sable.

The Sable went into commission May 8, 1943, and she joined the Wolverine at their homeport, the Navy Pier in Chicago. Her accommodations were similar to the Wolverine, and the two ships were quite similar in size; beam of 58 feet, length about 500 feet and displacement of around 7,000 tons, although Sable was less and Wolverine a bit more. Both, of course, were side-wheelers and remain the only aircraft carriers to ever hold that distinction.

In their operational period of 1943 to 1945, the two ships racked up impressive numbers, training 17,820 Navy pilots and logging 116,000 landings, 65,000 on Wolverine and 51,000 on Sable. It was not only pilots that got experience but also the Landing Signal Officers (LSOs), who gave visual signals to the incoming pilots, telling them when they were too high, too low and when to cut the engine and hook an arresting wire.

The Sable had the historical distinction, in the spring of 1943, of being the training ship to qualify a future president, Ensign George H. W. Bush, as a carrier pilot.

The surrender of Japan in August 1945 ended the need for pilot training, and both Sable and Wolverine were decommissioned on November 7. Both ships were born on the Great Lakes, and both had two careers on the Great Lakes, so, perhaps, it was fitting for both to end their lives on the Great Lakes as well.

Author's note: For readers who want more detail on the Wolverine and Sable, see Navsource and Wikipedia. Paul M. Somers, Lake Michigan's Aircraft Carriers, Arcadia Publishers, 2003, details the story and has many photos of the ships before and after conversion.

Jerry Sandvick has published several articles on maritime and aviation history and is an emeritus history professor and past president of the Lake Superior Marine Museum Association.

Water in their blood

BY PATRICK LAPINSKI

Marie Norick holds her phone nearly an arm's length away from her bifocals and dials another number. Keeping track of her sons was easier when they were teenagers on the family farm. Now, brothers John and Jim Norick could be anywhere on the Great Lakes, and they often are too busy to answer their phones—even for Mom. On this day, John is the easiest to reach.

All in the family

John is relief chief engineer on the *Walter J. McCarthy, Jr.*, and his regular ship, the *Indiana Harbor*. He started sailing in 1991, thinking that work on the boats was a quick way to earn money. Since then, marine engineering has turned into a very satisfying career. His brother Jim is relief second engineer on the *American Integrity*.

Looking at family history, it seems almost inevitable that Marie and Jerry Norick's sons would sail the Great Lakes—you might say they have water in their blood. John and Jim's great grandfather, Horace H. Thompson, was a Duluth tugboat operator in the 1890s and a respected diver. Their father, Jerry, sailed briefly in the early 1950s. He taught the boys to work with their hands, according to John.

Years later, stars and schedules align, bringing a convergence of Norick family members to the Port of Duluth-Superior. John's ship, the *Walter J. McCarthy, Jr.*, was loading coal, to be followed by the *American Integrity* with Jim aboard. Meanwhile, the *American Mariner* was loading grain in a nearby slip. Their cousin, Clark Vipond, works in the engine room of that vessel.

Meeting like this is always a bonus. Jim Norick stood on the deck of the inbound American Integrity, waving with one hand to John while holding his cellphone in the other as they briefly caught up on their lives and jobs.

Cousins climb the hawsepipe

Jim Norick began sailing in 1998 aboard ships like the *Arthur M. Anderson*.

"I worked on deck, so I was pulling lines and what not, but I just didn't know how everything worked," Norick said. Soon the pull of his family put Jim's sailing career on hold. It would be another five years before he returned to the lakes.

Upon his return, Jim "climbed the hawsepipe" (or worked his way up) to the engine room. Newcomers to the Seafarers International Union are given up to three-month "tours" in all areas of the ship to acclimate them to general aspects of the job. He racked up a lot of experience in his first 90 days.

"I did 30 days on deck, then I had to transfer down in

the engine
room for 30
days as
a wiper,"
said Jim.
"Then I
transferred again
to the tunnel gang,
conveyor gang, (where)
I did another 30."

It takes a lot of time to work up the seniority ladder and accomplish the skill level of an engineer. Jim worked as gateman and conveyorman for approximately three years. During this time, he wrote his Qualified Member of the Engine Department (QMED) ticket and then worked as a QMED for a span of years. In the winter of 2015, Jim wrote for his third engineer's license. Even now, as a second assistant engineer, Jim knows he is just beginning the long journey of mastering his craft.

The Noricks' cousin Clark is taking a similar path up the hawsepipe, although he started later in life. Sailing was a major career change for Clark. He was a white-collar worker in a dying sector of the technology industry, living in the Southwest, when he decided to try sailing.

"It was tough. I went from white collar to blue collar overnight," said Clark, who was 45 when he began working on the *H. Lee White*, twice the age of an average deckhand. "I've worked my way up through the ranks. They call it hawsepiping; you can either go to college to become an officer or you work your way up."

Jim chuckles a bit talking about Clark's experience.

"His first job was on a dredge, 12-hour days," Jim laughed. "He had blisters on his feet and his hands for the first couple weeks."

"It takes a certain kind of person to sail. It's not for the weak of heart," said Clark, who sails about 205 days a year. "You sacrifice a lot being out here. You're away from family, friends, your dog if you have one ... (but) I love the challenge. I like learning new things. I didn't grow up being mechanically inclined ... so I've learned everything from the ground up. That's been rewarding."

He also appreciates the short daily commute and ability to disconnect on his time off. When he's at work, he works. When he goes home, he doesn't think about sailing.



"I got all my credentials in 2008, and I wanted to work as a wiper, but I never did," Jeremy said. "What it came down to was, I could go down to an unlicensed school and take a bunch of safety classes, like lifeboatman and first

and working his way up the hawsepipe.

Traverse City, Mich., to become a third engineer rather than taking an entry level job

aid ... it would have cost me a lot of money, and then I'd only start out as a wiper or OS, ordinary seaman."

That is when Jeremey started talking to his uncle John about going to the maritime academy. He explored GLMA's offerings and enrolled in 2010, learning engineering science in the classroom and practical, hands-on knowledge during cadet time at sea. After graduation in 2014, his first ship was the Badger.

"If you work your way up, it might take you 10 years to get an engineer's license," reasoned Jeremey. "Going through the Great Lakes Maritime Academy, it only took four years, or three and a half, because I graduated early."

All of the men emphasize the importance of going to school for anyone serious about a sailing career.

"Go to school, keep up reading," Jim said. "You can top out as chief or captain."

The Norick brothers and their sailing kin are a microcosm of the Great Lakes maritime community at large. The finite number of ships and the constant intermingling of crew on various ships has created generations of familiarity between sailors, friends and families.

"We're not the only family that sails on the lakes; there are a lot of people with sailors in their families," Jeremy said. "The more you sail, the more you realize that it's all family."



The Walter J. McCarthy Jr. ushers in the April sunrise. John Norick sails on the Walter J. McCarthy Jr., while his brother Jim works on board the Arthur M. Anderson and their cousin Clark Vipond works in the engine room of the American Mariner.

Celebrating the tenants of the Duluth Airpark

BY KELSEY BOSETH

The Duluth Airpark is a fully served light industrial park owned and developed by the Duluth Seaway Port Authority to advance regional economic development—a key aspect of the Port Authority's mission. Companies invested in the Duluth Airpark employ more than 800 people and serve diverse industries. Here are a few current tenants growing their businesses in this unique development.

UNITED PIPING, INC.

This oil and gas industry general contractor has been headquartered in the Duluth Airpark since its founding by Dave Rickard and the late Bob Schoneberger in 1997. United Piping, Inc., (UPI) does new construction of oil and gas facilities (focusing on pump and compressor stations), maintains pipelines and systems, and has specialty divisions including horizontal directional drilling and pipe fabrication.

"Especially in the last six to seven years, United Piping has experienced a tremendous amount of growth," said Mel Olson, president of UPI. "With that growth, our needs have changed ... and the Airpark and its surrounding facilities have allowed us to expand."

UPI's campus in the Airpark consists of a five- to sixacre staging area for heavy equipment, an access road, a 25,000 sq. ft. pipe fabrication, warehouse and maintenance facility, and headquarters.

While the company began with just two people serving

4510 Airport Rd. | Duluth, MN 55811

- Founded in 1997
- Employs 120 people in Duluth
- Campus covers 12 acres total

Enbridge Energy as essentially its only customer, UPI has employed upwards of 750 people. As UPI expanded to serve other companies, a significant portion of its team members began to work across the country at project locations or one of its regional offices in Wisconsin, Pennsylvania, Michigan and Illinois.

With its rapid growth, UPI has kept its focus on developing an engaged culture, and it is known in the industry as being a good place to work.

"We definitely have a values-driven culture at UPI. The three values are integrity, respect and caring," Olson said. "We not only care about us and our coworkers, but we care about our clients and the safety of the communities in which we are working."

Visit www.unitedpiping.us to learn more.



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AMERICAN PRECISION AVIONICS

This Duluth-based contract manufacturer supplies custom wiring and cable harnesses for primarily the aviation industry but serves both the industrial and agricultural industries as well. American Precision Avionics (APA) is a sister company of American Precision Assemblers, a company from Hampshire, Illinois, which was founded in 1992. When American Precision Avionics started in the Duluth Airpark in 2006, it employed fewer than 10 people and had only two operational benches. The business has grown substantially in the years since.

"[The Port Authority] was instrumental in getting us leased space that exactly fit our needs," said Dave Scheck, who is responsible for business development at APA. In 2009, the business expanded to support 30 employees. "Most of the expansion came through our ability to support and grow our business with Cirrus, not only as their business grew, but we continued to add more value for them as well as other customers."

Today, in a classic example of successful business clustering, American Precision Avionics is the sole provider of custom wire harnesses to Cirrus Design, a Duluth-based airplane manufacturer, and has since begun to support other manufacturers. It provides jobs to more than 80 people, and about 50 percent of its latest growth happened in the past year.

"We're on the verge of needing more space," Scheck said.

Through its participation in the Arrowhead Manufacturers and Fabricators Association (AMFA), APA connected with the SciTechsperience Internship Program for STEM (science, technology, engineering and mathematics) grants, partnering with the University of

3815 Prosperity Rd. | Duluth, MN 55811

- Founded in 2006
- Employs 85 people
- 20,000 sq. ft. facility



Minnesota Duluth (UMD) to hire qualified interns.

"We are able to bring interns on quickly and train them with funding through the State of Minnesota in partnership with UMD," said Lynn Andrews, general manager of APA. "In fact, our current engineering manager came on board in 2008 as one of those interns."

It utilized Northeast Minnesota Office of Job Training resources to obtain a \$25,000 grant, used to certify 11 employees as Green Belts in Lean Six Sigma in order to improve, optimize and stabilize the business processes.

"Again AMFA was invaluable in connecting us to the training resources. As a result, we have completely reorganized the way we manufacture using an assembly pod concept," Andrews said. "We have standardized work procedures and given our shop employees more autonomy and ownership in the process. This has saved money and made us more efficient and able to quickly respond to the needs of the customers."

Visit www.apavionics.com to learn more.



If you are interested in learning more about available sites and opportunities to locate your company in the Duluth Airpark, contact Kate Ferguson, director of trade and business development, at kferguson@duluthport.com.

2019 Fearless Forecast: Plenty of wind (cargo)

Happy River brings wind energy components to the Port

After a lull in 2018, wind energy project cargo shipments are trending up this season, with several scheduled to arrive at the Clure Public Marine Terminal in Duluth. The first of these shipments, comprised primarily of 90-meter tower systems, sailed into Duluth Cargo Connect's trusty hands May 2 aboard the BigLift Happy River.

"Our port is a key player in wind energy development worldwide, with a significant percentage of the wind cargoes on the Great Lakes St. Lawrence Seaway moving through the Port of Duluth-Superior," said Jonathan Lamb, Duluth Cargo Connect president. "They are eye-catching cargo, since wind turbine components continue to be engineered larger and larger. The tower sections are long, but the blades are even longer—some well past 200 feet each—so people definitely notice its arrival. And with the *Happy River*, it's coming on a bright yellow ship, too. It's not quite the world's largest rubber duck, which I've heard will be visiting Duluth again this summer, but it's an eye-catcher nonetheless."

Duluth Cargo Connect offloaded this first batch of cargo with its twin 90-ton gantry cranes and mobile 300-ton crane. Truck deliveries to multiple wind farm sites throughout the Upper Midwest will continue through the summer and fall.

"With the Clure Terminal expansion and the experienced group we have operating here, we can manage these heavy-lift wind cargo scenarios efficiently, not only in terms of offloading the vessels, but also in terms of sending them on their way throughout the country," Lamb said. "We're looking forward to a busy season, and wind cargo will definitely be a contributor to that activity."







Maria G was the 2019 first saltie of the season. Ship and ship captain, levgen Medvedenko from the Ukraine, were greeted by Port Director

FIRSTS OF THE SEASON

First Outbound March 22
First Inbound (thru Soo) March 26
First Canadian March 29
First Saltie April 15

Larson and Jim Paine.

gift cards and passes to Duluth attractions.

Duluth Seaway Port Authority. Keech's guess was the closest among some

2,000 entries, earning her the grand prize package of a hotel stay, restaurant

load spring wheat bound for Italy. The Port Authority hosted a shipside welcoming event during which Captain Medvedenko was feted with gifts and

greetings from representatives of the United States Coast Guard, the Twin

Ports Ministry to Seafarers and the mayors of Duluth and Superior, Emily

Upon her arrival, *Maria G* docked at Riverland Ag/Duluth Storage to





Lake Superior ice coverage reached 95 percent this past winter for only the eighth time since 1973, leading to some worry about whether we would see a modern-day version of the scene below from May 1924. But those worries were eased by a mid-March warming trend combined with the March 20 arrival of United States Coast Guard Cutters *Mackinaw* and *Alder* into the Port of Duluth-Superior. The first outbound laker of 2019—the *Kaye E. Barker*—departed the Port a mere two days later. Built in 1952, the *Barker* was also the last traffic into the Port to close the 2018 shipping season, arriving Jan. 15 for winter layup.

In the ensuing days, ice beset three vessels—the *Mesabi Miner, American Spirit* and *H. Lee White*—but the *Alder* had them back underway in a matter of hours, and the 2019 shipping season proceeded at a deliberate pace.

Deb DeLuca and Twin Ports mayors, Jim Paine of Superior and Emily Larson of Duluth.

2:11 p.m. Kaye E. Barker, Interlake 1:48 p.m. Stewart J. Cort, Interlake 12:12 p.m. CSL Niagara, CSL 6:48 a.m. Maria G, Malta





Ramon de Larrinaga ushers in new era for port

Today she lays scuttled off the Argentinian coast, an ignominious fate for a ship once feted by thousands. But 60 years ago this month, the 475-foot *Ramon de Larrinaga* reached the pinnacle, sailing under the Aerial Lift Bridge as the first saltie of the Seaway Era—the *first* first ship.

A crowd of more than 3,000 gathered to cheer the historic arrival. Captain Joseph Meade guided her in amidst wind-whipped applause and streams of water sprayed in salute. The trans-Atlantic journey, made possible by the long-sought opening of the Great Lakes St. Lawrence Seaway in April 1959, took 14 days from England to Montreal, then seven more to Duluth.

Upon his arrival, Meade told the *Duluth News Tribune* that the new waterway would be "the salvation of mankind." He reasoned that it would provide cheaper transportation for grain to poverty-stricken countries. Fittingly, the *de Larrinaga* stopped first at Duluth's Peavey Grain Elevator to load oats before boarding barley from Cargill.

Filled and downbound, the *de Larrinaga* sailed away a memorable footnote in the Port of Duluth-Superior's ascension. She was the first of 42 overseas vessels to arrive during the Seaway's first full month, a newly unlocked procession that signaled even greater prosperity for what would become Mid-America's world port.

"The opening of the St. Lawrence Seaway marks, for Duluth, the beginning of a new era," wrote United States President Dwight D. Eisenhower in his commemoration of the event. "I know you will be looking to the opportunities it offers for continuing the industrial and commercial advances of the past, for increasing prosperity in your city, and for contributing to the good of the nation as a whole."

Since then, nearly three billion tons of cargo with an estimated value of over \$450 billion has moved through the St. Lawrence Seaway. Today, more than 237,000 jobs and \$35 billion in economic activity are supported by movement of various cargoes on the Great Lakes St. Lawrence Seaway System.

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

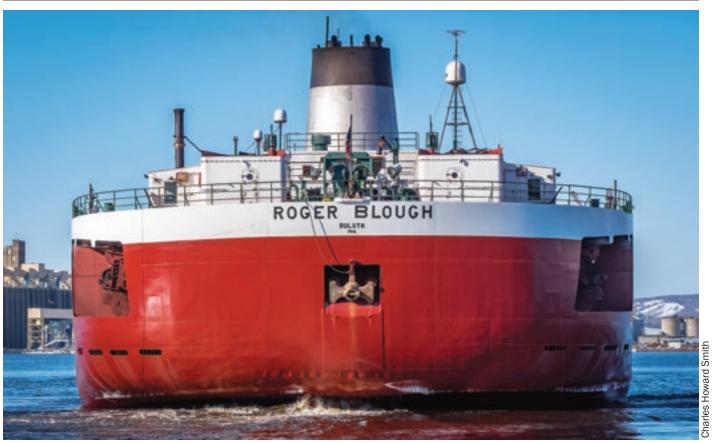
1987

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

Duluth: Great Lakes gateway to Western Canada



Arriving May 6 in the wee hours, BBC Scandinavia sailed into the Port of Duluth-Superior and berthed at the Duluth Cargo Connect facilities with heavy-lift project cargo bound for Alberta, Canada. Duluth Cargo Connecthandled the offloading and storage at Foreign Trade Zone No. 51 and will load it for transport to Wild Rose Country later this summer. Duluth is a major gateway for Western Canada-bound project cargo arriving via the Great Lakes St. Lawrence Seaway.



The Roger Blough set a National Weather Service record in April, transmitting 380 on-the-water weather reports as part of the agency's Voluntary Observing Ship (VOS) program. Sent via satellite, these transmissions are valuable for ship captains and land lovers alike, especially early in the season, before Great Lakes weather buoy activation. VOS data is used to produce better, more accurate forecasts.

AROUND THE PORT

Marine 19 fireboat sailing into service this summer

BY KELSEY ROSETH

The Duluth Fire Department's new fire and rescue craft is ready to be put into service, following more than a year of dedicated fundraising, development and community involvement.

Lake Assault Boats, part of Fraser Shipyards and a nation-wide manufacturer of purpose-built fire and rescue boats, designed and built the 32-foot, V-Hull craft—one of 100 custom fireboats built in Lake Assault's history. The Superior-based business developed it specifically to serve the Duluth Fire Department (DFD).

"One of the challenges that
DFD has is that they operate in both
rivers and bays, and also in the exposed
waters of Lake Superior," said Chad
DuMars, vice president of operations at Lake Assault

Boats. "The City of Duluth, because of its topography, resides on all three of those waterways."

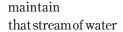
While most boats are built for one body of water, this all-hazard response vessel was designed to operate successfully in all three and serve many functions, including fire suppression, hazardous material response, medical evacuation, emergency medical services, search and rescue, spill response and more. It was named to honor Duluth's former first responders.

"Marine 19 was named after Duluth Fire Department's line-of-duty deaths, to pay respect to them," said Scott Kleive, deputy fire chief for the City of Duluth Fire Department.

Featuring a 10-foot, 6-inch beam and a carrying capacity of 3,500 pounds, this vessel was designed to be both powerful and versatile. It features cutting-edge joystick piloting technology that allows the boat's operator to use the joystick to travel in whatever direction is needed, without having to shift between the boat's twin Mercury Verado V-8, four-stroke outboard engines, which are powerful, yet fuel efficient.

Marine 19 also includes Mercury Skyhook digital anchor technology. This means the boat maintains a heading and position without needing to throw an anchor overboard.

"It allows [firefighters] to keep the boat stationary without having to manipulate the throttle and steering and



on a target for an extended period of time," DuMars said.

Both the digital anchor and joystick piloting systems are designed to use GPS technology and an electronic compass to automatically control shifting, throttling and steering.

Additionally, *Marine 19* uses a 1,500 GPM Darley fire pump (powered by a dedicated, 365- horsepower engine), a remote-controlled 2,000 gallons-per-minute rooftop monitor, a 12-foot, 6-inch long pilothouse, two 12-inch Garmin touchscreens and a suite of advanced electronics. The vessel also carries extended hoses, which can stretch across Park Point to support fire trucks.

To help pay for the \$597,000 vessel, the DFD utilized the Department of Homeland Security's Port Security Grant Program. As a condition of receiving the grant, 25 percent of the funds had to be raised locally. That money came from local businesses, community grants and other fundraising efforts. The Duluth Seaway Port Authority helped launch that fundraising campaign in 2017 with the initial pledge.

The craft is ready to go on the water in June, following an appearance at the national Fire Department Instructors Conference in Indianapolis, Ind., this past April.



Talk about hands-on learning! A new interactive map of the working waterfront, recently installed at the Lake Superior Maritime Visitor Center in Duluth, puts information about the Port of Duluth-Superior's docks, piers, terminals and cargos literally at your fingertips.

The touch screen is part of a revamped exhibit that will soon include an AIS ship-tracking map so people can watch boats move across Lake Superior, video monitors showcasing the important work of the U.S. Army Corps of Engineers (USACE) in the Twin Ports, live feeds from multiple webcams and more.

"The exhibit will be a one-stop place where visitors can learn about the harbor and shipping—I think people will really enjoy it," said Denise Wolvin, director. "We hope to have it finished by the summer season."

The Lake Superior Maritime Visitor Center is Duluth's No. 1 attraction and welcomes some 500,000 visitors each year. Many are fascinated to learn about Great Lakes maritime history and heritage, including famous shipwrecks like the SS *Edmund Fitzgerald*, which is featured in a newly updated and expanded exhibit.

"We took down all of the glass and the neighboring exhibit and dedicated a whole wall to telling the story of the *Edmund Fitzgerald*," Wolvin said. "Instead of just focusing on the sinking of the *Fitz*, we started with the contract to build it and went through 1975 when it sank."

The Great Lakes Shipwreck Museum provided valuable photos of crew members aboard the *Edmund Fitzgerald* that fateful night. Joe Zajac, a longtime member of the Lake Superior Marine Museum Association (LSMMA), donated a model of the intact vessel to give perspective on how it was constructed. These donations brought the exhibit to a new level according to Wolvin.

Glass removed from the prior Edmund Fiztgerald

(Top) An expanded exhibit follows the SS *Edmund Fitzgerald* from design and construction to its sinking and memorializes crew members who died in the shipwreck. (Inset) Visitors learn about port facilities and cargos by touching dots on a new interactive map.

exhibit has been repurposed to display two Fresnel lenses recently acquired from Duluth's pierhead lighthouses. LSMMA paid for a lampist to repair the lenses and provided funding for all of the recent and ongoing exhibit upgrades.

In addition to exhibit improvements, staff members have spent much of the winter and spring working to photograph and inventory a collection of about 8,000 items stored at the USACE Vessel Yard on Minnesota Point, entering each piece into a new collection management database. Items in the collection are rotated on and off the exhibit floor.

"A lot of people come here repeatedly to watch the ships, and we want them to stop, explore and maybe learn something new," Wolvin said. "We don't change everything, because visitors have favorite exhibits, but we tweak and add new elements to keep things interesting."



Neighborhoods in West Duluth will begin seeing the signs of coming construction in 2019.

Reconstruction of the Twin Ports Interchange is moving forward, thanks in part to a recently secured \$20 million BUILD grant from the U.S. Department of Transportation. The grant brings secured funding up to \$603 million and puts the Minnesota Department of Transportation (MnDOT) in a good position to start the estimated \$342 million project.

The Twin Ports Interchange is located where I-35, I-535, and US 53 converge in Duluth. It provides access to the Port of Duluth-Superior and serves as a primary freight route for timber, iron and energy industries in northern Minnesota and Wisconsin. Size and weight restrictions on its bridges and ramps currently limit the movement of some trucks serving these industries, particularly those carrying oversized, dimensional freight from the Duluth Port Terminal.

"We are pushing over a thousand loads a year from the Port onto city streets because they currently cannot go through that interchange," said Roberta Dwyer, Twin Ports Interchange project manager for MnDOT. "We also have to upgrade it for safety. It has the fourth highest crash rate of any interchange in the state of Minnesota."

The reconstruction project will replace eight bridges with an at-grade and divided interstate roadway. It will shore up remaining infrastructure to reduce congestion, improve safety and better accommodate truck traffic to and from the Port.

"We are fortunate to have DOT and elected officials who recognize the economic value of the Port and the need for safe, robust freight corridors," said Jonathan Lamb, president of Lake Superior Warehousing, a partner with the Duluth Seaway Port Authority in Duluth Cargo Connect. "Our facility connects all modes of transportation, and dimensional freight that arrives by ship and needs to

move out by road or rail is getting bigger and heavier all the time. To have that interchange accommodate oversized loads like wind turbine components and pipeline equipment is critical."

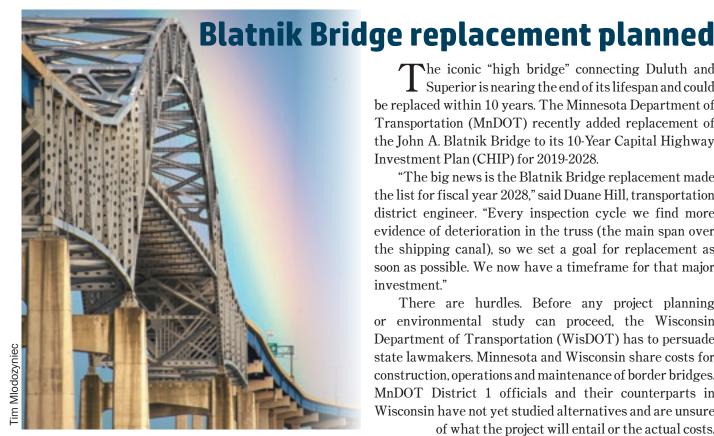
For more than a year, Port officials have participated in a public advisory group convened by MnDOT to help direct the Twin Ports Interchange project. The group represents diverse interests in the reconstruction and its impact on local neighborhoods, businesses, and the community. MnDOT keeps the public engaged and informed through monthly public meetings and by holding office hours at a nonprofit in the impacted Lincoln Park neighborhood. A visual quality committee made up of Lincoln Park residents and businesses is helping to shape the look and feel of the new interchange.

"We know where the new ramps will be and where the roads will go, but the visual quality group is helping to determine colors, textures and how it will look from the neighborhood perspective," Dwyer said. "We started with about 20 options and hope to narrow it down soon to one or two for public comment."

This summer will be spent improving local streets where traffic will be rerouted during the interchange construction. Actual work on interchange ramps and bridges will begin in 2020 and last three to four years. Dwyer said part of the urgency is another big project, an overhaul of the Blatnik Bridge less than 10 years down the road (see related story).

"We need to get this link done before that starts in order to keep traffic moving throughout the entire Duluth-Superior area," she said.

Find project details about the Twin Ports Interchange reconstruction at www.dot.state.mn.us/d1/projects/twin-ports-interchange/index.html.



The iconic "high bridge" connecting Duluth and Superior is nearing the end of its lifespan and could be replaced within 10 years. The Minnesota Department of Transportation (MnDOT) recently added replacement of the John A. Blatnik Bridge to its 10-Year Capital Highway Investment Plan (CHIP) for 2019-2028.

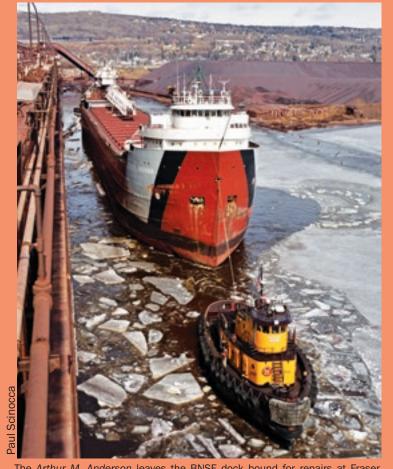
"The big news is the Blatnik Bridge replacement made the list for fiscal year 2028," said Duane Hill, transportation district engineer. "Every inspection cycle we find more evidence of deterioration in the truss (the main span over the shipping canal), so we set a goal for replacement as soon as possible. We now have a timeframe for that major investment."

There are hurdles. Before any project planning or environmental study can proceed, the Wisconsin Department of Transportation (WisDOT) has to persuade state lawmakers. Minnesota and Wisconsin share costs for construction, operations and maintenance of border bridges. MnDOT District 1 officials and their counterparts in Wisconsin have not yet studied alternatives and are unsure

> of what the project will entail or the actual costs. The \$455 million budget estimate included in the 2019-2028 CHIP is merely a placeholder, but Wisconsin requires legislative approval for a project of this size and scale.

In the meantime, MnDOT, which maintains and oversees construction projects on the Blatnik Bridge, will proceed with scheduled inspections and maintenance, including \$9.1 million in upgrades planned for 2020. MnDOT and WisDOT also will continue to study the structural integrity, load capacity and wind resilience of the existing bridge-information that could help determine whether the bridge replacement can incorporate some existing elements or will require a completely new structure.

The Duluth Seaway Port Authority works closely with state transportation officials to ensure robust highway and bridge infrastructure that can accommodate heavy freight and oversized loads in and out of the Port. Its input helped shape plans and timing of the Twin Ports Interchange reconstruction, slated to begin in 2020 at the foot of the Blatnik Bridge in Duluth. These two major investments will fortify the Twin Ports' transportation network and help secure the Port of Duluth's position as a seamless multimodal hub.



The Arthur M. Anderson leaves the BNSF dock bound for repairs at Fraser Shipyard. She has been called back into service for the 2019 shipping season.

Pothole patching material shows promise

Anyone who has hauled freight or even driven on northern roads and highways knows the dreaded lurch of hitting a pothole. An experimental patch mix made of waste rock (tailings) from taconite mining could smooth the way for safer, more comfortable over the road transport.

Scientists from the University of Minnesota Duluth's Natural Resources Research Institute (NRRI) joined City of Duluth road crews last fall, filling potholes at the corner of Truck Center Drive and Chestnut Street with multiple test formulations of the rapid setting material. The site was chosen for its challenging conditions and history of pavement failures. Researchers returned this spring to see how the products performed.

"Overall, I'm satisfied, but I know we can do better," said Larry Zanko, senior research program manager in the minerals group at NRRI, who focuses on beneficial reuses for byproducts like taconite tailings. "A couple of the repairs are so-so, but a couple are pretty good."

That is positive news for a region plagued by harsh winters, deep frost and gaping potholes. Now it is back to the NRRI labs for further tests and fine tuning of the material Zanko describes as "iron cement." Samples will be put under the microscope to determine why some formulations work better then others.

This will be followed by more field trials and research into scaling up production and application techniques to make the patch a functional alternative for road crews.

"The ultimate goal is to get a system that can do a lot



KR.

of repairs quickly and efficiently," Zanko said. "The trick is this material sets up so fast, you don't want it clogging and ruining expensive equipment. It is a real challenge."

Inquiries are flowing in from across the country. Zanko is hopeful this new product creates economic opportunities for a small business that has licensed the technology. It also could provide a new avenue for Iron Range mining companies to dispose of taconite tailings, while giving road crews a more stable patching material and drivers and haulers relief from the pitfalls of potholes.

Duluth's Coast Guard Auxiliary Flotilla chooses 2019 leaders

The U.S. Coast Guard Auxiliary (USCG Aux) Flotilla 30-04 of Duluth recently chose its leaders for 2019, electing Barry Andres as commander and Dave Anderson as vice commander. Andres is from Marshall, Minn., where he works in information technology for Schwan's Company. He has been an Auxiliarist for five years and served as a radio communications specialist in the U.S. Navy in the 1970s. Anderson is lead meteorologist for CBS 3 TV in Duluth and an adjunct meteorology instructor for Northland College in Ashland, Wis. He has been an Auxiliarist for 20 years and is also a former board member of the Lake Superior Marine Museum Association.

The USCG Aux promotes and improves recreational boating safety and supports the USCG in other ways as needed. Auxiliarists are not contractually bound, enlisted or commissioned officers, but are volunteers. They can assist the active-duty USCG in any mission not involving law enforcement or military action. For example, Andres volunteers in the galley of U.S. Coast Guard Cutter *Alder*



Dave Anderson, left, and Barry Andres

and has completed 12 tours aboard the vessel. His goal as commander is to make volunteer service more fun for the crew of Flotilla 30-04 and to help the Twin Ports' active Coast Guard in new ways. Find information about the Auxiliary's volunteer opportunities at cgaux.org.

USCG Aux

Russell Steel moves to new location

A longtime tenant business recently moved from the Duluth Port Terminal to a new location in Proctor, Minn. Russell Steel is a family owned provider of carbon steel, aluminum and stainless steel products along with customer metal shearing, burning and saw cutting services. Its relocation builds upon years of success on Port Terminal Drive.

"Thank you to the Port and Rice's Point for being a great home for the past 15 years," said Lisa Russell Hansmann, owner, Russell Steel. "We appreciate the support from the Port Authority over the years and during this transition; the staff has been extremely supportive."

The company's new location is 329 2nd St., Building #145, in Proctor. Port personnel are proud of their role in Russell Steel's success and wish owners and employees continued growth and prosperity.



Port Authority officers elected

A new slate of officers is leading the Duluth Seaway Port Authority (DSPA) board of commissioners. The board held its annual meeting March 27 and elected officers for the fiscal year beginning April 1, 2019. Rick Revoir is now president, succeeding Ray Klosowski, who completed his two-year term as president but will remain on the board. Other officers chosen include Tony Sertich as vice president, Patrick Boyle as secretary, Norm Voorhees as treasurer and Mike Jugovich as assistant treasurer. Yvonne Prettner Solon rounds out the seven-member governing body.

The DSPA board overseas the Port Authority's financial and organizational affairs. Commissioners meet regularly to set policy, approve contracts and determine budgets. Two commissioners are appointed by the Minnesota governor, two by the St. Louis County board and three by the Duluth City Council. Each is appointed to a six-year term, with varied expiration dates.







Patrick Boyle



Norm Voorhees



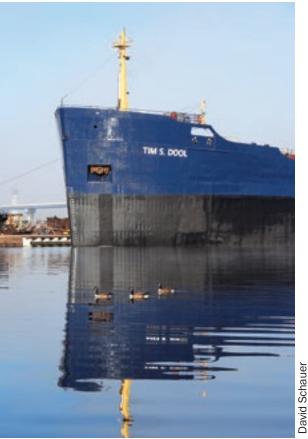




Ray Klosows

Travel on a Great Lakes freighter

Win a ride of a lifetime. The Soo Locks Visitors Center Association is raffling off a round-trip for four aboard a Great Lakes freighter. The winner and three guests will travel aboard an Interlake Steamship vessel in the summer of 2020. The departure port and dates will be coordinated with the winner. You must have a valid passport, U.S. passport card, Nexus or equivalent to participate, and all persons traveling must be able to navigate stairways and ladders. Tickets are \$10 each or three for \$25. Download your raffle form at www.saultstemarie.com. With luck, your ship will come in!



The Tim S. Dool departs Fraser Shipyard bound for the Husky fuel dock before heading out to work.

PORT PASSINGS

Captain Richard Robert "Dick" Langlee, 73, of Duluth, died April 11. Langlee graduated from Duluth Denfeld High School and worked one summer at Rockwood Lodge on the Gunflint Trail before starting his employment with Duluth Superior Excursions (also known as the Vista Fleet) in the summer of 1965. He became a captain in 1973 and then manager of the entire operation in 1985, retiring in 2008. Through his many years of service with the Vista Fleet, Langlee was widely known as Captain Dick. He was involved with a number of local organizations, including River Quest, where he served as treasurer for many years. He also served 15 years on the board of the Lake Superior Zoological Society and held positions that included president, immediate past president, secretary and treasurer. Captain Dick is survived by his wife, Paula, three daughters and a son, five grandchildren, a brother, and other relatives. Memorial requests include Gales of November c/o Lake Superior Marine Museum Association. the Muscular Dystrophy Association and Lake Superior Zoological Society.

Ronald Earl North, 82, of Duluth, died January 29 from complications with cancer. North was a graduate of Superior Central High School and proudly served in the United States Army. He started his marine career working on Great Lakes ore boats, but the bulk of his work life was spent at Zenith Dredge Company, retiring from Marine Tech, LLC (which acquired Zenith Dredge's assets in 1995). North loved the outdoors, fixing things and woodworking in his garage. He is survived by his wife, Esther, three grown children, seven grandchildren and other relatives.

John K. Wilson, 87, died March 27 after a short illness. Wilson grew up in Sault Ste. Marie, Mich. He began a 40-year career sailing the Great Lakes at the age of 17, retiring in 1990 from U.S. Steel as chief engineer of the Edgar B. Speer. He briefly served as chief engineer of the Roger Blough shortly after her delivery in 1972 and returned to the vessel in June 1974 for a three-year stint. This was followed by alternating work on multiple vessels before landing the chief engineer position aboard the Edgar B. Speer in May 1980. Wilson continued to work well into retirement, returning multiple times for winter work, serving as port coordinator in Milwaukee, and traveling the world as an engineering consultant for the repair and maintenance of ocean vessels. He eventually settled down and took a job as night guard at the Soo Locks, where he remained into his 80s. Wilson is survived by his wife, Ruth, five adult children, several grandchildren and other relatives.

Clinton "Clint" Oral Ferner, 91, formerly of Duluth, died Feb. 2, in Crown Point, Ind. Known to many in the Twin Ports as the "Railroad Man,"

Ferner was born in the railroad station at Oostburg, Wis., where his father was a telegrapher and the family had living quarters. He was raised in Green Bay and got his first railroad job in 1945 as a fruit inspector for the Green Bay and Western. Following graduation from the University of Wisconsin in 1958, he began work at the Elgin Joliet & Eastern Railway in Gary, Ind., working his way up from yardman and brakeman to general superintendent. In 1981, he was named vice president and general manager of the Duluth, Missabe and Iron Range Railway (DM&IR) in northern Minnesota, where he worked until his retirement in 1993. While in Duluth, Ferner served on the board of directors for the DM&IR, Marshall School, Lake Superior Museum of Transportation (now the Lake Superior Railroad Museum), St. Luke's Foundation, Beck Foundation, Northeastern MN Development Association and The United Way of Greater Duluth. He was a member of the Lake Superior Transportation Club and Missabe Road Historical Society. He is survived by his wife, Maureen (Rene), an adult son, nine grandchildren, two step-grandchildren and seven greatgrandchildren.



USCGC Mackinaw docked in Duluth

IN FOCUS: Jeffrey Doty

Jeffrey Doty has never been on a ship, but the U.S. Marine Corps veteran, psychiatric nurse, husband, father and grandfather of nine has a keen eye for maritime photography. He shared insights as part of this series about the gifted photographers whose images help bring the working waterfront to life.

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

Photography is simply a hobby. My fulltime job is as a psychiatric RN at St. Luke's hospital. I enjoy sharing with others how I see the world. I am fascinated by the ships, particularly at night. I like night photography for a strange reason—I like light. The ships are loaded with lights. When you mix that with the reflections off the water or ice, I see art in motion.

Facebook Page: leffey Doty Photograph

Jeffrey Doty

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

I am from Duluth, and, as a young boy, I lived on Park Point. I have made many new friends as a result of this waterfront. I am learning so much from my fellow photographers and have appreciated the time spent at coffee, sharing our mornings together doing what we love.

How would you describe your approach to photography? Are most shots planned or spontaneous?

It is the experience that counts for me and not necessarily the image. I shoot intentionally and use the shipping schedule, satellite info, Duluth Harbor Cams and weather data to help plan my shots. I enjoy creating images in my mind before I shoot them. I do everything possible to increase my odds of getting a great shot, but sometimes the ambient light isn't there and my settings are off. I do not have long to get it right.

Do you have a specialty area?

I like the challenges associated with capturing the ships at night. I find there is a very narrow window for camera settings when shooting moving objects in the dark. When I get back home and upload my pics, it is like Christmas seeing what I have found.









Photos by Jeffrey Doty



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