



Duluth Seaway Port Authority

Summer 2014

NORTH STAR PORT



Suffering a summer disorder

I suffer from an affliction, which I believe many others do, as well: Summer Attention Deficit. I find it hard to stay focused during this time of year.

The problem is that summer is usually the best time for vacations, family outings and hobbies. So many outdoor activities make us want to get involved — and all at the same time! BBQs? Yes. Fishing? Yes. Kids' baseball games? Yes. Next thing

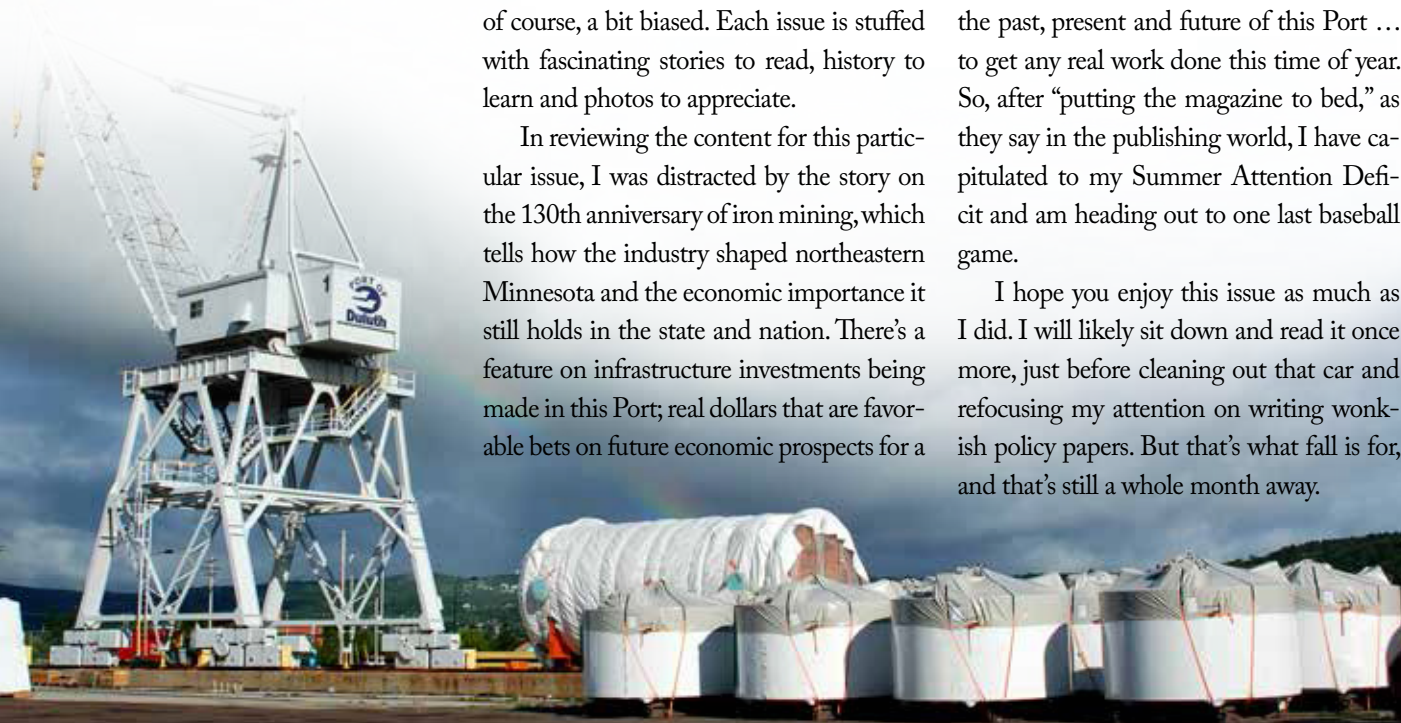
The Harbor Line

Vanta E. Coda II
Port Director



you know it's fall, and we're cleaning out cars full of mustard, tackle, baseballs, sunflower seeds, sand, canoe paddles, a bag of rocks (certain to be the best agates ever found), golf bag, one very smelly towel, dog fur, bug spray (two cans), and a half-eaten candy bar strategically lodged under the third child's car seat!

But I digress. See, completely unfocused. Way past deadline for my magazine column and here I am writing fluff.



Responsibly, I should be writing about the recent passage of very critical WRRDA legislation — noteworthy in what it does for ports, the Great Lakes maritime industry and the environment. A piece of American “can-do consensus” legislation that actually did something of note, passing the combined House and Senate, 503 for to 11 against, and signed into law. Bipartisan legislation of that sort just doesn't happen in Congress these days.

And how about those companion bills moving through both chambers that would give the U.S. uniform ballast water standards under one governing regulator (i.e. the U.S. Coast Guard)? This is an extremely important step on an issue that needs federal attention in order for all stakeholders to find a reasonable solution.

The problem is, I just can't stay focused today. At one time, I was able to eliminate Summer Attention Deficit from my work life, but not anymore. The fault lies with this *North Star Port* magazine for allowing distraction to creep into my work days. You see, I'm a huge fan of this publication and, of course, a bit biased. Each issue is stuffed with fascinating stories to read, history to learn and photos to appreciate.

In reviewing the content for this particular issue, I was distracted by the story on the 130th anniversary of iron mining, which tells how the industry shaped northeastern Minnesota and the economic importance it still holds in the state and nation. There's a feature on infrastructure investments being made in this Port; real dollars that are favorable bets on future economic prospects for a

sustainable business environment. The mid-season recap highlights another milestone in project cargo handling and the connection between the Port and Minnesota Power, which recently moved its 15th shipment of wind generation units through the public terminal. Their wind installations have enabled Minnesota Power to reach state renewable energy goals a full 11 years ahead of schedule.

In the “Around the Port” section, we note a changing of the guard at MnDOT Ports and Waterways, at MARAD, the Seafarers Center, at NRRI and an addition to our leadership team here at the Port Authority. Look for the piece highlighting a Great Lakes pilot whose artwork goes on display in Superior soon. And the feature that answers a question I've had since first seeing a plaque last fall in City Hall for the USS *Paducah*. I lived in Paducah, Ky., for several years and, for the life of me, could not understand what the connection could be with Duluth. Now I know.

It's nearly impossible to pull oneself away from such captivating stories about the past, present and future of this Port ... to get any real work done this time of year. So, after “putting the magazine to bed,” as they say in the publishing world, I have capitulated to my Summer Attention Deficit and am heading out to one last baseball game.

I hope you enjoy this issue as much as I did. I will likely sit down and read it once more, just before cleaning out that car and refocusing my attention on writing wonkish policy papers. But that's what fall is for, and that's still a whole month away.

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Soudan mine now a park

The Soudan iron mine, which produced the first cargo of iron ore for shipment on Lake Superior (see Page 10), now is the Soudan Underground Mine State Park.

Ready to plunge a half-mile deep into the earth? This is the park for you.

The historic mine – and now an adjoining physics lab – are accessible at the same location through separate tours.

www.dnr.state.mn.us/state_parks/soudan_underground_mine/index.html

About North Star Port

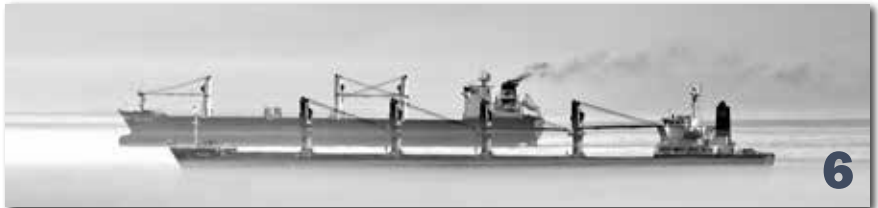
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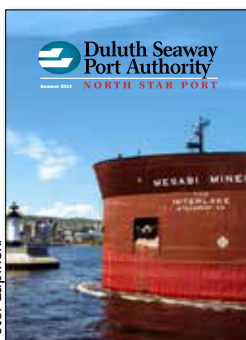


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Minnesota's iron mining industry began with the discovery of a 'mountain of iron'



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Capt. Dan Rentschler has been on boats since he was a baby. These days he's on a big one – the 1,000-foot *Edgar B. Speer*

On the covers



Peter Lapinski

On the front:

The *Mesabi Miner* approaches the Duluth entry in dramatic fashion on June 10. She would load 58,257 tons of coal at Superior Midwest Energy Terminal.

On the back:

The Dutch-flagged, 556-foot *Reggeborg*, built this year, takes her handsome self to Hallett Dock No. 5 on July 7 to load 12,311 tons of bentonite clay.



Diane Hildren

The three lives of the USS *Paducah*

By Jerry Sandvick

Until being disestablished in 2007, the U.S. Naval Reserve and its parallel organization, the Minnesota Naval Militia, had been a presence in the Twin Ports since shortly after the Spanish-American War of 1898. During those years, Duluth was normally assigned a commissioned naval vessel whose purpose was to keep naval Reservists' skills sharp.

The first such ship was the USS *Gopher*, a steam-powered gunboat built in 1871. Originally named USS *Fern*, she sailed the Atlantic coast and Caribbean, was laid up after the Spanish-American War and, in 1905, recommissioned as the *Gopher* and then sent to Duluth as a training ship.

From 1921 to 1930 the old steamer USS *Essex* served the training program, and in the late 1930s the YP-61 was here as well. The best remembered and longest serving training vessel, however, was the USS *Paducah*, a gunboat with a storied history in three chapters. Built at a yard on Long Island, she was launched in October 1904, commissioned in September 1905 and joined the Caribbean Squadron in 1906.

Her particulars were: length 200 feet, beam 35 feet and draft 13 feet with a displacement of 1,084 tons.

With twin screws, her reciprocating steam engine could send her up to 13 knots, her crew was 184 and she carried sev-

eral guns, the largest being six four-inchers. The hull was wood planking over a steel frame. From 1906 to 1917 she patrolled the Caribbean, showing the flag in defense of U.S. interests there. She was at Vera Cruz to support the U.S. troop landing during the 1914



Kathryn A. Martin Library/UMD

unpleasantness with Mexico and then back to patrols in the Caribbean.

April 1917 saw the U.S. entry into World War I, and the immediate German threat was the U-boats. The *Paducah* went to a Portsmouth, N.H., yard for conversion to a convoy escort, a duty she performed until the end of the war, November 1918. While on escort duty she was based in Gibraltar and sailed with several convoys, most notably one in September 1918 when a U-boat attacked her convoy and a ship was torpedoed off Cape Sigli, Algeria.



Before the *Paducah*: Two of the *Paducah*'s predecessors as training ships in Duluth: left, the *Gopher* and, right, the *Essex*.

Lake Superior Archives/UWS

WWI U-boat records show that the unfortunate ship was most likely the British freighter *Policastro*, a 4,600-ton steamer. The *Paducah* counterattacked and was credited with damaging the U-boat but there was, unfortunately, no confirmation that the submarine was sunk.

The *Paducah* was decommissioned after the war but began her second chapter when she was recommissioned in May 1922 and in June sent to Duluth as a training ship for the 9th Naval District reservists. For nearly two decades *Paducah* was the classroom in which recruits from the northland were taught to be sailors.

She was a reasonably good sea-keeping ship, and the chow was good, but accommodations were sparse. Wes Harkins, a Duluth native who sailed on her, said that the bunks were few, cramped and generally only for officers and chiefs. Most crew members, in time honored naval tradition, slept in hammocks.

Harkins was a yeoman who worked for the paymaster and thus had a small office space where he slept. He was still in high school when he reported aboard *Paducah* as an apprentice seaman, and his inauguration into the glamorous world of the Navy was peeling a washtub full of potatoes every day of his first week.

A training ship did many things, from weekend exercises to gunnery training to hauling forest firefighters. The gunner training involved longer cruises to Chicago and maneuvers on Lake Michigan. These were usually done in concert with three other Great Lakes training ships: her sister ship, the *Dubuque*, and two others, the *Wilmington* and the *Wilmette*. Live-fire gunnery was done only on Lake Michigan since the other Great Lakes share a border with Canada and an 1819 treaty forbade either nation from having armed warships on the Lakes.

In late 1940 the Duluth Naval Reserve was activated because the war in Europe was causing a growing need for America to prepare. The *Paducah* sailed to the East coast in early 1941, and after the U.S. entry into WW II later in the year, was assigned to training Navy Armed Guard personnel. She stayed mainly in Chesapeake Bay for this. The Armed Guards were

Navy personnel who sailed as gun crews on civilian merchant ships.

The third chapter of *Paducah's* career was both short and dramatic. Decommissioned by the Navy in September 1945, her owner was now the U.S. Maritime Commission whose job it was to dispose of war surplus shipping. A buyer named Maria Angelo bought the ship for \$77,500 in late 1946, and it was



Lake Superior Archives/UWS

Illustrious careers might lie ahead for these *Paducah* trainees, but for now they're peeling spuds.

quickly resold to the Weston Trading Company. But both transactions were pure fabrication. The real buyers were agents for the embryonic state of Israel to facilitate the "Aliyah Bet," code name for the illegal immigration of European Jews to Palestine. It was illegal in that it defied British policy of separating Palestine into Jewish and Arab states based on the existing situation there. Immigrants were thus discouraged, and the British Navy enforced a quarantine. Any ship carrying Jewish immigrants to Palestine was going to be a blockade-runner and risked conflict with the British.

To prepare for her new role, the ship was taken to Miami for extensive remodeling of her upper works in order to carry passengers, and she was renamed *Geulah*, Hebrew for "Redemption." In May 1947, she sailed, stopping at the Azores, Lisbon and, by August, the Black Sea port of Burgas, Bulgaria.

There she took aboard 1,388 men, women and children and set out for Palestine in company with another ship, the *Medinat Hayebudin* ("Jewish State"). The account of the two blockade runners is a tale in itself but in October 1947, *Geulah* was intercepted, boarded by British officers and towed to the port of Haifa. The immigrant passengers were shipped to a camp in Cyprus and the ship interned by the British.

Israel became an independent state in May 1948, but the *Paducah/Geulah* was too decrepit for the liking of the new Israeli navy, so she went into the merchant trade and hauled cargo for a few months. Her life as a merchantman ended in Naples, where she tied up after her last voyage. She gathered rust there until 1951, when she was sold for scrap and ended her life in a ship breaker's yard.

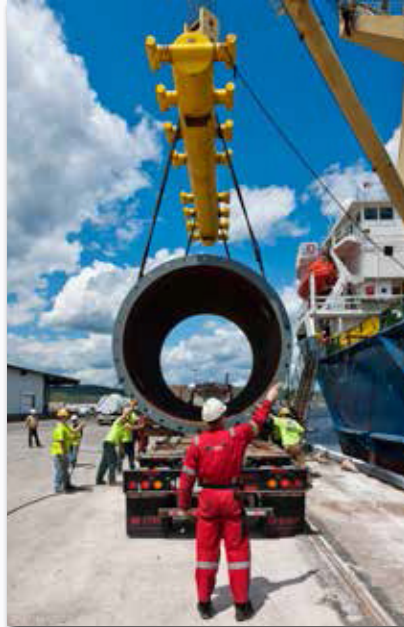
Mid-season snapshot: Finally gaining ground

Reports at the end of June from across the Great Lakes pointed to cargo movement being almost 20 percent off compared to the same time last year ... a brutal winter being the underlying factor behind lower tonnages for the first half of 2014.

However, here in the Port of Duluth-Superior, spirits were buoyed by strong gains in cargo movements, particularly in general cargo handling. "We had five ships from Europe arrive loaded with energy-related project cargo headed for North Dakota and Canada," said Vanta Coda, Port Authority executive director. The Port also saw double-digit gains in June in shipments of most bulk commodities.

While the Port's overall YTD tonnage of 10.3 million short tons was off 17 percent from 2013, single-month shipments of coal, grain and iron ore were running well ahead of last year. Iron ore tonnage was up nearly 47 percent in June alone in the Twin Ports. Fleets trying to make up early season losses and replenish stockpiles on the Lower Lakes were operating at full strength and peak efficiency to load and turn vessels as quickly as possible.

"Things are definitely moving in the right direction," said Coda. "We can't recoup overnight a month's worth of cargoes lost to the chokehold that ice had on the Great Lakes early this season, but I'm hopeful that the industry will continue to dig itself out of that hole and, by end of next quarter, be running much closer to average books of business."



We do the heavy lifting

Left: Crews offload a skirt section from the *Jumbo Spirit* for a pressure vessel for a North West Redwater project in Calgary.

Below: Jordan Korzenowski and Clinton Whereatt, Lake Superior Warehousing crew members, remove straps from a gantry crane hook on July 14. The crane was unloading wind cargo from the *Peter Rönna*.



Robert Welton photos



Paul Scirocca

The *Jumbo Spirit* was in Duluth on June 3 to offload a heavy-lift component at the Port Terminal.



Robert Welton

A 69-metric ton condenser destined for a potash mine in Saskatchewan arrives on June 11 aboard the *BBC Chile* along with 12 cooling units and 14 generators bound for the Bison Wind Energy Center in North Dakota.

Robert Welton



Sea fog nearly envelops the *Federal Mattawa* and *Apollon* as they pass well outside the Duluth piers on May 20.

Paul Scinocca



The *James R. Barker* leaves with a splash on June 18 as she heads for the St. Clair Power Plant with 58,160 tons of coal from Superior Midwest Energy Terminal.

Robert Welton



The *American Mariner* is docked at Riverland Ag/Duluth Storage on June 10 to load 22,600 metric tons of spring wheat bound for Buffalo, NY. Inset: A bird's-eye view of Alex Paquette as he operates the gantry crane at Riverland Ag/Duluth Storage during the grain-loading process.

Investing in the Port's future



The Port of Duluth-Superior encompasses 49 miles of shoreline in the states of Minnesota and Wisconsin. The harbor's 17 miles of shipping channels are dredged to Seaway depth of 27 feet and are bordered by 20 active bulk cargo docks, one multimodal general cargo terminal, two tug companies and a booming shipyard.

Many of those docks and terminals are in the midst of millions of dollars worth of rehabilitation and new-build projects. Approximately \$20 million was invested in waterfront redevelopment during 2013; upwards of \$20 million of work is under way this year, and as much as another \$30 million worth of infrastructure investment in this harbor is on the horizon for 2015-16.

These major investments in building and refurbishing 21st century infrastructure not only bolster our local economy but also allow companies to capitalize on trade opportunities here in the U.S. and abroad, enabling this entire Port to be competitive on a global scale.

Hop aboard and we'll take you on a spin around the waterfront to get a bird's-eye view of completed projects and those in process ... plus get a sneak peek at what's on deck for future redevelopment. Here's a list of sites and activity, beginning with:

Duluth Seaway Port Authority Dock C&D

Resurrecting a crumbling dock and putting it back into service as a new multimodal facility will expand the Port's general cargo capacity and provide a platform to encourage additional development. Major components of the rehab project include: 2,500-plus feet of new, coated sheet piling, with fenders and bollards; heavy-lift reinforcement; resurfacing the pier's 28 acres; building a RoRo dock; dredging adjacent waters for berthing; installing road and rail links; plus onsite safety, utility and security improvements. The \$16 million transformation is supported by a \$10 million federal TIGER grant, nearly \$3 million from the Minnesota Port Development Assistance Program and another \$3 million from the Port Authority.

CHS

Inspections continue on sheet piles that have been coated with various materials to combat corrosion.

General Mills – Elevator A, Duluth

1,200 feet of new, coated sheet pile driven in a project started in 2013 and completed this year.

General Mills – Elevator S & X, Superior

1,200 feet of new dock wall started in 2013 will be completed in 2014.

Riverland Ag/Duluth Storage

About 900 feet of existing dock wall is to be clad with coated steel panels this year.

Hallett Dock No. 5

600 feet of new coated sheetpile in 2013, adding extra space for ships; 100 more feet is being added this year.



CN's Dock 6 will have a total of 3,600 feet of new coated sheet piling, on both sides of the dock.

CN Duluth Dock 6

A project to install 1,800 feet of new, coated sheet piling on the east side of Dock 6 began in 2013 and will be finished this year. The companion 1,800 feet of sheet pile on its west side was completed in 2010. Potential expansion of the adjacent Lakehead Storage facility is undergoing environmental review.

Hallett Dock No. 8

All 2,000 feet of this dock have been completely repaired with new coated sheet piles in front of old crib. New bollards and fenders also were installed.

Midwest Energy Resources Co.

Structural piling repairs to the main loading wharf; corrosion protection and testing will continue for several years.



Images courtesy AMI Consulting Engineers, PA.

With Phase 3 complete, a 2,000-foot dockwall will be available at Fraser for layup and repairs.

Hallett Dock No. 5 has new sheet pile and more room for ships.

Fraser Shipyards

Fraser Shipyards’ five-year revitalization project continued this year with the announcement of a \$2.9 million Wisconsin Harbor Assistance Grant that will help complete Phase 3 of a \$10 million shipyard renovation. The project actually began in 2009 with a \$3.7 HAP grant; Phase 2 moved forward with the help of a \$2 million federal earmark secured by then-Congressman Dave Obey in 2010. Two sections of new dock wall, 850 feet and 450 feet, were completed in 2013. The additional 750 feet to be completed next year will result in having a 2,000-foot dock overall to expand capacity in managing two thousand-footers for layup and/or repairs. In addition to the walls, a new, three-story office building and other improvements were completed last year.

**Calumet Superior
Duluth Marine Terminal**

Gate upgrades, security improvements, a new covered truck transfer canopy.

Graymont (Superior)

Graymont has invested heavily in improvements and dock repairs.

Pier B Development (formerly Lafarge)

Reconfigured Slips 2 and 3 could be part of a multi-million dollar development that would include hotels and retail. Financing is pending.

Barker’s Island Marina

Upgrades on floating docks E, F and G. New wood decking, electrical pedestals and potable water.

Connors Point Cove Marina

After a year of construction, AMI Consulting Engineers opened its new marina in July and is leasing space. The 40-slip marina under the Blatnik Bridge in Superior has about six spots allocated for AMI’s own research and response boats with the remainder available for lease to recreational boaters.

Park Point Marina Inn

Construction on an \$8 million, 68-room complex was completed this spring in Duluth’s Park Point waterfront neighborhood. The hotel, built on the site of the former Duluth Boat Club, incorporated design elements of the old structure, including nearly 50-foot steeple towers.

Hampton Inn and Suites

Duluth-based ZMC Hotels plans to construct a \$9 million Hampton Inn and Suites on Superior’s waterfront, pending city approval. The 75-80 room property would be built between the Richard I. Bong Veterans Historical Center and Perkins Restaurant with a target completion date of mid-summer 2015.



Hotels and retail could occupy Pier B, the former Lafarge site.

130 years of Minnesota iron mining



Still letting off steam even after their trip down to Duluth from the Iron Range, pellets are ready to move from ore car to dock to ship for transport down the Lakes.

For the Duluth Seaway Port Authority, by the Iron Mining Association

This summer, Minnesota iron mining celebrates the 130th anniversary of its first shipment of ore.

While Minnesota is now a leader globally, the state's iron mining industry came to be almost by accident. In the late 1860s, it was a short-lived "gold rush" that brought fortune-seekers to what we now know as the Vermilion Range. According to Marvin G. Lamppa, in his book *Minnesota's Iron Country*, while others focused their energy on gold, federal government surveyor George Stuntz was looking for iron — and he found it.

In current-day Sudan, Minn., Stuntz found what he called a "mountain of iron," which would someday become Minnesota's first iron mine — the Breitung mine. In 1865, Stuntz wrote "when this country is developed, that big mount of iron will do it."

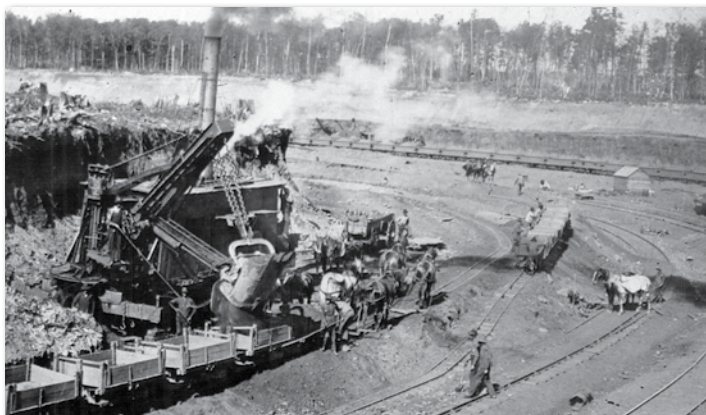
For 20 years, the land where Stuntz found iron lay

dormant due to difficulties in transporting the ore to Lake Superior as well as complications in obtaining rights to the land and minerals. In addition, the country's steel plants back East were already well served by their own nearby mines. However, as

the price of ore began to rise, Pennsylvania businessman Charlemagne Tower turned his attention to the land Stuntz had surveyed. In 1880, Tower gained title to the land. He spent more than \$3 million to get the land ready to mine, and he brought in Michigan miners to run the operation.

Also under construction were docks in the newly named Two Harbors (formerly Agate Bay) and tracks for the Duluth & Iron Railway between the docks and the mine. Ten eight-wheeled, 20-ton ore cars were sent to the Range for this first shipment and, according to Lamppa, the workers and their families cheered upon their arrival.

And then the first Minnesota ore was sent to market. As reported in *Pride of the Inland Seas*, by Bill Beck and C. Patrick Labadie: "200 tons came down from Sudan hauled by the locomotive *Three Spot* to the Agate Bay docks at Two Harbors on July 31, 1884."



Kathryn A. Martin Library/UMD



Courtesy Cliffs Natural Resources

Then and now

Back in the day of the Hull Rust mine, some of the mining horsepower was still being provided by, well, horses. Mining today, here at Hibbing Taconite, features massive shovels and haul trucks that combine high technology with brute power. The truck in this photo, dwarfed by the shovel, hauls a 240-ton payload.

In a Minnesota Historical Society publication on Lake Superior shipwrecks, we find this tidbit: “The first cargo of Minnesota ore, consisting of 2,818 tons of “Vermilion Lump” hematite, [was] consigned to George and Samuel Ely of Cleveland [and] was loaded on the steamer *Hecla* and the consort-barge *Ironton* on August 1, 1884.

The first mine — soon employing more than 500 men, up from the original 100 — kept those first cars and those first docks busy. In the first season overall, 62,124 tons were shipped to Cleveland. In his diary, Stuntz wrote, “once news of iron on the Vermilion Range leaks out, homestead and pre-emption claimants will settle down there like grasshoppers in June.”

Just as he was correct about looking for iron ore while others searched for gold, Stuntz was also correct about the influence that iron mining would have on northeastern Minnesota. In the coming years, people from 45 different nationalities would travel to Minnesota to settle the region and establish what is now known simply as Minnesota’s Iron Range. These men and women mined the red ore that helped industrialize the state and country.

This red ore was eventually depleted due in large part to the huge amounts that were mined to sustain America’s victories in World War II and the Korean War as Minnesota iron made the steel that helped the American cause. This depletion spurred the creation of new technologies to extract lower concentrations of iron out of taconite rock, and today this kind of innovation continues — in a reverse sort of way — with new methods being created to mine iron from decades-old red-ore tailings previously thought of as unusable.

The industry has grown to include 10 iron mining facilities and processing plants on the Iron Range and in Silver Bay. In addition, two new facilities are currently under construction; Essar Steel will be the



first mine-to-steel capable facility in the United States once it is completed, and Magnetation’s Plant 4 is a prime example of the industry’s evolution in finding new uses for what was previously considered waste rock.

Today, Minnesota iron accounts for 80 percent of the first-pour steel in the United States. With that kind of continued output, Minnesota iron keeps the Port of Duluth-Superior busy — in addition to ports along Minnesota’s North Shore in Two Harbors and Silver Bay, not to mention offloading destination ports on the Lower Lakes. Minnesota iron mining has grown tremendously since its modest start of about 62,000 tons shipped in that first year; in 2013, the industry shipped nearly 16.4 million short tons.

(In 1953, at the height of the Korean War, the industry shipped a stunning 65 million short tons of ore.)

These millions of tons of ore are sent to steel-making plants and eventually become the vehicles, appliances, bridges and other infrastructure components that are essential to daily life in America. Considering these historical and personal influences on Minnesota jobs, infrastructure and everyday life, IMA President Craig Pagel says this 130th anniversary is more than a look back.

“Minnesota still has large deposits of iron and, with the industry continuing to evolve technically, environmentally and economically, we should be a player in the global and regional economy for hundreds of years,” he said.

T-shirts, banners and stickers celebrating 130 years of iron mining in Minnesota circulated in the region in recent parades, and an event marking the anniversary itself was celebrated in the place where it all began — Soudan, Minn. www.minnesotairon.org

Another first: Duluth Port moves a cargo of iron nuggets / Page 12



The *Arthur M. Anderson* loading iron ore pellets at the CN dock in Agate Bay in Two Harbors.

Courtesy CN



Robert Welton

Employees at Hallett Dock No. 5 load the first shipment of iron nuggets from Mesabi Nugget onto the barge *Ashtabula* on June 12.

Another historic moment: First iron nuggets cargo

June 13, 2014, marked the beginning of another chapter in the history books — both for northeastern Minnesota’s iron mining industry and for the Port of Duluth-Superior — as the tug *Defiance* barge *Ashtabula* left Hallett Dock No. 5 loaded with 28,166 short tons of iron nuggets.

This was the very first waterborne shipment of high-purity, direct-reduced, pig-iron nuggets from Mesabi Nugget’s plant near Hoyt Lakes, Minn. The cargo was discharged later in the Port of Toledo for delivery to Steel Dynamics in Butler, Ind., to be used as feedstock for the steel mill’s electric arc furnaces (EAF).

“We anticipate loading a similar cargo every four weeks,” said Mike McCoshen, president of Hallett Dock Co. The nuggets were delivered to Hallett via truck; those trucks returned to the Hoyt Lakes plant loaded with raw materials to produce additional nuggets.

“There is a learning curve in handling this particular product,” added McCoshen, “primarily because of its weight and density. But the first loading went better than anticipated.”

While pellets made from Minnesota iron ore continue to meet the needs of blast furnaces in integrated steel mills along the Lower Lakes and around the world, they cannot be used by a growing segment of the domestic steel industry —

EAF steelmakers known as “mini-mills” — that need feedstock with a much higher iron concentration.

The iron ore that goes into nugget production at Mesabi Nugget is being recovered from tailings from old natural ore mining operations on Minnesota’s Iron Range by Steel Dynamics’ majority-owned Mining Resources facility.

The heart of the nugget production process is a 60-meter-diameter rotary hearth furnace that converts pellets containing iron ore concentrate, pulverized coal and binders into nuggets that end up being nearly 97 percent pure iron. The

Hoyt Lakes plant produced its first nuggets in January 2010. Mesabi Nugget is a joint venture between Steel Dynamics (81 percent) and Kobe Steel (19 percent).



Courtesy Mesabi Nugget

A handful of Mesabi Nugget’s finest.



Robert Welton

Hallett Dock No. 5 fills the holds of the barge *Ashtabula* with iron nuggets that are destined for the Port of Toledo and then an electric arc furnace in Butler, Ind.

Port Authority adds Government & Environmental Affairs Director

The Duluth Seaway Port Authority welcomed aboard a Government and Environmental Affairs Director last month. Deborah DeLuca, distinguished expert on redevelopment projects and environmental policy, officially joined the staff on July 29.



DeLuca

DeLuca is a founding board member of Minnesota Brownfields, a nonprofit established to ensure the effective reuse of brownfield sites across the state. As principal of DeLuca Strategies for 14 years, she has

provided advice to public, private and non-profit clients.

Her areas of expertise include grant-writing, development/implementation of funding strategies, project management, government relations and outreach education. Over the course of her career, DeLuca has secured over \$25 million in state, local and federal funding for clients and helped manage over 40 of those associated grants.

Port Authority Executive Director Vanta Coda pointed to DeLuca's unique blend of management credentials and public policy expertise in making the announcement. "Rare it is to find one individual skilled at navigating the equally complex environmental and political landscapes. Deb joins our leadership team at a strategic time, when our economic development mission is at the fore."

DeLuca brings to this position more than 25 years of public and private sector experience. She began her career as a hydrogeologist with the Minnesota Department of Agriculture, after which she went to work with the MPCA, becoming supervisor of its Voluntary Investigation and Cleanup Program. She also helped organize an international exchange program and served as lecturer on environmental policy for master's-level engineers in the Institute Nationale Agronomie in Paris, France.

A graduate of the University of Wisconsin, Madison, DeLuca earned a B.S. in molecular biology and a master's in Land Resources, with a focus on environmental chemistry and policy, from the UW Institute for Environmental Studies.

Jaenichen confirmed as MARAD administrator

The U.S. Senate confirmed Paul "Chip" Jaenichen as U.S. Maritime Administrator on July 15, approving President Obama's choice for the country's top maritime post. Jaenichen has been with MARAD since July 2012, when he was appointed Deputy Maritime Administrator. Jaenichen retired after serving 30 years as a nuclear submarine officer in the U.S. Navy. He traveled to Duluth last September to announce the award of a \$10 million federal TIGER grant for the Port Authority's Dock C&D redevelopment project. The administrator is planning a return visit for the formal groundbreaking, which has not yet been scheduled.



Bob Horn

Heritage Marine's newest tug, soon to be renamed *Nancy J*, makes her way to Duluth-Superior from the Gulf of Mexico.

Heritage adds fourth tug to fleet

A fourth tug will join Heritage Marine's growing fleet, based in the Twin Ports. Owner Mike Ojard, who recently purchased the *Horace* from Point Comfort Towing in Texas, expected it would arrive soon from the Gulf of Mexico. The trip included a barge tow up the Mississippi and Illinois rivers and a tight squeeze beneath a railroad bridge in Lemont, Ill. Quite a feat to fit a 26-foot tall tug beneath a bridge that, at most, had 19½ feet of clearance. Part of the pilothouse had to be removed to squeeze under. After dry-docking in Chicago, the propellers and rudders were reinstalled. The 1960s-era tug will be painted in Heritage Marine's signature maroon and gold and will be rechristened the *Nancy J*, in honor of Ojard's wife. Its air conditioner is being replaced with a heater — no surprise given the frigid winter conditions in which the new tug will often operate. When the *Nancy J* goes into service later this year, Heritage Marine will have four operational tugs, including the *Edward H*, the *Nels J* and the *Helen H*. The *Nancy J* is 98 feet long by 30 feet wide. The twin-screw vessel has flanking rudders that allow it to move sideways, which will be helpful with a ship in tow or when maneuvering through ice-clogged harbors.

Capt. Dennis Aho



Capt. Aho draws on experience

A collection of drawings by maritime artist Capt. Dennis Aho will be on exhibit at the North End Arts Gallery in Superior, from Sept. 27 through Nov. 29. "Close Quarters: Open Waters" includes drawings of vessels, bridges and shorelines, captured throughout Capt. Aho's storied career piloting foreign vessels as a member of the Western Great Lakes Pilots Association. An opening reception and storytelling (be prepared to be entertained!) will be on Sept. 26 from 5 to 7 p.m. at the North End Arts Gallery, Red Mug Corner. The Superior Council for the Arts is presenting the exhibit with financial support from local sponsors.

Robert Welton



J.B. Ford won't be saved

The Great Lakes Steamship Society announced in July that it has abandoned its effort to save the 111-year-old *J.B. Ford* as a museum ship. The *Ford* is docked in Superior. It had been estimated that \$1.5 to \$2 million was necessary to save the *Ford* from the scrapyard. Lafarge North America owns the ship. The Steamship Society still is working with Lafarge to salvage certain artifacts, including the forward cabins. The *Ford* was distinguished by its three-cycle reciprocating steam engine — the last of its kind in existence — and last sailed in 1985 as a cement barge.

Phenow accepts Ports and Waterways post

Patrick Phenow recently accepted a position as program manager for Ports and Waterways at the Minnesota Department of Transportation. He had previously worked with the department in general freight planning activities, including helping to develop Minnesota's first-ever Statewide Ports and Waterways Plan. He began transitioning into his new role in February, under the tutelage of his predecessor, Dick Lambert. "I'm lucky to have been given the opportunity to learn the ropes from Dick, whose love for Minnesota's waterways is contagious," said Phenow. "I look forward to building on his legacy."



Phenow

Paulson new Twin Ports Ministry director

The Twin Ports Ministry to Seafarers has a new director: the Rev. Doug Paulson. Rev. Paulson and his wife, Deborah Adele, moved to Duluth in 1991 when he started as Lutheran Campus Pastor at the University of Minnesota Duluth. His is a familiar face to many of those involved with the Seafarers Ministry, as he began serving on the board in 2006. Important pastimes over the past 22 years include singing with the Arrowhead Chorale, hiking and playing the guitar. He sees the focus of the Seafarers Ministry as one of hospitality and considers the Twin Ports a place of welcome and respite for seafarers.



Paulson

NRRI welcomes Weberg as new director

The new head of the Natural Resources Research Institute (NRRI) at the University of Minnesota Duluth recently toured the Port of Duluth-Superior as part of an effort to learn about the region's key industries. "I was astounded by the capabilities and regional potential offered by the Port," said Rolf Weberg, who was named NRRI director after a national search. "I look forward to identifying areas where NRRI's environmental and technical expertise can help drive sustainable economic development." Weberg graduated from UMD in 1982 with a B.S. in chemistry before earning his doctorate in synthetic and mechanistic inorganic chemistry from the University of Colorado at Boulder. He spent 25 years with DuPont USA, most recently as global research and development manager.



Weberg



Members of the U.S. Coast Guard Marine Safety Unit in their new office space.

Coast Guard unit shows off new digs

Members of the U.S. Coast Guard Marine Safety Unit (MSU) Duluth showed off their new office space June 26 with an open house and reception. MSU Duluth recently relocated from the U.S. Army Corps of Engineers building in Canal Park to the G.W. Heaney Federal Building to accommodate a growing

need for space. MSU Duluth's duties include vessel inspections, foreign vessel compliance examinations, maritime pollution and security contingency planning and response, marine casualty investigations, waterfront facility inspections, marine event permitting, and fishing vessel safety.



Altec HiLine manufactures truck-mounted hydraulic equipment for companies that need to reach high places.

An uplifting expansion

Altec HiLine will celebrate its expansion and the creation of new jobs with a VIP reception on Oct. 8. The company is located on Port Terminal Drive and leases space from the Duluth Seaway Port Authority. It manufactures truck-mounted hydraulic equipment used by the electric utility, telecommunications, tree care and other industries that need to reach high places.

Watch the next issue of *North Star Port* for a full story on the expansion and how the Port Authority's economic development team works with growth-oriented companies like Altec HiLine to keep regional industries strong.

Anchors Aweigh for Navy Week

Duluth will be one of only six cities nationwide to host a Navy Week celebration this year, set for Aug. 21-25. You'll know the Navy's in town when hundreds of uniformed officers and sailors in summer whites appear at activities showcasing their commitment to service and their roles in protecting this nation. After an exhibition by the Navy's renowned dive team (Leap Frogs) at the state Capitol and a Navy Night at a Twins baseball game, the week rolls into high gear in Duluth on the 21st with a full day of events at the Boys & Girls Club. Also, the Navy Band plays, Leap Frogs jump and Navy Seals lead some 500 youths in physical fitness exercises.

On Friday, Naval officers will participate with alumni from the USS *Duluth* in dedicating that vessel's anchor near the Korean and Vietnam Memorials on Duluth's Lakewalk. Navy assets will appear at other venues that day including divers at the Great Lakes Aquarium and a parachute jump by the Leap Frogs at Barker's Island. Then it's Navy Night at the Movies in Leif Erikson Park



Look out for flying Frogs!

with a concert by the Navy Band followed by a screening of *Top Gun*. Navy Week culminates with the weekend Duluth Air and Aviation Expo, where the Blue Angels flight squadron will present heart-stopping demonstrations.



Capt. Dennis Aho (left) and Dr. Richard Stewart perform a memorial bell's toll.

National Maritime Day

A memorial tolling of a ship's bell to signify a final Changing of the Watch was part of the Seafarers' Memorial Service during the Port's National Maritime Day celebration on May 22.

The tolling was performed by Great Lakes Capt. Dennis Aho of Superior and Richard Stewart, Ph.D., former captain in the Merchant Marine and current head of the University of Wisconsin-Superior's Transportation and Logistics Management Program.

The meeting's keynote speech was by author, historian and maritime expert C. Patrick "Pat" Labadie, former director of the Lake Superior Maritime Visitor Center in Duluth, who spoke on "Keeping Maritime History Alive."

It was a poignant reminder of the role mariners have played in shaping the Great Lakes region and our nation and the value of preserving their legacy for generations to come.

Final Viking Chapter meeting

On June 23, the Viking Chapter of the WWII Merchant Mariner Veterans Association met for the final time and marked the dissolution of the organization. It was a poignant event but at the same time, a celebration of accomplishment. Duluth-Superior's Propeller Club has had a connection with the Viking Chapter for many years in that representatives of the Merchant Marine group came to the Twin Ports each May to be a part of our Maritime Day observance. We thought it fitting to reciprocate by means of some Propeller Club members paying their respects to the mariners at their final gathering. Adele Yorde, the Port's P.R. manager, Davis Helberg, Dick Bibby and Jerry Sandvick represented Duluth-Superior.



From left: Davis Helberg, Jerry Sandvick and Dick Bibby.

Helberg, retired Duluth port director, made a few remarks and presented a gift copy of the *Pride of the Inland Seas* history.

Although the Viking group has officially disbanded because of age and infirmities, its members intend to have informal lunches and coffee meetings when able. The Twin Ports group assured them that they are always welcome at Maritime Day here in Duluth, and we left the event with feelings of gratitude for these men's service and optimism that we will see them again.

— Jerry Sandvick



Colorful dishes await visitors to the Taste of Lake Superior Fish Classic on Sept. 24.

Fresh taste of Lake Superior

Few things taste better than fresh fish, except maybe fresh fish prepared by professional chefs. The fourth annual Taste of Lake Superior Fish Classic will be on Sept. 24 at the Glensheen Historic Estate in Duluth.

Chefs will compete in a cookoff and tasting event using Lake Superior fish. Winners will be chosen by judges as well as by popular vote of those who attend.

The Fish Classic was started by Minnesota Sea Grant in 2010 to promote the big lake's commercial fishermen.

This year, *Lake Superior Magazine* has taken over the lead role, partnering with the Minnesota, Wisconsin and Michigan Sea Grant organizations, the Duluth Seaway Port Authority and other sponsors. It definitely is an event you'll want to catch.

An 'Epic Ice Season'

Last season's record-breaking cold, snow and ice kept folks on the Great Lakes St. Lawrence Seaway scrambling. One of the busiest was Mark Gill, U.S. Coast Guard director of vessel traffic services at Sault Ste. Marie. As head of "ice ops," Gill worked through an intense season, strategically repositioning Coast Guard icebreaking assets according to changes in weather and ice. Gill will share his experiences and other insights during Gales of November, Nov. 7-8 in Duluth. He is scheduled to speak at the Friday joint luncheon of the Lake Superior Marine Museum Association and the Duluth-Superior Propeller Club. His presentation title, fittingly: "2014: An Epic Great Lakes Ice Season."



Gill

www.lsmma.com



Courtesy Great Lakes Aquarium

Shipwrecks Alive! opens

Sunken vessels create mesmerizing underwater habitats for fish and other creatures. This fascinating world is revealed in a new exhibit at Great Lakes Aquarium.

Shipwrecks Alive! contrasts shipwreck habitats of the Great Lakes with those in the Mediterranean Sea and Pacific Ocean. The exhibit features a model of the stern of the SS *America*, a sunken vessel in Lake Superior's Isle Royale National Park, along with an iron staircase and other artifacts salvaged from the wreck. Paul and Cindy Hayden, publishers of *Lake Superior Magazine*, donated the artifacts.

Port Passings

■ **William B. Satterness**, 84, formerly of Duluth, died on May 1. He began his 43-year career with U.S. Steel Corporation in 1949 in the open hearth at Duluth Works. In 1956, he transferred to Trenton Works (N.J.), and in 1969 returned to Duluth Works as supervisor of workers compensation and plant protection. As the mill wound down, he transferred again to U.S. Steel's Great Lakes Fleet, retiring in 1992 as director of employee relations. He is survived by two sons, four grandchildren, a sister and several nieces and nephews.

■ **Edward F. Katzmark**, 74, Superior, died on May 7. He was a lifelong resident of Superior's East End neighborhood. He entered the U.S. Navy on his 17th birthday and served on the USS *Hancock* (CVA 19). Upon leaving the Navy, he joined the Merchant Marines as a wheelsman on the Great Lakes Fleet. He also worked at King Midas flour mill until 1971. He is survived by his wife, Kathleen, two daughters, three grandchildren, one great-grandchild and many other relatives.

■ **Capt. Dudley J. Paquette**, 88, who served 30 years as an officer in the Inland Steel Company Fleet and was captaining the *Wilfred Sykes* on the day the *Edmund Fitzgerald* went down, died on May 17. He began his sailing career on the Great Lakes as a 16-year-old deckhand, and, by the time he retired in 1980, he had captained every Inland Steel vessel. He served in the U.S. Navy during World War II and was a licensed marine officer and master of steam and motor vehicles of the U.S. Coast Guard Merchant Marines. He also was a longtime member of the Duluth-Superior Propeller Club. In retirement, he collaborated on the book *The Night the Fitz Went Down* with author Hugh E. Bishop, recounting his memories of the hours leading up to the *Fitzgerald* wreck and the dangerous search afterward. He is survived by two sons, two daughters, seven grandchildren and three great-grandchildren.

■ **Ralph Harrison Bertz**, 91, Duluth, died on June 4. Bertz spent 41 years with the U.S. Steel Corporation in various capacities. In September 1971, he was appointed director of engineering of U.S. Steel's Great Lakes Fleet in Cleveland. He was transferred to Duluth in July 1972 and served in that position until September 1990. Members of the maritime community remember Bertz as a gifted engineer and longtime industry champion. He is survived by his wife, Jessie, of Duluth, a son, a daughter, a grandson and several nieces and nephews.

■ **Martin A. Forbes**, 71, died on June 12. Forbes was employed with the Wisconsin Department of Transportation. He was a member of the Duluth Yacht Club and served on its board of directors. He also was actively involved with the Duluth-Superior Sailing Association. He is survived by a daughter, brother, his mother and two nephews.

■ **Ethel K. (Rindal) Roberg**, 93, Duluth, died on June 12. She was born March 13, 1921, in Culver, Minn., and married Fritz Roberg in 1939. They later moved to Duluth. During the war years, she worked at shipyards in the Twin Ports and later worked and retired from Elliott's Packing Co. She is survived by three sons, a daughter, nine grandchildren and 13 great-grandchildren.

■ **Darrel "Doc" W. Pfeffer**, 67, Superior, died on June 13. He spent 40 years with the Missabe Railroad. He worked various jobs at the ore docks in Duluth, including list man, machine operator and control operator. He was promoted to supervisor of dock operations in 1977, supervising operations at Duluth and Two Harbors. He was instrumental in the development and coordination of the Docks Safety Program. He is survived by six brothers, four sisters and numerous nieces and nephews.

Prose and poetry capture St. Louis River Quest

Awards were presented earlier this summer to two sixth-graders whose entries took top honors in the 2014 Captain Ray Skelton River Quest Writing Contest. **Coriella Sheetz**, who is homeschooled in the Cloquet-

Carlton area, won first place in the essay competition. **Shay Callaway** from Ordean East took top honors in the poetry division with her poem entitled *Wizards of the River*. Runners-up were **Elizabeth Emmel** from St. James Catholic

School and **Sarah Mason** from Ordean East in the essay and poetry categories, respectively. Below are excerpts. To read award-winning essays and poems in their entirety, visit www.seagrant.umn.edu/riverquest.

Winning Essay: Coriella Sheetz



Coriella Sheetz

Have you ever looked out at Lake Superior and seen just how majestic it is? ... It seems unlikely that something so gigantic, so majestic, so big and powerful could possibly be harmed, but the truth is, it can. Lake Superior and the land, rivers and streams around it as well as the creatures that live there are a carefully balanced ecosystem ... We do things that harm the Lake Superior ecosystem, such as introducing invasive species, destroying natural habitats and polluting. However, we can also learn to change our behavior in order to help protect the Lake Superior ecosystem.

More than 19,000 students from the greater Twin Ports area have participated in River Quest since its inception.

Winning Poem: Shay Callaway

Wizards of the river
keep the St. Louis River clean.
Otherwise, without them,
The river'll be polluted and green.
All the helping companies
at River Quest have a goal.
Such as Duluth Sail and Power Squadron
who have safety in their souls ...
WLSSD keeps all the water healthy
especially where the river and Lake Superior
meet at the great estuary ...
Learning more about where you live
and maybe help by doing your part
Let nature be your motive
I hope you have learned a lot.



Shay Callaway

Robert Welton Photos



Above: At the Lake Superior NERR station, students learn how river water mixes with Lake Superior in the harbor – the estuary of the St. Louis River.

Right: At the U.S. Coast Guard learning station, students have a chance to soak up oil in the water to prevent it from harming the environment.



To the winners go ...

First-place winners of the writing contests received plaques that will remain on display at their schools for the next academic year. Prize packages included gift certificates to attractions and restaurants, plus promotional items from several learning station sponsors at River Quest 2014.

A record 1,433 students participated in River Quest this year. During their 2½ hour adventures, those sixth-graders learned about the St. Louis River ecosystem at a dozen different stations staffed by volunteers who covered topics ranging from pollution prevention and stopping aquatic invaders to personal water safety and commercial shipping.

River Quest 2015 has been scheduled for May 11-14.

Born to be on the bridge



by Leslee LeRoux

Capt. Dan Rentschler sails into home waters when he brings the *Edgar B. Speer* into Duluth. During the seven hours it typically takes to load the 1,000-footer with iron ore pellets, he hopes to see his wife, Sarah, son Ethan, 10, and daughter, Gretchen, 8.

But time at home always flies for a sailor, and soon the *Speer* is headed downbound to Gary, Ind., or Conneaut, Ohio, where the ore will be off-loaded to railcars, bound for a Pittsburgh steel mill. Then the *Speer* heads back up the Lakes for another load in Duluth, Two Harbors or Superior.

The route may be routine, but transits are never the same.

“There are times when it gets a little scary, like when the wind shifted out of the wrong direction in Two Harbors and we had to leave partially loaded. Another time we were beset in a large drifting ice floe that was taking us toward the beach at Port Huron,” he said.

Capt. Rentschler keeps a picture on his phone of the *Speer* heading into Sturgeon Bay on a trip to the shipyard. “The trees are so close they are almost brushing the side of the hull. It’s unbelievable, very tight. The pressure is really on in places like that.”

Laker captains take the helm with the training and experience to handle that pressure, and Capt. Rentschler, 52, has the tools for this job. He has been on boats since he was a baby, sailing on his family’s classic wooden sailboat and working his way up to high-speed skiffs that he and his brother pushed to 30 knots on Lake Geneva.

When it was time to think about a career, life as a professional mariner kept



Dave Ballard Photography

Sarah and Dan Rentschler, with Ethan and Gretchen. calling his name. He left Traverse City Maritime Academy in 1987 with a third mate’s license. He joined the tanker trade until a relief job opened up with Inland Steel, and he sailed on the *Edward L. Ryerson* and the *Wilfred Sykes*. Then he got a job with U.S. Steel in 1991 and was one of the youngest mates in the fleet. He seized an opportunity to move up the ladder and has been with the company ever since.

He sailed as mate on the *Edgar B. Speer* and the *Roger Blough*, and in 2005 began sailing as relief master on the *Edwin H. Gott*. When Capt. Larry Stoltz retired from the *Speer* in 2007, Capt. Rentschler was ready to take the helm.



Dennis O'Hara

Here’s the boat that Capt. Dan Rentschler is piloting these days: the 1,004-foot, 19,600-horsepower *Edgar B. Speer*, one of the most powerful of all lakers.

Captains typically work 60 days on and then have 30 days off. The days on-board are long.

“I try to keep normal business hours, 8-to-5, because that’s when the office is open, and I like to be available,” he said. “Then I am up from about an hour before we enter the vessel traffic system in the St. Marys River, and I stay up if we are going to Lake Michigan until we clear Lansing Shoals. That’s about a 24-hour period. That’s downbound, about every six days. Same for the upbound trip. I am on the bridge for the entire river transit. And a trip like that may end at 4 a.m., and then I try keeping my same business hours.”

Capt. Rentschler credits his ability to stay focused to run his ship safely and efficiently in large part to his wife, Sarah, the daughter of a mariner, whom he met when she was a porter on the *Blough* back in the days when the flagship carried dignitaries. Sarah keeps the home front on an even keel. “She does such a good job, keeping the calendar straight. Juggling the kids’ schedules and the madness of our lives,” said the captain. “I could not do as well if we had to switch roles.”

Despite Lake Superior weather that can kick up a storm and make a captain lose another precious night of sleep, and a schedule that separates him from family, Capt. Rentschler knows he was born to be on the bridge of the *Speer*. “I just love driving boats,” he said.



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