

Duluth Seaway Port Authority

Fall 2015

NORTH STAR PORT

Let's keep freight moving

Surface transportation funding legislation has been a key focus this fall for the American Association of Port Authorities (AAPA) and for the Duluth Seaway Port Authority. In November, the House passed its version of a six-year reauthorization bill. The Senate passed its version as the DRIVE Act in July. Congress was facing a November 20 deadline to complete work on a conference bill to prevent a gap in funding. As active members of AAPA, Duluth Seaway Port Authority Executive Director Vanta Coda and Government and Environmental Affairs Director Deb DeLuca participated in a 'fly-in' to lobby in D.C. in early October. Coda also penned an Op/Ed piece in support of the legislation that ran in the Oct. 11 edition of the Duluth News Tribune. While the bill will likely have passed out of conference and be awaiting the President's signature by the time this issue is printed, we felt it was important to share this commentary with all of our readers.

Ever wonder how bananas make their way from the tropics to your grocery store shelves ... or how raw materials make their way to manufacturing facilities ... or how companies get orders delivered on time ... or what you'd find to wear or drive or eat without the

trains, planes, trucks and ships that move FREIGHT cross-country and around the world?

FREIGHT is not something most of us think about on a daily basis. Yet it is basic to our daily lives. Freight

is the "stuff" we buy and use — everything from bulk commodities to finished products. Freight is the heavy equipment that keeps industry operating; the wind turbine components that generate electricity, the steel used in new construction. And, in one way or another, freight is what keeps our lights on, our homes heated, and our families fed and clothed.

Here in the Port of Duluth-Superior and in ports across America, freight cannot move if necessary infrastructure isn't properly maintained.

Port directors from across the country have issued an urgent call to fully fund federal programs that will keep America's endangered freight corridors open for business.

The economic cost of America's crumbling transportation infrastructure is well documented. According to the American Society of Civil Engineers, the cost of deficient highways could cost businesses and households up to \$276 billion by 2020 and up to \$1.3 trillion by 2040. Some 1,200 miles of these roadways serve as vital freight connections to U.S. ports, which are also in dire need of investment. A \$9.3 billion U.S. trade loss is projected from the use of undersized vessels in shallow harbors and narrow channels by 2020.

Counted on to move millions of tons of freight each year, our ports and land-side connections to rail and roadways are under threat. Failure to improve them will hurt the economy and threaten job creation in port communities nationwide.

There is a lot at stake. Approximately \$6 billion worth of goods and material move through America's seaports every day. Last year, international trade through these ports accounted for \$4.6 trillion — about one-quarter of the U.S. economy — and is projected to reach 60 percent of GDP by 2030. In 2014, economic activity at American ports generated more than 23 million jobs and more than \$321 billion in tax revenue.

Locally, the economic impact is huge. Moving cargoes in and out of the Port of Duluth-Superior supports 11,500 jobs, \$596 million in wages and salaries, and

generates \$1.5 billion in business revenues. Across our binational Great Lakes St. Lawrence Seaway system, the impact of port operations is even more staggering: 227,000 jobs, \$14 billion in wages and a \$33.5 billion contribution to the region's economy.

On average, 38 million short tons of cargo move through the Port of Duluth-Superior each year — outbound commodities including iron ore, coal and grain coupled with inbound deliveries of limestone, salt, cement and clay plus multiple shipments of heavy-lift and project cargoes critical to employers, miners, manufacturers, farmers and families across North America's heartland.

In a recent report by the American Association of Port Authorities, port leaders from the Great Lakes region identified the need for nearly \$333 million in landside freight infrastructure investments over the next decade. Nationwide, nearly one in three port leaders said they need at least \$100 million in intermodal upgrades to handle projected 2025 freight volumes. The total investment required across all port locations is estimated to exceed \$29 billion.

Without efficient land connections, ports will suffer. What happens when port infrastructure fails to keep pace? Congestion. According to nearly a third of U.S. port directors, congestion at intermodal connectors over the past decade already has caused productivity to decline between 25 and 50 percent. Decreased productivity means delayed orders, spoiled perishables, higher shipping expenses and reduced international competitiveness.

America can't afford a lack of investment in its nation's freight network. Simply put, in the Port of Duluth-Superior and across the country, we need to keep freight moving.

The Harbor Line

Vanta E. Coda II
Port Director



1200 Port Terminal Drive
Duluth MN USA 55802-2609
Tel: (218) 727-8525 / (800) 232-0703
Fax: (218) 727-6888
E-mail: admin@duluthport.com

Commissioners

Steve Raukar, Hibbing, president
Ray Klosowski, Duluth, vice president
Rick Revoir, Duluth, treasurer
Chris Dahlberg, Duluth, assistant treasurer
Norm Voorhees, Duluth, secretary
Tony Sertich, Duluth
Yvonne Prettnner Solon, Duluth

Administration

Executive director: Vanta E. Coda II
Chief financial officer: Kevin Beardsley
Trade development: Ron Johnson
Port planning and resiliency: Jim Sharrow
Facilities manager: Jason Paulson
Public relations: Adele Yorde
Government & environmental: Deb DeLuca
Business development: Kate Ferguson

Clure Public Marine Terminal Operator

Lake Superior Warehousing Co., Inc.
1210 Port Terminal Drive
Duluth MN USA 55802
Tel: (218) 727-6646
Fax: (218) 727-6649
E-mail: admin@lswci.com | www.lswci.com

About North Star Port

This magazine is produced by the Duluth Seaway Port Authority; Adele Yorde, PR director.
The magazine is prepared for publication by Fortner WordWorks; Larry Fortner, editor.
North Star Port is printed by Pro Print of Duluth and mailed by BarCodes Plus of Superior.

Clarification

The summer 2015 issue of *North Star Port* implied that the Trans Superior International Yacht Race always begins in Sault Ste. Marie, Mich. The starting line actually alternated from 1969 to 1985 between Sault Ste. Marie, Mich., and Sault Ste. Marie, Ontario. From 1987 to 2013, the biennial race started exclusively from the Canadian side. This year, the race kicked off from the U.S. side again.



Mary T. George

NORTH STAR PORT

Fall 2015 / Volume 47, Number 3



5 Project cargo
Wind-energy components have given the Port's season a Big Lift



6 Full of energy at 125 years
Superior's Fraser Shipyards celebrates with technology, infrastructure upgrades



7 NOAA's arks
Lake Assault Boats don't have to be good; 'they have to be perfect'

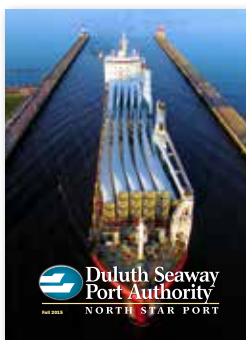


10 Remembering the Fitz
Making a commitment to safe passage is the best way to honor not just one ship, but all ships and those who sail on them



19 LSTs on the Great Lakes
A few WWII landing crafts found new duty in fresh-water service

On the covers



On the front

The *HHL Tyne* arrives with blades from Spain and German-made nacelles for an energy project in North Dakota. It was the *Tyne's* first full transit of the Great Lakes-Seaway system.

On the back

After loading coal at the Superior Midwest Energy Terminal, the *Mesabi Miner* completes its final turn in the harbor before departing on Oct. 16.



Paul Scinocca



One photo captured the diverse mix of project cargo moving across the Port Authority's Clure Public Marine Terminal this fall, including oil processing units bound for Alberta and generators from Finland awaiting transport to North Dakota, plus a shipment of blades from LM Wind in Grand Forks, N.D., being loaded into the cargo hold of the *BBC Kimberley* (above) for export to Germany.

Slowdown in Twin Ports as shipping season nears the close

Though YTD tonnage figures may appear to be holding their own compared to last season and to long-term averages, that slight margin is being sustained by increases in coal shipments, limestone loadings and grain exports here in the Twin Ports in sharp contrast to the iron ore trade being off some 20 percent in October.

Slump. Downturn. Cyclical swoon. By whatever name you call this season's drop in ore shipments, there appears to be no quick fix on the horizon. What's ailing the domestic steelmaking industry and pellet producers alike is still largely out of their control — a global glut of ore and the dumping of foreign steel into U.S. markets.

Workforce adjustments continue to be made up and down the supply chain, from layoffs to layoffs. As of Nov. 11, five U.S.-flag lakers had already laid up and more are expected to follow suit before the end of December — weeks ahead of the Jan. 15 closing of the Soo Locks.

“Global pressures on regional mar-

kets and sustained drops in commodity pricing have impacted our entire Great Lakes shipping community this year,” said Port Authority Executive Director Vanta Coda. “With recent trade actions at the federal level, we hope to restore those tonnages next year.

“At times like these, ports look for good news stories to share, and for us here in Duluth that's been the rise in project cargoes at our Clure Public

Marine Terminal. Volumes are up. Traffic mix of those high-value cargoes is strong.”

In October alone we handled components for oil processing and generators for power generation as well as wind blades exported from North Dakota to Germany. We'll welcome at least two more salties before the end of this season and hope the surge continues well into 2016.



The *Cason J. Callaway* has company in port on Sept. 28 including an Algoma ship already docked plus two salties waiting at anchor outside the harbor.

Diane Hilden



After a lengthy summer layup, the *Walter J. McCarthy Jr.* loads coal on Sept. 19 at the Superior Midwest Energy Terminal.



Robert Welton

Wind turbine tower sections en route to ALLETE Clean Energy's Thunder Spirit wind farm in North Dakota.

Mary T. George



There's no missing the *Tracer* as she offloads at the Clure Public Marine Terminal on Oct. 9.

Paul Scinocca



The *Federal Asahi* departs for Mexico on Oct. 2 with a split load of canola and wheat from CHS.



Names to go with faces

Five crew members from Lake Superior Warehousing were pictured in our summer magazine without identification. But they richly deserve name recognition. They are (from left): Chad Warring, Dusty Mishler, Eric Forsberg Zoran Pedisic and Mike Johnson.

Robert Welton



Dennis O'Hara / Northern Images Photography

The 60-acre shipyard in Superior has a new look, having invested millions in infrastructure improvements and service offerings to best serve the maritime industry.

Fraser Shipyards builds on 125 years of success

By Julie Zenner

Staying afloat for 125 years is a remarkable feat for any business. Fraser Shipyards in Superior has succeeded by ensuring that the huge vessels that transport cargo across the Great Lakes are seaworthy and well equipped for the job.

The company has been celebrating its 125th anniversary throughout 2015. It started in 1890 as the American Steel Barge Company, building whaleback vessels on its current site in Howard's Pocket, a shallow bay on the west side of Connors Point. Over the years, it passed through several owners before the Fraser family took control in the 1950s, giving the company its current name.

Today, the legendary Twin Ports shipyard is a subsidiary of Fraser Industries, LLC, which is owned by Capstan Corp. It has evolved through the years from new construction, self-unloading

conversions and ship lengthening into primarily a repair and maintenance yard for large vessels.

Boatbuilding returned in 2010 when Capstan relocated a subsidiary, Lake Assault Boats, to the property (see related story). Recent new construction includes a fuel barge, crane barge and pusher tug. This winter brings the first major propulsion conversion project to the yard since the '80s. Northern Engineering, another Capstan company, also operates under the umbrella of Fraser Industries and supports the shipyard business.

Fraser Shipyards itself is poised for a strong future. Owners have invested millions of dollars in dry dock and infrastructure improvements to better serve the shipping industry. The facility is gearing up for its busy season — a two-month window from mid-Janu-

ary to mid-March when the Soo Locks close and Great Lakes shipping grinds to an icy halt. Each year, the number of employees at Fraser Shipyards more than doubles during that winter layup time as boilermakers, operators, electricians and other skilled craftsmen overhaul vessels from bow to stern. They rebuild engines, replace conveyor belts, repair hatch covers and complete heavy steel replacement. Each wintering vessel brings hundreds of thousands of dollars to the local economy in wages and materials.

Fraser Shipyards has played an important historic role in the Port of Duluth-Superior and is securing its future by responding to maritime industry needs with updated infrastructure and a well-rounded suite of services. The shipyard enters its next 125 years poised to keep maritime customers and the Twin Ports' economy in shipshape.

Lake Assault Boats builds NOAA's arks

Lake Assault Boats is on a mission to design, construct and deliver rugged, specialized watercraft to law enforcement, fire and rescue and other mission-specific customers across the United States. The rapidly growing company, located at Fraser Shipyards in Superior, recently hit a new milestone — landing its first federal contract and delivering the first two boats to National Oceanic and Atmospheric Administration Response Teams in San Francisco, Calif., and Mobile, Ala. The next pair is under construction and slated for delivery in February to NOAA teams in Texas and Maryland. A pending contract is in the works for a fifth and sixth vessel.

NOAA plans to use the fleet of 31-foot-by-8½-foot hydrographic survey boats to chart the bottoms of rivers, oceans and other bodies of water for navigation, particularly after hurricanes or other natural disasters.

“They awarded the contract to us based on our design and flexibility,” said Chad DuMars, Lake Assault vice president of operations. “We are good listeners, and we are able to do nearly everything inhouse, from pre-design to final delivery.”

These particular vessels are constructed heavy in electronics, each with its own generator and computer



Robert Welton

The first pair of Lake Assault new-builds is ready for delivery to NOAA response teams.

server onboard plus a “moon pool” that can accommodate multiple transducers. “We had to meet nearly a dozen performance standards in designing and building these vessels,” said DuMars. “Each is taken out on multiple sea trials to test its speed and stability, particularly with high-speed turns.”

DuMars spoke to the Propeller Club of Duluth-Superior in September. He told how each vessel built by Lake Assault Boats is custom designed, engineered and built with interlocking precision-cut pieces of aluminum and options to meet each client’s mission-specific order.

LAB personnel also make the final deliveries and spend two weeks on-

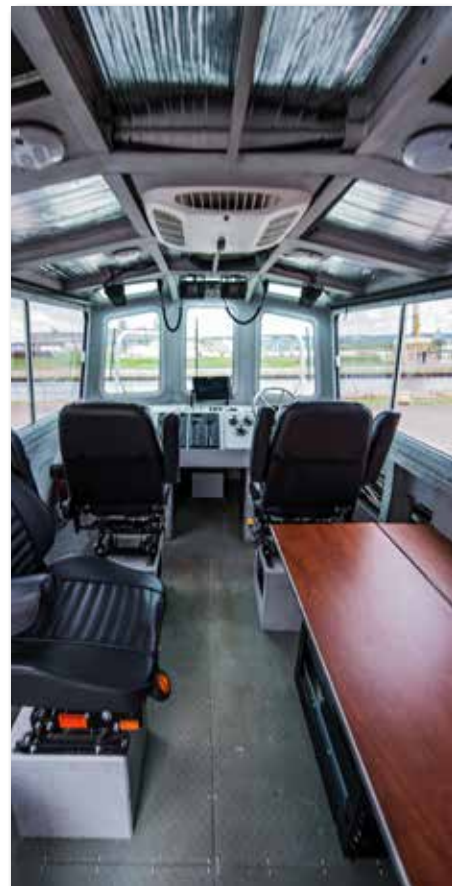
site setting up all of the electronics and training customers on the boat’s computer system before it ever hits the water. “Many of the vessels we build are used to save lives,” DuMars said. “They have to be perfect.”

— Julie Zenner



Courtesy Lake Assault Boats

A NOAA employee controls the Response Team’s new boat during a test drive in San Francisco Bay.



Robert Welton

Heavy in electronics, the cabin also sports a few creature comforts.

Diane Hilden



The *Tim S. Dool* discharges cement at CRH US (formerly Holcim) in Duluth.

New owner, name for Duluth cement terminal

With a merger completed in July, the newly created European cement giant LafargeHolcim has emerged as the largest producer of aggregate in the world. Closer to home, the merger has led to new ownership and a name change for the former Holcim (US), Inc., terminal on the Port Authority's Clure Public Marine Terminal in Duluth.

Holcim Ltd. and Lafarge SA were required to divest of multiple holdings as part of their merger. The Holcim terminal in Duluth is one of at least a half-dozen purchased by CRH, a global building materials group headquartered in Dublin, Ireland, and operated by Oldcastle Materials, CRH's North American branch. Here it will be doing business as CRH US.

According to Rob Prusak, manager of the cement site on the Wisconsin side of the harbor, that facility will continue operating in the near term as Lafarge North America, Superior.



Adele Yorde

In new jobs at Fraser Industries. From left: James Farkas, Tom Curelli and Dave Steininger. Derek Tanula is not pictured.

Familiar faces in new places at Fraser

Promotions at Fraser Industries, a division of the Capstan Corp., have placed some familiar faces in new positions.

James Farkas has been named senior vice president of operations for Fraser Industries, LLC, Fraser Shipyards, Inc. and Northern Engineering Co. He joined the company in 2011 as general manager of Northern Engineering Co.

Tom Curelli has been named vice president of engineering, environmental services and governmental affairs, moving from director of operations for Fraser Shipyards.

Dave Steininger is the new controller and vice president of business administration for Fraser Industries and Fraser Shipyards. He has been with the Capstan Corp. since 2011 and most recently served as business manager for Fraser Shipyards.

Derek Tanula has been promoted to yard superintendent for Fraser Shipyards after being employed there for 20 years. He succeeds Mike Peterson who moved across the harbor in June to become port engineer with Great Lakes Fleet.

Dennis O'Hara/Northern Images



One good tern deserves another

The six-acre Interstate Island, created in about 1934 with the dredging of the Duluth shipping canal, hosts one of two viable common tern colonies on Lake Superior and is considered critical habitat of the piping plover by federal officials. The island also hosts ring-billed gulls and herring gulls. Now it is the site of habitat enhancement efforts by state and federal agencies. Plans included replacing 3,000 yards of sand lost to wind erosion, top dressing with gravel and other materials and rebuilding a gull enclosure. Material was delivered by barge and placed by Marine Tech crews.

Port Authority expands one role, adds facilities manager



Jim Sharrow

The Duluth Seaway Port Authority has expanded the role of one of its management team members and added a new facilities manager.

Jim Sharrow, who had served as the Port Authority's facilities manager since 2002, was named director of port planning and resiliency in August. He now oversees the Port Authority's capital programs, maritime policy, risk management and security plans, plus its connectivity to regional planning initiatives.

"This expansion of Jim's role really plays to his strengths," said Executive Director Vanta Coda. "His engineering expertise and collaborative work with multiple stakeholders leverages Jim's talents for the benefit of the Port and the Great Lakes-Seaway system."

Sharrow spent 28 years with the USS Great Lakes Fleet, serving as that company's engineering and maintenance director before leaving to work as a consultant in naval architecture and marine engineering. A licensed professional engineer in Minnesota and Wisconsin, he is a member of the Minnesota Society of Professional Engineers and Minnesota Sea Grant's Advisory Committee. He also is a past chair of the Harbor Technical Advisory Committee and a member of the Lake Superior National Estuarine Research Reserve Advisory Board.



Jason Paulson

In early November, the Port Authority named Jason Paulson as its facilities manager. He serves as a liaison with tenants, service and governmental agencies, private contractors and other property users to derive maximum safe and efficient use of Port Authority-owned land, structures, equipment and other assets. Paulson was operations manager at Lake Superior Warehousing (LSW) for eight years, overseeing cargo loading and vessel discharge on the docks and managing warehouse operations on the Clure Public Marine Terminal.

Prior to LSW, Paulson served as operations manager/trainmaster with the Union Pacific and CN-IC Railroad. Earlier in his career, he was a land surveyor and GIS analyst with Livgard Surveying, Inc. The former U.S. Marine Corps Officer and naval aviator graduated with honors from the University of Minnesota Duluth with a double major in history and political science.

"I am thrilled to be at the Port Authority," said Paulson. "It's a unique opportunity to apply my logistics and project management skills within an organization I've come to know and respect."

"With his rail, maritime and warehousing experience plus a solid working knowledge of our terminal, Jason is uniquely qualified to provide an almost seamless transition in this position," said Coda. "He is a great addition to our team."

Port authority leaders deliver key messages to Congress



Courtesy AAPA

The American Association of Port Authorities led a delegation of port directors and key staff members on an Oct. 8 fly-in to Washington, D.C., to discuss priorities of this nation's port industry with Congressional leaders and the Office of Management and Budget. From left: Mary Beth Long, AAPA; Tay Yoshitani, Port of Seattle; Noelia Rodriguez, Port of Long Beach; Paul Anderson, Port Tampa Bay; Vanta Coda, Duluth Seaway Port Authority; Paul Ryan (R-WI), now Speaker of the House; Kristin Decas, Port of Hueneme and AAPA Board Chair; David Libatique, Port of Los Angeles; Kurt Nagle, AAPA; Laurie Michel, The Port Authority of New York & New Jersey; Susan Monteverde, AAPA; Joe Ruddy, Virginia Port Authority; John Young, AAPA; and Ed Miyagishima, Port Tampa Bay.



In what might have been the last picture taken of the *Edmund Fitzgerald*, she unloads at Great Lakes Steel at Zug Island on the Detroit River on Oct. 26, 1975.

Remembering the *Fitzgerald*, with focus on safe passage

By Patrick D. Lapinski

Every autumn, and especially in the notorious month of November, the maritime community acknowledges with sorrow a tragic milestone: the loss of the steamer *Edmund Fitzgerald* on Nov. 10, 1975.

Now four decades removed, that incident still resonates deeply within our maritime community. Every year brings new commemorations, while books, videos and photographs of the *Fitz* and other stories of loss continue to pour out over the Great Lakes maritime industry. Often they blur the lines between fact and fiction.

Noted Great Lakes maritime historian Fred Stonehouse, author of *The Wreck of the Edmund Fitzgerald*, one of the seminal books on the ship, spoke at the Gales of November maritime conference in Duluth in early November and at the bell-

ringing ceremony at Whitefish Point later in the month. In reflecting on the 40th anniversary of the loss, Stonehouse said the ceremonies serve a valid purpose.

“Commemorating the loss,” he said from his home in Michigan’s Upper Peninsula a few weeks before Gales, “helps all of us remember the men who make their living on the Lakes, and their families and their loved ones.”

Stonehouse also believes the loss serves to remind us of the bigger picture. “By remembering *Fitzgerald*, we not only honor that wreck and their families, but I think we in measure honor all of the other wrecks,” he said. “If by remembering *Fitzgerald*, it also introduces a little note of caution to other operators on the Lakes; that, too, is not a bad thing. In balance, there are very positive reasons, I think, to remember *Fitzgerald*.”

From an industry perspective, Jim Weakley, president of the Lake Carriers’ Association, offered his thoughts on the *Fitzgerald* and the current state of the Great Lakes maritime industry. “We urge all to respect the feelings of those who have lost loved ones on the ship and mark the occasion appropriately,” he said from his office in Cleveland. “For industry, that means building on our excellent safety record.

“As the expression goes, that safety record is no accident. The industry is continually looking at ways to enhance safety, be that personal-protection equipment or navigation and communications equipment and systems. Today’s mariner has tools unthought of years ago, and future generations will be able to avail themselves to things we can’t even imagine now.”



Frederick Stonehouse

With that, let us turn our attention away from yesterday and loss and on to today and the new realities of the Great Lakes maritime industry.

The simple fact is that the Great Lakes maritime industry is incredibly safe and stable. Admirably, the maritime industry has come a long way not only in vessel design and construction, but also in providing safe and healthy working environments on the water and ashore.

That position is put forward by advocates of the Great Lakes St. Lawrence Seaway system and supported by many maritime organizations, such as the Lake Carriers' Association and the Chamber of Marine Commerce (CMC) in Ottawa, who make the case for waterborne commerce as the most economical and environmentally friendly and, most important, safest option among the nation's transportation sectors.

In the spring of 2014, an extensive 18-month study, "Safety Profile of the Great Lakes St. Lawrence Seaway System," was released. The report was the first major research supporting the industry's safety record available for public consumption.

The study, commissioned by the CMC and conducted by Research and Traffic Group, an Ontario transportation consulting organization, analyzed safety data collected from Canadian and American government sources covering the 10-year

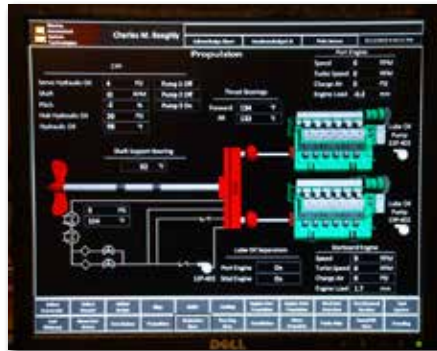
Advances in maritime technology



Transmitters handle everything from GPS information to satellite communications and television.



The Sperry Navplot 4000 steering stand on the *Hon. James L. Oberstar* is tied to the ship's gyrocompass.



This screen is part of the system that provides real-time engine data to the pilothouse and other stations.



Forward mast and long-range radar antenna. The ship also has a short-range unit.

period ending in 2011 — information based on an estimated 69,960 vessel trips.

Stephen Brooks, CMC president, said the study "clearly showed that marine is the safest way to transport goods in the Great Lakes. Ships have little to no negative impact on public safety and significantly lower employee incident rates than other modes of transport."

Many practices factor into the safe operation of vessels on the Lakes. Broadly speaking, vessel safety falls into several categories, such as structural safety, workforce training, communication and navigation and weather and environmental conditions. Similar to the blocks of a building's foundation, all of these, when combined, serve to support the entire structure with

SHEET NO. 12 YEAR 1975

DATE SHEET STARTS November 26th

* Extended Season Letter written by RBW - into January!

THE HANNA MINING COMPANY DO LAKES SUPERIOR

Piers	Dock	Remarks	VESSEL	Time Arrived		Time Finished		GRADE	Tons	L/B	Telex	Consigned	
				Hour	Date	Hour	Date						
Piers 2 35	35	John Duncan Abd * R/W Steel Abd	223. J.H. Thompson	3:15	7m	8:45	7m	National Pellets	21128	X	HWX	Hanna Ice, Detroit	
	2/Hrs.		224. Raymond Reiss	6A	7m	12:30	7m	Kraemer-Gorse	12046	X	HWX	Hanna Ice, Buffalo	
			225. G.M. Humphrey	4:50P	8m	9P	10:50P	8m	Itasca Pellets	24414	X	HWX	Quebeco Steel, C.P.
Piers 11 05P	05P	* New steel * R/W Steel	226. K.T. Wiley	11:45P	8m	4:15A	9m	National Pellets	21920	X	HWX	Hanna Ice, Detroit	
Sank 7:10/P 10M			227. (K) Fitzgerald	1:58P	9m	2:20P	9m	National Pellets	26116	X	HWX	Hanna Ice, Detroit	
Piers: 10 35A	35A	Finland	42. Willard-Sured	11:05A	9m	4:50P	9m	Avlon Pellets	20248	X	HWX	Kilbuck Steel & Iron	

In his capacity as vessel agent for the Hanna fleet, Richard "Dick" Bibby noted on this spreadsheet that the *Fitzgerald* finished loading 26,116 tons of pellets at Burlington

All photos taken aboard the *Hon. James L. Oberstar*

Photos by Patrick D. Lapinski

the unique aspects of each providing cohesion and stability to the entire group.

American vessels on the Great Lakes are primarily inspected and classified by the American Bureau of Shipping (ABS) and in Canada by Lloyds Register of Shipping and DNV GL. These agencies work in conjunction with the U.S. Coast Guard and Transport Canada to verify compliance with regulations specific to the Great Lakes domestic trade.

When a vessel transits the Duluth Ship Canal, most onlookers focus on the ship's pilothouse. This is where the action is. Just look at all the communications and weather hardware, spotlights and even, somewhere up there, the ship's bell. To many eyes, this is the heart of the vessel. Navigation technology has changed considerably since 1975 when the *Fitz*, the vessel with the big Columbia star, ran its courses over the Great Lakes.

The pilothouse of today's Great Lakes freighter is a technological marvel. At night the space is aglow with instrument panels that aid the pilot and wheelsman. Most of today's electronic enhancements are not directly attributed to the loss of the *Fitzgerald*, but to two significant contributions to the pilothouse that came within a few years of the loss, most notably depth finders and Loran-C.



From photographer Wesley Harkins: 'Columbia Transportation Co.'s big new str. *Edmund Fitzgerald* loading a cargo of pellets at Reserve Mining Co.'s dock at Silver Bay, Minn., on Oct. 29, 1958, in the ship's first season of operation.'

Courtesy Richard Bibby



The *Fitz* underway in August 1975.

Roger LeLievre

Clearly, the ability to know how much water is under the hull is of vital importance, and this addition just made common sense.

Loran technology, developed in the 1940s, was based on continuous, low-frequency radio transmissions from land-based beacons to give a vessel an accu-

rate position. Loran-C technology came to the Great Lakes in 1980, another step in navigational sophistication. To show how fast technology can change, in just a few short decades the Loran-C equipment has been replaced by newer GPS and AIS, or Automatic Information Systems, and is no longer in use.

PORTS AND VESSEL REPORT

PORTS		VESSELS LOADED													
		8	9	10	11	12	13	14	15	16	17	18	19	20	
		Mon	Tues	Wed	Thurs	Fri	Sat	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	
Date	Time	Telex	Draft	Delays	REMARKS	Undlg Port	Hours								
7th	9:10A	TWX (26-6 & 26-10)	26-8	1-00 shift	2-25 H2O	(ETA) Yelreit	1100 Sunday	9th (50)							
7th	12:45P	TWX (20-0 & 20-4)	20-2	None logged other than trouble	unch	(ETA) Bflo	1500 Monday	10th (74)							
8th	10:25P	TWX (26-6 & 26-10)	26-2	1-00 shift	3-30 H2O	(ETA) Cleve	0900 Tuesday	11th (58 1/2)							
9th	4:40A	TWX (26-4 & 26-7)	26-5 1/2	1-15 shift	30 H2O	(ETA) Yelreit	1000 Tuesday	14th (43 1/4)							
9th	1:55P	TWX (26-2 & 26-7)	26-3	1-45 shift	1-00 H2O	(ETA) Yelreit	1830 Tuesday	11th (50 1/2)							
9th	4:35P	TWX (26-0 & 26-6)	26-3	3-00 shift		(ETA) Fulbr	0430 Wednesday	12th (59 1/2)							

Northern in Superior on Nov. 9, 1975. In his final *Fitzgerald* entry, Bibby simply posted 'Sank', at 7:10 p.m. the next day.

Electronic charting and navigation technology came to the Lakes in the early 1990s. Canada Steamship Lines and the American Steamship Company became early adopters of the technology, with each fleet piloting similar a system on a select number of their vessels. By 1995 electronic charting and positioning technology had been installed on all Lakes vessels.

These systems use official nautical charts that are displayed dynamically in conjunction with satellite tracking to provide a vessel with real-time positioning. The use of GPS satellites, in conjunction with an AIS transponder, has greatly increased navigational capabilities and communication.

“The Seaway was the first waterway in North America to use an automated identification system, in 2002, and today that operates throughout the Great Lakes-Seaway basin,” said Brooks, discussing the system’s approach to safety.

Traffic monitoring on the Great Lakes is a part of the governance of maritime commerce shared by both Canada and the United States. Regulating bodies have the ability to observe all vessels within their respective control areas. These traffic control stations play a vital role in Great Lakes safety by helping to regulate and re-route the flow of ship movement during weather events such as heavy fog and ice, and in an emergency they can serve as a command center for a coordinated response.

The system can also pinpoint the exact location of a grounded vessel. Within seconds of an incident, vital information can be compiled on the vessel’s cargo, the water current, weather, water levels, the pilot on board and the owner/operator/agent of the ship. Having such information readily available has dramatically improved incident response capabilities.

Nearly all of this technology and monitoring focused on safety is there to cope with the biggest obstacle on

the Lakes — the weather.

Some of the best real-time weather information comes directly from ships participating in the U.S. Voluntary Observing Ship (VOS) program, run by Ron Williams, port meteorological officer at Duluth [*North Star Port*, Spring 2015]. Williams helps train ships’ officers



The pilothouse on a modern Great Lakes freighter is a marvel of navigation and weather technology.

in the arts of observation and weather codes and in transmitting that data back to the weather service.

A basic knowledge of weather is a critical part of deck officer training, one that harkens back to the days of wooden ships and iron men, when many a captain plotted his own forecast. “Almost every storm is spent looking at ship weather observations and updating forecasts to keep crews safe,” said Williams.

Creating a culture of safety at sea is really no different than measures taken in workplaces ashore. All Great Lakes fleets operate companywide safety programs, and the vessel crews themselves conduct regular meetings during the sailing season to cover specific areas of safety and concern in addition to conducting mandatory drills such as fire and lifeboat training to hone their skills.

Since the loss of the *Fitzgerald*, historian and author Fred Stonehouse noted, vessels are now required to carry an Emergency Position Indicating Radio Beacon unit, as well as cold-weather immersion suits, technology that he says was available in the Pacific fishery well

before the loss of the *Fitzgerald* but not required at the time on the Great Lakes.

The U.S. Coast Guard and Transport Canada adapt international standards to the specific requirements of training and safety on the Great Lakes, specifically in the training developed on the Lakes for electronic charting. Staying ahead of the

curve means that mariners are spending more time in the classroom during the winter than on the golf course. New technology is important for safety, but owners also want more efficiency for their bottom line. One new piece of technology in active development is the Draft Information System (DIS), installed on 43 domestic Canadian vessels.

Brooks noted that ship owners are excited about this development. “It uses satellite-based navigation to pinpoint the exact location of a ship and hydrographic maps to model the channel’s bottom in 3D,” he said. “The system provides the ship’s navigator with a color-coded map of the channel ahead of the ship. The colors on the map will change according to the ship’s present speed. By adjusting the current speed (which affects the ship’s draft), a navigator can ensure that the ship will safely transit every segment of the channel.”

The bottom line is that this innovation can enable a ship to carry as much as 400-plus metric tons of additional cargo per Seaway voyage.

Achieving a high level of operation for ships on the Great Lakes does not

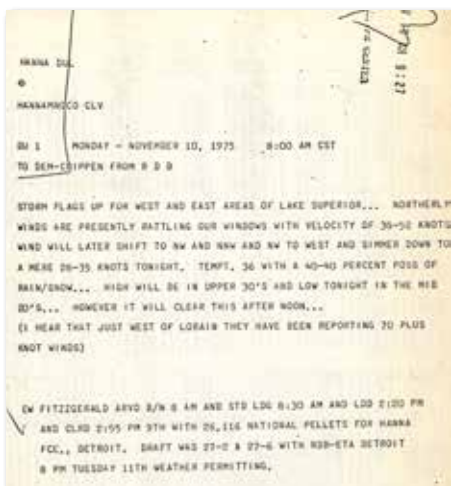
Patrick D. Lapinski

equate to complacency. Change is constant, and billions of dollars are being spent on fleet renewal, with safety and sustainability the top priority. “These vessels have smarter bridge layouts with floor to ceiling windows for enhanced navigation, infrared cameras to improve operations in low or poor light, more powerful bow thrusters to improve maneuverability in ports and restricted areas, improved fire suppression systems, better lifeboats ... the list goes on,” Brooks said.

Whether the *Fitzgerald* could have survived with the use of today’s technology is a moot point. The *Fitz* and its crew, along with every other vessel out in that November gale, had what was then considered the best technology available. The simple fact remains that sometimes a ship just gets caught and there’s nothing its captain or crew can do.

Instinctively, or perhaps as a result of the *Fitzgerald* and other losses over the decades and centuries, vessel captains are notably more respectful of storms, believes Stonehouse. “The change I’ve seen I think has been an emotional change, from talking with crews,” he says. “To them, *Edmund Fitzgerald* occurred last week. It’s still something they live with; it’s still something they’re very aware of, it’s something they’re very conscious of.”

Patrick Lapinski is a Superior native and a maritime photographer, historian and author.



The *Fitz* executes a turnaround at Silver Bay before leaving with pellets.

Wesley Harkins, courtesy Richard Bibby

Loss drew attention to structural integrity

Vessel inspection and certification gained attention worldwide as far back as the mid 1700s with the development of independent vessel classification societies. The origins of these organizations came from a need to independently evaluate the integrity of a ship’s hull and operating machinery to determine its insurable risk to survive a voyage. Keep in mind that sailing in the early 18th century was considerably riskier than it is today. As vessel construction and technology have evolved, so too has the role of classification societies.

Following the loss of the *Edmund Fitzgerald*, the structural integrity of the vessel came under intense scrutiny. (It is important to note, at the same time, that no definitive cause for the ship’s loss has ever been conclusively determined.)

On the Lakes, ships undergo a continuous regimen of inspection and upgrades to machinery and maintenance. As part of the process, known as “surveying,” all vessels are subject to out-of-water hull inspection, commonly called a five-year survey. Additional surveys are conducted for areas such as electronics, load lines, lifeboats and insurance and cargo. Aside from the independent surveys, vessel owners and operators all conduct their own inspection and maintenance programs for their vessels.

All Great Lakes freighters have come under intense scrutiny. “From a structural point of view, all vessels now have computerized loading instruments that are quicker and more accurate than manual calculations to ensure that the vessel is loaded safely and that stresses in the hull are within safe limits for the entire trip,” said Stephen Brooks, president of the Chamber of Marine Commerce and a keynote speaker at Gales of November 2015 in Duluth.

“There have also been improvements in requirements for hatch openings on decks, hatch coamings and covers. Analysis showed that well-rounded corners on hatch openings, insert plates to increase local thickness and well-defined coamings [framing above deck around the hatch openings] have combined to prevent fatigue cracking.”

Structural requirements for the hulls of fuel tankers, considerably more prevalent on the lower Lakes than in the western end of Lake Superior, also have changed.



Stephen Brooks



Pictured with just a week's worth of jackets and coats collected at Altec HiLine are General Manager Dave Faynik and Human Resources Manager Cindy Yewell.

Waterfront community collects Coats for Kids

Port Terminal tenants and other waterfront neighbors participated in the Northland's 12th annual Coats for Kids drive in October. Altec HiLine was the newest of nine dropoff sites this year. The drive collected over 1,700 new and gently used coats for the Salvation Army to distribute to children in the Duluth-Superior area. "Altec HiLine and our associates are committed to helping those in need," said Cindy Yewell, human resources manager, who helped coordinate the effort. "Every year, we look for ways to give back to our community."

Yewell personally was moved by stories of kids standing out in the cold waiting for school buses without anything to keep them warm. Her husband, a long-time school bus driver, welcomes shivering students aboard each winter and keeps extra hats and mittens on the bus.

"I think of how lucky my kids and grandkids have been to have a coat each year, and the fact that some kids have none truly saddens me," Yewell said. "It is heartwarming to see the waterfront community step up to address this need."

New coordinates for Great Lakes veteran

Mike Peterson, former yard superintendent at Fraser Shipyards, is charting a new course in his maritime career, having accepted the position of port engineer with Great Lakes Fleet in June. During nearly four decades at Fraser, Peterson witnessed and participated in all aspects of yard operations, particularly steel fabrication. "Mike has left a boot imprint on every U.S.-flag laker operating in this era," said Tom Curelli in a letter penned to long-time Fraser customers. "Over time, Mike moved through hand lofting to CAD-based design and numerically controlled cutting tables. His legacy skills and experience provided the foundation of our services. We thank him for passing so much on to current supervisors and shipwrights."



Mike Peterson

Around the Port

Port Authority's Johnson trades up to retirement

If you ask Ron Johnson about his role as trade development director for the Duluth Seaway Port Authority, he would say: "I like to tell people I stay on top of all cargoes that come and go, not only through the Port of Duluth, but across the Great Lakes, and I keep an eye out for new cargoes that could possibly be handled here."

The position Johnson will leave in January 2016 when he retires after 18 years is actually a bit more complicated. Developing and managing programs to generate and retain Port commerce has required him to work with a broad range of waterborne and overland carriers, shippers, receivers, agents, forwarders and other organizations engaged in domestic and international trade. He has gone on trade missions, tirelessly promoted the Port and its capabilities and escorted trade teams and business groups through the waterfront.



Ron Johnson

Johnson also has supported regional industries and kept close tabs on global markets for steel, coal, grain and other commodities that move through Duluth. His knowledge of the grain industry has made him the Port's "go-to" guy for questions about agricultural commodities. This depth of experience and institutional knowledge will be greatly missed.

"We are always trying to attract new cargo and maximize the Port's capabilities," Johnson said, noting that Duluth's reputation for excellent productivity and capacity for safely handling break-bulk, heavy lift and dimensional cargo has grown through the years. He sees growth opportunities in other general cargo and some container volume and in positioning the Port of Duluth as a larger North American distribution center. "Tidewater ports are getting extremely congested, and we can be competitive for additional waterborne commerce and for warehousing and moving cargo by rail or truck."

Johnson will miss the Port community, but he is ready to trade his busy career for a slower pace in retirement. He hopes to spend more time with his grandchildren, raise funds for the Barnum Dollars for Scholars endowment program, pursue photography and maybe even write a book. "I also own a little tree farm that needs trimming," he said.

"I have loved every day of work here. Many generations have preceded me, and others will follow. The Port Authority will remain in well qualified hands long after I retire."

Distinguished scientist to direct Sea Grant

An internationally prominent aquatic researcher and educator will take the reins of Minnesota Sea Grant in January 2016. John A. Downing, Ph.D., has been named University of Minnesota Sea Grant college program director and professor in the department of biology at the University of Minnesota Duluth.

He will move to Duluth from Iowa State University, where he has earned the Regents Award for Faculty Excellence as professor of ecology, evolution and organismal biology and chair of the environmental science graduate program. He also is chair of the executive board of the Council of Scientific Society Presidents and immediate past president of the Association for the Sciences of Limnology and Oceanography.

“Given the number and quality of organizations and researchers pursuing aquatic science, I truly think the Duluth-Superior area is poised to become the nation’s new center of aquatic research and outreach,” Downing said. “I’m excited about the opportunity to work with such motivated people and this terrific program.”

Downing replaces Jeff Gunderson, who retired on April 1 after 36 years with the organization, including six as director.



John A. Downing

New GM at Key Lakes/Great Lakes Fleet

Keystone Shipping Co. recently appointed John Thibodeau general manager of Key Lakes, Inc. In that role, he is responsible for the safe and efficient operation of all nine vessels in the Great Lakes Fleet as well as management of the Duluth shoreside staff.

“We recognize John’s years of experience and exceptional performance as fleet engineer for Key Lakes, Inc.,” said Capt. Bruce Fernie, Keystone’s VP-Operations, “and are certain that he will bring the same degree of professionalism and strong work ethic to his new position as general manager, while retaining his role as fleet engineer.”

Thibodeau, a graduate of the Maine Maritime Academy, sailed for 25 years, mostly on the Great Lakes. He retired as chief engineer from Bethlehem Steel Corp. off the *M/V Burns Harbor* to come ashore as a port engineer for Great Lakes Fleet in the spring of 1996. He was promoted to fleet engineer in 2011 and, in July of this year, promoted to general manager.

Thibodeau succeeds Capt. Bill Peterson, who was reassigned this summer to the Keystone Shipping Co. office in Bala Cynwyd, Pa., to serve as fleet manager and oversee the recently acquired tanker, *Seakay Spirit*.



John Thibodeau



Last trip for the *J.B. Ford*.

Final stop for the *J.B. Ford*

The *J.B. Ford* was towed on Oct. 8 by Heritage Marine tugs to her last destination, the dockside scrapyards of Azcon Metals in Duluth for eventual demolition. When she goes, the ship will take with her the last working three-cycle reciprocating steam engine on the Great Lakes. That power plant, however, has not been used since the mid 1980s. The vessel has been used as a cement barge and floating storage since then.

The *Ford*, built in 1904 as the bulk freight steamer *Edwin F. Holmes*, measures 440 feet long with a 50-foot beam, a depth of 18 feet and a capacity of 8,000 tons. At one point she was named the *E.C. Collins*. In 1959 she was converted to a self-unloading cement carrier and had many productive years in that capacity. Her last years in stationary storage were at the Lafarge dock in Superior. While there she simply faded into disrepair.

Historic perspective: The *Ford* was built eight years before the *Titanic* sank and was a survivor of the 1905 *Mataafa* storm. Final scrapping plans will remain on hold while Azcon monitors scrap and metal prices.



A mussel-encrusted anchor helps tell the story of the *Ford*'s concluding chapter.

Diane Hilden

Sara Summers-Luedtke



Pete Kramer has joined Lake Superior Warehousing.

Lake Superior Warehousing adds a GM

Peter “Pete” Kramer brought a breadth of logistics experience with him from the rail industry when he stepped onto the Port Authority’s Clure Public Marine Terminal on Oct. 5 and into his new role as general manager for terminal operator, Lake Superior Warehousing (LSW).

Kramer will oversee a number of LSW activities, including an emphasis on longer term planning, labor relations, special project management and sales. He also will work closely with LSW President Jonathan Lamb on pricing and market analytics. “I’m excited to join such a talented team with veteran foremen and crew members all focused on productivity, safety and customer satisfaction,” said Kramer. “My goal is to help move forward both the maritime and warehousing components of our business to even higher levels of success.”

Kramer’s initial career plans took him from his hometown of Soudan, Minn., to the University of North Dakota where he graduated with a B.S. in aerospace sciences, a private pilot’s license and dreams of becoming an air traffic controller. Federal budget cuts grounded that plan as hiring was at a standstill for several years, so he worked in the loss prevention/security sector for a couple of large retailers until making a career move and hiring on with the BNSF Railway as a laborer in Brainerd, Minn.

For a decade, Kramer “rode the rails” into a variety of management positions with BNSF from Minnesota to Texas and back again. In every position — from trainee to roadmaster to clearance manager to trainmaster and, finally, to customer integration manager on the sales and marketing side of the business — he availed himself of training opportunities to broaden his knowledge base about logistics and skills in workforce management.

Kramer sees a strong connection between air traffic training and his new transportation role. “The majority of college time was spent behind a simulator where programs pushed us beyond the point of failure then had us work backward to analyze and fix what we’d done wrong. That kind of analytical thinking is invaluable in the world of transportation logistics and supply chain management, particularly when dealing with multiple issues at the same time.”

Pacesetter Award for powerhouse port



From left: Betty Sutton, Vanta Coda, Fred Shusterich and Jonathan Lamb.

In presenting a Pacesetter Award earlier this fall for increased international cargo tonnage during the 2014 season, Betty Sutton, administrator of the St. Lawrence Seaway Development Corporation, acknowledged Fred Shusterich, president of Midwest Energy Resources Company, and the 19 percent increase in coal exports via Superior Midwest Energy Terminal. She also congratulated Vanta Coda, Port Authority executive director, and Jonathan Lamb, president of Lake Superior Warehousing, for the Clure Terminal’s whopping 132 percent increase in general cargo shipments. Grain exports from Twin Ports’ terminals also increased by 16 percent. In her remarks, Sutton reminded all that this was the 15th time this Port had earned a Pacesetter Award, calling the Port of Duluth-Superior “the powerhouse of the Great Lakes.”

Waste Management opens on Port Terminal

Waste Management, the largest recycler in Minnesota, opened its Duluth Materials Recovery Facility for business on Oct. 1.

The facility will serve as an intermediate transfer site, where recyclable materials collected in the Twin Ports area will be prepared for shipping to the company’s Twin Cities Recycling Facility. Final improvements and building renovations were completed earlier this fall. They include new truck ramps and loading areas, a truck scale in the rail shed and a 3,600 square foot addition to the leased property at 1105 Port Terminal Drive. In this operation, the Port Authority’s newest tenant collects, presorts and compacts recyclable glass, paper and plastic before items are loaded onto semis and transported to Minneapolis for further processing.



The doors are open for a new business on Duluth’s Port Terminal.



Andy McDonald takes a hike into a new life.

MIC planner retires

Andy McDonald, AICP, retired in September as principal planner of the Duluth-Superior Metropolitan Interstate Council (MIC), but has promised to remain involved in harbor land-use issues. According to McDonald, he is simply “changing careers” after 19 years in transportation planning to have more time to travel ... by foot, canoe, bike, car, train, ship and/or plane.

McDonald led numerous planning projects directly related to the Port, including extensive studies on rail transportation, truck routes, port access, regional freight movement and waterfront land use. “Harbor-related projects were the most rewarding part of my work,” he said — not surprising for a fourth-generation Duluthian whose father, grandfather and numerous other family members worked on the waterfront. His father, a teacher, worked summers at the grain elevators; his grandfather worked for the Great Lakes Towing Co.; and several cousins sailed the Great Lakes.

His first order of business in what he calls “semi-retirement” was a 265-mile, month-long trek from the start of the Superior Hiking Trail near the Canadian border to Duluth. He now plans to spend time with family and do some consulting.

“I still have a lot to offer,” he said. “The Harbor Technical Advisory Committee may not have seen the last of me.”

Port Passings

Thomas E. Cashman, 77, of Mankato, Minn., died on Aug. 9, 2015. Cashman spent much of his career as executive vice president of Northwest Agri-Dealers Association (NWADA), a position he took over from his father, Ed Cashman, in 1974. In this role, he provided information, education and representation for the organization’s regional membership. When NWADA merged with the Minnesota Grain and Feed Association in 2004, Cashman stayed on as executive vice president during the transition, continuing his active lobbying activity until his retirement a year later. He is survived by his wife, Lynn, three sons and four siblings.

Dennis N. “Butch” Hale, 75, the sole survivor of a Great Lakes shipwreck and well known character in shipping and lighthouse circles, died Sept. 2, 2015, of cancer in Ashtabula, Ohio. Hale served in the U.S. Army in the 1950s and later worked on the Great Lakes. He was the lone survivor of the shipwrecked *Daniel J. Morrell*, which sank on Lake Huron on Nov. 29, 1966, killing 28 crew members. Hale wrote the book *Shipwrecked: Reflections of the Sole Survivor* in 2010 about his survival and rescue. Through the years, he shared his story many times, including multiple keynotes at the Gales of November conference in Duluth. Hale was an honorary member of the International Shipmasters Association, the Great Lakes Lore Museum and the Maritime Museum of Sandusky. He was founder of the Ashtabula Lighthouse Restoration and Preservation Society and had been curator of the Ashtabula Marine Museum for six years. Hale is survived by his wife, Barbara, two daughters, two stepchildren and seven grandchildren.

Francis Walsh Sr., 72, of Duluth, died on July 25, 2015, of heart and lung disease. Walsh was born in Bridgeport, Conn., and raised in Scranton, Pa. He joined the U.S. Coast Guard at the age of 17 and retired after 20 years of service as boatswain’s master chief. His first duty station was the USCG base in Duluth in 1961, followed by numerous other assignments. After retiring from the USCG, he returned to Duluth in 1986 and worked in managerial positions at Taco John’s, Food & Fuel and Moose Lodge 505. He is survived by his wife, Lynn, three sons, two daughters, 11 grandchildren, three great-grandchildren and other family and friends.





LSTs on the Great Lakes

The *Highway 16*, her welded-shut bow doors still clearly visible, was built as the LST-393. She is now performing museum duty in Muskegon, Mich., and is available for tours of her engine room, crew spaces and bridge.

By Jerry Sandvick

LST, of course, means Landing Ship Tank. But for a ship so vital to the Allied victory in World War II, the LST managed to acquire some unflattering nicknames. *Large Slow Target* was perhaps the most common one.

And LSTs truly were large and slow, but they were also respected by their crews and so crucial to war operations that they saw service in Europe, the Mediterranean and the Pacific. So crucial, in fact, that 1,051 of were built in a high-priority program from 1942 to 1945.

Large-scale amphibious warfare characterized WW II, and the U.S. and Great Britain built a whole family of vessels that were designed and built to carry troops and equipment from the sea

to the beach. The LST, at 328 feet with a beam of 50 feet, was the largest of these. Power came from a pair of 900 h.p. GM diesels, and the normal crew complement was about 100 officers and men.

The design of the LST was firmed up in 1942, production began in June and the first was launched in October 1942 at Newport News. Their design was a tribute to American and British maritime engineering prowess: an oceangoing ship that could run right up on the beach, discharge cargo and back off again.

LSTs entered combat in the Solomon Islands in June 1943 and were a part of every major action thereafter. One only has to see a photo of the landing zones at Normandy or Iwo Jima to understand that the LST carried troops, vehicles and cargo of all descriptions.

With the end of the war came a flood of surplus equipment. Battleships and bombers don't have much civilian use, but cargo airplanes and ships do, and so it was with the LSTs. Some were mothballed, and many were simply scrapped or sunk, but a smaller number were modified and entered commercial work.

LSTs were small for economical oceangoing cargo operations but they were suited to other kinds of work and, most important, their cost was a fraction of a new build. Several were modified to a greater or lesser degree for postwar careers, including the four featured here in Great Lakes service.

LST-885 was launched in Pittsburgh in September 1944 and had a 15-month combat tour in the Pacific with a Coast Guard crew. LSTs were not

usually named, just known by hull number. LST-885 was a part of the Okinawa invasion in the spring of 1945 and later carried occupation forces to Tokyo. Once the ship was decommissioned by the Navy, ownership passed to a Texas grain company and, in 1951, to N.M Patterson and Sons, a prominent Canadian grain trading company in business since 1908.

The vessel was converted to a package freighter at Lauzon, Quebec, on the St. Lawrence River.

Now named *Gaspedoc*, the ship mainly carried large rolls of newsprint to Lake Michigan cities from Fort William (Thunder Bay) but also would carry grain and coal as the shipping business required.

Her work as a Laker lasted from 1951 to 1968, when she was sold off the Lakes and renamed *Witsboal* under Panamanian registry. While details are murky, old LST-885 seems to be still registered as active in 2015.

We have a splendid photo of LST-1006 under her civilian name *Solveig*. The photo was taken at Port Arthur, Ontario, in 1958, and the ship is loading pulpwood from a log boom, which

Author's Note:

I spent a day aboard LST-393/*Highway 16* at its Muskegon dock a few years ago and found the ship to be a most worthwhile piece of our history. You can visit the engine room, crew spaces, the bridge and various museum displays.

When you walk the tank deck and the weather deck you get a genuine feel and appreciation for the ingenious design of these ships and for the living conditions of the crews and troops that were in them.

One other LST, the 325 is a museum ship at Evansville, Ind., on the Ohio River. She was also a part of the armada in the Mediterranean and at Normandy. Under the foreign assistance program, she was given to the Greek Navy from 1964 to 1999 and made a museum on her return. She did not sail the Great Lakes.

But the city of Evansville is certainly an appropriate site since about 170 LSTs were built there from 1942 to 1945. They were taken to the Gulf via the Ohio and the Mississippi.

— Jerry Sandvick

is appropriate because for 22 years her main duty was hauling pulp logs down the Lakes.

Built in Quincy, Mass., LST-1006 took part in the Philippines (Luzon) invasion and the April 1945 Okinawa action as well. Occupation force duties in China kept her in service until mid-1946, and she was struck from the Navy register in 1948.

The Roen Steamship Company of

Canada took ownership in 1951 and the LST was sent to Sturgeon Bay, Wis., where the engines were removed and she was converted into a crane-equipped bulk cargo barge.

Solveig was so named in honor of the owner's wife, Solveig Veseth. The ship ended its career in 1973, when it was sold for scrap and broken up in Kewaunee, Wis.

Possibly the most recognizable LST in its second life was 1063, civilian name M/V *Polaris*. This LST was one of the late war 542 Class vessels, also known as the Chelean County class.

Although the designs of the various amphibious landing craft had been frozen early on in order to keep production running smoothly, it was inevitable that there would be improvements due to operational experience. The later LSTs had a strengthened weather deck. A ramp replaced the elevator for vehicle transfer from weather deck to tank deck. And there were slightly better creature comforts for the crew and troop areas.

LST-1063 was launched on Feb. 11, 1945 and commissioned in March. Assigned to an LST flotilla in the Pacific, the war ended before the ship saw any



Wesley Hartkins

The barge *Solveig*, originally the LST-1006, loading pulpwood from a log boom in Port Arthur, Ont. As the 1006, the ship won three battle stars for its role in the Leyte and Subic Bay landings and the Okinawa assault and occupation.

front line action, but she did do occupation duty until April 1946.

She was decommissioned and bailed back to the Maritime Commission in 1948. Being a late model LST without hard use, 1063 was bought by Cleveland Tankers, Inc., and converted to a tanker in 1949.

The conversion was done in Oakland, Calif., and the ship, now the *Polaris*, sailed through the Panama Canal, up the Mississippi River system and cleared Chicago in May 1949 bound for Bay City, Mich., with a cargo of gasoline.

The *Polaris* was one the first post-war LST conversions, and its career on the Lakes was not without adventure. In February 1964 she ran aground off Two Rivers, Wis., and was rescued by the USCG *Mesquite* and in 1974 ran aground near Buffalo and was taken to Fraser Shipyards in Superior for repairs. The *Polaris* was scrapped at Ashtabula, Ohio, in 1977.

We are fortunate that one LST is today preserved as a museum ship and that it is a vessel with both a sterling war record and a storied civilian career. LST-393 was launched on Nov. 11, 1942, at the Newport News shipyard and commissioned just one month later. Assigned to the European Theater of war, the crew earned three battle stars in recognition for delivering cargo to the beachheads at Sicily (July 1943), Anzio (September 1943) and Normandy (June 1944). The D-Day landing remains the largest and best-known amphibious assault ever, and 393 did her part and then some.

On that first evening, June 6, she off-loaded M-4 Sherman tanks and other cargo and then was stranded high and dry on the beach for two days before favorable tide and wind conditions helped her back off. As the fighting moved inland away from the beaches, the Army had to be supplied and a massive amount of cargo had to be hauled. LST-393

A tragic moment

Highway 16's domestic career was not without tragedy. At 2 a.m. on July 4, 1959, she was inbound to Muskegon and, as the *Muskegon Chronicle* headline summarized it, "Six Drown In Lake Channel Here When Yacht, Auto Carrier Crash."

made about 30 round trips across the English Channel carrying all manner of war materiel and taking Allied wounded and German prisoners on the return to Britain.

After her D-Day operations, the ship was ordered back to the U.S. for a refit and was sent to the Pacific and would likely have been a part of any invasion of Japan. Such an invasion never occurred, of course, but LST-393 was on her way to the Panama Canal in 1945 when the war ended. Records show that in her war work she carried 3,248 vehicles, from jeeps to tanks and over 15,000 troops, casualties and prisoners.

The ship was decommissioned in March 1946, declared surplus in 1947 and, in March 1948 became a civilian when the Wisconsin and Michigan Steamship Company purchased it. The

plan was to modify the LST and use it as an automobile ferry, crossing Lake Michigan from Muskegon to Milwaukee. The bow doors were welded shut and the ship started carrying deck loads autos across the Lake. The name was changed to *Highway 16* because the U.S. highway of that number crossed Michigan from Detroit to Muskegon and resumed in Milwaukee. The former LST was the link crossing the Lake, it was said.

For 27 years, *Highway 16* kept a year-round schedule and occasionally got stuck in heavy ice, but that didn't seem to be a problem for a ship that had gotten herself off a D-Day beach.

With the coming of highway improvements, auto ferries were less needed, and the old LST made its last trip on July 30, 1976. She was laid up for the next 27 years, until 2002, when a volunteer group in Muskegon was able to begin extensive restoration of the vessel and open it to the public as a museum ship and memorial to the WW II crews who sailed them.

Jerry Sandvick is a history professor emeritus and author.



The *Gaspedoc*, here offloading grain at Capitol Elevator No. 4 in Duluth in 1953, was built as LST-858 and served in the Pacific in World War II. In her Great Lakes career, she was used principally to carry newsprint rolls from Fort William to Chicago and Milwaukee, with occasional bulk cargoes of grain, coal and sulfur.



Duluth Seaway Port Authority

1200 Port Terminal Drive
Duluth, Minnesota
USA 55802-2609
www.duluthport.com

ADDRESS SERVICE REQUESTED

PRSR STD
US POSTAGE
PAID
DULUTH, MN
PERMIT NO. 492

