



**Duluth Seaway
Port Authority**

Fall 2014

NORTH STAR PORT

Booming salt trade aims to keep traffic moving on winter roads and highways

By Patrick Lapinski

"I've never seen so much salt on the docks this early in the year in at least a decade," says Mike McCoshen, president of the Hallett Dock Company. "The salt trade right now is booming. I think for 2014-15 there's a little bit of panic based on what happened last year. We completely ran out of salt last winter."

Nobody wants to be in that position this year, so rest assured that the right people on the waterfront are working to ensure that there will be plenty of salt on hand for this winter.

Salt has been handled in the Twin Ports since 1880, and it was as valuable a commodity then as now, if for different reasons. One of the challenges of living during settlement days in the Twin Ports was a lack of refrigeration, so salt was in demand as a preservative for meat, game and fish. Today, salt is used primarily as a highway deicer in addition to its uses in agriculture, water conditioning and dust control.

Having the salt on hand in time for the next snow season is the result of a process that began months ago when the previous winter-summer changeover occurred. State and county highway departments estimated their needs, as did regional hubs like Duluth and Superior, along with smaller municipalities and so on farther down. Then, in late spring

and early summer, requests for bids are sent out for the next winter's supply. The salt companies then choose which orders they want to bid on as the scramble for contracts begins. Only after the contracts have been negotiated and signed does the salt begin flowing into Port.

McCoshen explains how these contracts work at an elementary level. In his example, the city of Superior wants 10,000 tons of road salt. "They'll put that out and call three salt companies, and the salt companies will bid on it," McCoshen says. "Say Morton gets [the contract]. The city is then obligated to take 80 percent of that, so if it's a 10,000-ton bid, it

is obligated to take 8,000 tons, even if it turns out to be a mild winter. On the flip side of that, the salt company is mandated to have available 120 percent of the bid. So they need to have 12,000 tons here for the 10,000-ton bid if we have a drastic winter."

In the Upper Midwest, three major companies are competing in the salt trade — Morton, Compass Minerals — previously known as North American Salt Company — and Cargill, recently returning to the market after an extended absence. Within the Duluth-Superior harbor, Compass Minerals has the largest presence, followed by Cargill. Morton has not been very active in the area in the past several



Robert Welton

Unloading a cargo at Hallett Dock No. 8 creates a towering mountain of salt.

years. At one time Morton Salt did operate a small-capacity processing plant on the Superior side of the harbor, near the head of the Tower Avenue slip.

The majority of the salt arriving in the Port is unloaded from ships at Hallett's Dock No. 8 in Superior. "It comes on lake vessels from various ports, all underground mines," says Hallett's McCoshen. "All the Compass Minerals salt comes from Goderich, Ontario, on the eastern side of Lake Huron. The Morton salt comes from Windsor, Ontario, which is really just across from Detroit, and the Cargill salt comes from the Cleveland area."



Salt from Goderich, Ontario, on the eastern side of Lake Huron, flows into a hold of the *Algomarine*. Compass Minerals in Duluth gets its salt from Goderich.



The *Radcliffe R. Latimer* discharges salt at Compass Minerals in Duluth.



This salt is not where green eggs and ham come from. Instead, it's Cargill highway deicer being discharged from the *Manistee* at Hallett Dock No. 5.

Salt's new name in Duluth

Compass Minerals' physical presence has deep roots in the harbor, even though its name is relatively new. Old habits die hard, and some in the Twin Ports still say "Cutler-Magner" when referring to the present salt operation because that Duluth-based company ran the local operation for 100 years. But then came change.

Graymont Western U.S. Inc. purchased Cutler-Magner in 2007, but the plant continued operating as Cutler-Magner until 2009, when Graymont sold its salt business on the Duluth side of the harbor to Compass Minerals of Overland Park, Kan. Graymont continues to operate a lime plant in Superior.

A core of former Cutler-Magner employees still carry on the tradition of quality and hard work established by their forebears. No one is prouder of this heritage than Mark LaLiberte, representing the third generation of his family to manage the plant. "My grandfather [Henry LaLiberte] started with Cutler-Magner," Mark says, "and my father [Clarence LaLiberte], my cousins, myself, my brother."

The change in ownership has been good, says Mark. He notes how Compass Minerals has a presence in big box retail stores like Menard's and Home Depot, which is helping the salt business grow. "Cutler-Magner concentrated on the smaller customer base — more traditional agriculture-based distribution," says Mark. "Since we were purchased by Compass Minerals, our markets have broadened."

In 2013 the Compass Minerals plant at Duluth was recognized by the company with its President's Award for the best environmental health and safety performance within all of Compass Minerals. "That was a great accomplishment for a division of the company that's relatively new," says LaLiberte.

— Patrick Lapinski

Smaller amounts of salt, maybe one or two boatloads a year, are handled at the C. Reiss Terminal and at the Compass Minerals near-downtown Duluth dock. A small amount of liquid product also arrives at Compass Minerals by rail-car throughout the year.

Using the Great Lakes to transport salt from the mine to the Twin Ports is by far the most efficient and economical means to deliver it. Ships, carrying 20,000 to 30,000 metric tons per load, bring in salt throughout the year, beginning in June and well into November. "The water by far is the most advantageous. You get something like 800 truckloads on one boat, so the economies of scale are huge," says Mark LaLiberte, plant manager at Compass Minerals in Duluth. "It has less impact on the environment if you look at the emissions factors for trucking versus using the Great Lakes. That's a high item on everybody's lists these days."

The salt that arrives in the harbor is commonly stored on impervious pads and secured under protective tarps. Nearly all of this is committed for highway use and is treated with an anti-caking agent that prevents the salt from clumping. Making the salt available for distribution to the various entities via a network of trucking companies and private contractors is all part of the logistics of handling the salt under the watchful eye of the Hallett Dock Company.

"Dock 8 currently has on hand somewhere between 120,000 to 140,000 tons of salt," says McCoshen.

You would think that telling one pile of salt from another pile would be next to impossible, especially in winter, but in reality it's easy. The secret is in the color of the anti-caking agent applied to the salt.

Morton's salt has a distinctly blue tint, Cargill's salt has a green hue and Compass Minerals' salt is just white.

Deicing is only one of many applications for rock salt. At Compass Minerals' plant on the Duluth waterfront, untreated

ed rock salt is processed into a variety of products. "My facility is the most diverse because I'm producing agriculture feed salts, water conditioning salts and deicing products," says plant manager LaLiberte. The downtown dock receives a handful of ships each year to supply the needs of the plant.

Compass Minerals' American Stockman line of packaged and block salt blended with minerals is a staple in the agricultural feed industry. The salt blocks, each weighing 50 pounds, are made one at a time at the plant on Railroad Street. The 750-ton block press that is used to make salt blocks was installed in 1954 and is still producing.

Bagged water softening products are also produced at the plant, serving both residential and commercial markets, such as water conditioning and industrial applications. The Duluth plant can process around 100,000 tons of salt annually. The salt used in these products comes from the Goderich mine and is considered to be among the purest in the world. The Goderich mine is one of three owned by Compass Minerals.

Goderich itself is a quaint community built on a bluff overlooking the expanse of Lake Huron. Century-old houses line the top of the hill, along with an old lighthouse overlooking the harbor and the mine. Years ago, according to local lore, a man prospecting for oil accidentally discovered the salt deposits there. It proved to be a most valuable find, and mining began in 1880 on a small scale.

Modern mining came in earnest in 1959 when a mine-

shaft was constructed to access the salt. Salt is mined from the ground like coal and ore, but at much greater depths. The mining at Goderich takes place about 1,800 feet below the surface of Lake Huron.

A variety of salt products also come to Duluth by rail from Compass Mineral's Great Salt Lake plant in Utah for the production of water-conditioning salts, agricultural salts and industrial dust control and deicing brines. Magnesium chloride brine is one of the products used as road stabilization, dust suppressant and deicer. The product is stored in an 80,000-gallon tank farm and is distributed by truck or by rail. The territory serviced by Compass Minerals includes a wide swath of northern Minnesota and Wisconsin and reaches a little bit into the Dakotas, Iowa and Illinois.

Salt is warily eyed as a harbinger of winter. To prepare for the rigors of the season, humans and machines have been mining all summer. As a result, salt is here and more is on the way. So drive on.

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The Capt. Henry Jackman arrives on Aug. 28 with over 29,000 tons of salt for Hallett Dock No. 8 in Superior.

Diane Hilden