

SNOW+ICE

GUIDE

Cargill's salt mines, like this one in Cleveland, weren't shy of supply this year.



An 'unprecedented' dilemma

Salt suppliers, experts quell snow removal contractors' concerns over what appeared to be a salt shortage this winter. BY SARAH PFLEDDERER

CASE SNOW MANAGEMENT staff made a 16-hour round trip to Maine to pick up an order of rock salt this winter. All the while, there were piles upon piles of the deicer at the company's local supplier, right down the road from its headquarters in Attleboro Falls, Mass.

Case Account Executive Neal Glatt says seeing the surplus through rearview mirrors not only rubbed salt in the company's wound, but it convinced him the snow management industry was not, in fact, facing a salt shortage, as some news headlines read. He identified the problem as a "supply chain issue."

"It's not like the salt industry fell on its face," Glatt says. "The problem was everybody needed the same thing at the same time on a more frequent basis."

His viewpoint aligns with what many experts and suppliers say created an apparent salt shortage this winter.

The root causes

Lori Roman, president of the Salt Institute, confirms there is a sufficient amount of salt available for mining, and it was

being mined this winter. The problem was the severe winter increased the demand for ice melts, and the extreme cold that came with it affected suppliers' transportation methods for those products.

"The modes of transportation we used were challenged by the same weather causing the demand," says Mark Klein, director of communication at Cargill. For example, the supplier has salt mines in Lansing, N.Y., Cleveland and Avery Island, La. The latter generally transports product on barges up the Mississippi River—these vessels can move the equivalent of 15 rail cars or 60 to 70 tractor-trailers, Klein says. The cold froze parts of the river, though, requiring the supplier to resort to ground transportation, which held equal challenges.

Rail cars had to travel at slower speeds to be cautious of the cold's effect on the air brakes, Klein says, and, when transporting by truck, Cargill faced the same winter roadway conditions as commuters.

Martin Tirado, CEO of the Snow & Ice Management Association (SIMA), says this isn't the first time the industry has encountered a "supply and demand issue" thanks to severe weather. He recalls a similar situation in the 2008-2009 winter and says it happens every four to five years.

What added to the dilemma this year, Tirado says, is contractors had no notion there would be extreme snowfall, given they prepare for average winters. Because there were relatively mild winters for the past two years, contractors underestimated how much salt to order at the start of the season.

"The government sector and the private sector pre-purchase based on averages (for the past) three to five years," Tirado says. "The reality is this winter the snowfall was much

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higher than average in most locations.” (See sidebar for snowfall statistics.)

In addition to the high precipitation, states like Wisconsin, Michigan, Minnesota, Iowa, Indiana, Illinois and Missouri registered a top 10 coldest winter for the 2013-2014 season, according to the National Oceanic and Atmospheric Administration (NOAA).

Statistics like that caused the high demand for salt. Case, for instance, used 50 percent more salt than average winters past, albeit the company also grew 25 percent more than last year, Glatt says.

Suppliers scramble to meet demand

“What we’ve seen this year has been wave after wave of snow and ice events across the snow belt,” Klein says. “That has caused demand unlike what most people have seen ever.”



Case used 50 percent more salt this past season than an average winter.

To compensate, Cargill’s salt miners worked up to 60 hours per week (compared to last year’s 32 hours per week), Klein says. The company quickly used up its excess supply from last season.

The result of that overtime covered only the company’s orders for contract-holding customers, though. And many of those contracts have maximums, meaning clients may receive 20 percent to 30 percent more product than originally

agreed upon and at the same price. Halfway through the winter, most customers already were into their maximums, Klein says, leaving little else for contractors looking to buy as they go.

Suppliers, like Cargill, are obligated to fulfill the orders of contract-holding clients before other customers. And some suppliers give government contracts precedence over private contracts because it’s viewed as a public safety issue.

Those scenarios left contractors like Glatt and Shayne Newman, president of YardApes, on the outs of receiving rock salt when it was sitting right in front of them.

“Municipalities or the state always take first dibs on salt,” Glatt says. “You’re not able to get in line and pick it up.”

Newman faced like challenges, saying at one point he called every supplier within 100 miles of the New Milford, Conn.-based company just to find none

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Philadelphia.....	68 inches
Toledo, Ohio.....	85.3 inches
Wilmington, Del.....	56.1 inches

SOURCE: THE WEATHER CHANNEL (THROUGH APRIL 3)

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had rock salt or none available to customers without contracts.

"It was unprecedented," he says. "I've never seen a situation like we've had this winter. It wasn't a shortage. There wasn't anything available for contractors."

Newman got creative in obtaining some product when a supply store a quarter mile from his office limited contractors to purchasing only five bags of salt until further notice.

He sent different employees to the store and provided them with cash instead of the company credit card so they would appear to be purchasing five bags for a separate company each time.

Seeing both sides of the problem was Dan Degan. He is co-founder of SharkMarx, an eBay- or Priceline-like buying platform that operates as a "reverse auction." Contractors submit requests

for products and dealers/distributors offer bids on their requests. Degan acted as the middleman this winter between disgruntled contractors hunting for deicers and suppliers (dealers/distributors) who were mum about having nothing to provide.

Come December few dealers were bidding on ice melt requests on the site. That raised a red flag to Degan and his business partner—as did the contractors communicating their concerns and "sheer panic" to the company if they didn't get their hands on ice melt.

"They were worried about slip-and-falls," Degan says.

SharkMarx dialed suppliers from the East Coast to some in Montana in search of ice melt. It eventually found some in Utah and Tennessee and facilitated the delivery process, subcontracting a trucking



Experts advise contractors to stockpile salt for each season.

company to transport the product to customers.

The longest delivery was from Salt Lake City to Worcester, Mass. The majority of transactions were bags of deicing blends and calcium chloride, Degan says. He adds contractors were paying 68 percent more than average for those when they became available on the website.

Tirado also saw price spikes.

"The price got ridiculous," he says. "We're hearing two to three times the price midseason (compared to) what it was to purchase in August or September."

For next year, Degan is encouraging contractors and dealers to communicate about ice melt earlier, suggesting getting those orders in place between June and August.

"Everybody wants to get to the Walmart model of just-in-time inventory," he says. "It's the nature of the industry. Nobody is thinking about buying in advance and in bulk to be prepared."

Playing the 'capacity-balancing game'

Stockpiling is the topmost advice experts offer to prepare for severe winters.

The Salt Institute encourages having one year's worth of salt stockpiled before the snow starts to fall.

"That means some of these private contractors may want to consider how they can store it properly, making sure they keep a supply under cover so it doesn't get into the elements and that it's stored on a concrete pad so it's not going into the soil," Roman says (see Web Extra).

Yet, the challenge to stockpiling is it takes a financial investment and requires storage space.

"That's difficult to do from a cash flow perspective for the majority of contractors," Tirado says. "As storms happen,

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For more information on salt storage, download the Salt Institute's handbook on the topic in the Web Extras section at LandscapeManagement.net.

contractors are able to bill and obtain more revenue, but really the best way to manage is to purchase above average for the year in advance."

He adds larger companies have the space to bulk up stockpiles, whereas smaller companies rely on suppliers to store the product until they need to purchase it.

Still, companies with stockpiles suffered this year, and Case was one of them. The company aims to have a two-week supply on hand at all times.

At one point it stretched that excess for three and half weeks, doing so by scaling back its pretreatments and only applying salt to high-traffic areas.

To stretch supply, Tirado suggests treating only high-traffic areas of a property, too, such as the main drag of a parking lot or building entryways. He also advises to use liquid applications as a pre-wet on a current salt inventory so it lasts longer. He notes it's important to educate employees on application rates so they know not to over apply (see sidebar).

"It's always a capacity-balancing game," Glatt says.

Some of Case's contracts prohibit it to raise customers' prices due to market issues. And for that reason it "absorbed some of the hit" from the shortage, paying out of pocket for the additional transportation costs to get salt.

YardApes doesn't stockpile, so it relied on customer communication and rationing to fulfill its contracts.

The company notified clients of the salt shortage and said only high-traffic areas would be treated for the time being. It rationed the amount of salt it had by creating a sand/salt mix to provide traction to properties versus melting the ice.

While for the most part customers were considerate of the situation, Newman says it has made him consider putting a clause in his contracts that the company isn't liable for slip-and-falls if the industry is in a salt shortage.

"Really, what we were worried about is liability falling back on to the contractor," Newman says. "Is there going to be any leniency if there's a salt shortage? It's a tough situation." LM

EMPLOYEE SALT SPREADING EDUCATION CHECKLIST

Here are a few things to make sure employees understand about salt spreading, according to Martin Tirado, SIMA CEO.

- 1 The effectiveness of rock salt depending on temperature and surfaces.
- 2 Identifying high-traffic areas on a property site map.
- 3 When it's appropriate to use alternative methods such as pre-wetting a salt supply or applying abrasives like sand.

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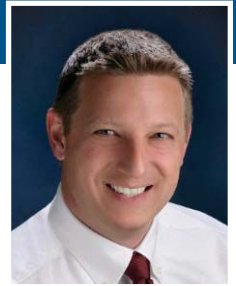
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BY PHIL HARWOOD

How to use weather data for sales, renewals

THE SNOW BUSINESS is full of unknowns. One of the biggest unknowns is, of course, the weather. But there is one aspect of the weather that's 100 percent known: data for weather that has already occurred. Weather data are widely available for most communities in North America. It might require some digging to find, but with persistence you can track down data from a variety of public and private sources. In some markets, weather information is available for free. In other markets, free information is limited and may be unreliable or inconsistent. Fee-based weather services are an excellent source of information, especially where free information is not readily available or trustworthy.

Another source of weather data exists in the form of internal records. Snow professionals always should track their own weather data throughout the year so it's not a massive undertaking at the end of winter.

What to track

While there are many types of weather data available, this article will focus on precipitation in the form of snow. Finding good snowfall data will assist greatly during the sales and renewal process.

Regarding snowfall data, there are two types to gather, and you generally need not look further than the National Weather Service to do so. The first type is seasonal—not annual—snowfall totals, for as many years as possible. In my home market of Detroit, seasonal snowfall totals are available going back to 1880. Seasonal totals include an entire winter season (for example, November through April). Annual totals include a calendar year from January to December. Seasonal snowfall data are generally easy to locate. Seasonal totals are extremely valuable to calculate seasonal service pricing and seasonal caps, which often are based on seasonal numbers.

The second type is daily precipitation data. These reports typically show the type and amount of precipitation daily for each month. Armed with this information, it's possible to determine the number of events and the type of event for each occurrence.

The importance of accurate weather data cannot be understated. By incorporating updated and reliable data into your sales and estimating process, you'll instill a higher level of confidence

with your customers and prospects during renewal and sales processes. When you educate and inform during the sales process, you build trust, break down barriers and sell more work at higher closing rates.

How to incorporate

To incorporate weather data into your renewal and sales processes, develop a historical overview of seasonal snowfall data for your market(s). A bar chart on a single page is a nice visual presentation of this information (see "Web Extra"). Be sure to show seasonal totals on the chart. Along with this and using the same set of information, it's helpful to determine and show the average and probability of snowfall totals at various percentiles.

The average is straightforward, easy to calculate and easy to understand. It provides a guidepost or reference point for comparative purposes. Any given season may be quickly compared to the average to determine the variance, whether under or over the average. This variance is another way to present seasonal snowfall information on a bar chart.

Calculating probability is not all that complicated, although it's not quite as easy as calculating the average (see "Web Extra"). Probability is the likelihood of occurrence in terms of a percent. Information is power and statistical information equips the salesperson with enormous power going into a sales opportunity.

Daily precipitation data are equally powerful during the renewal and sales process. Knowledge of historical weather data regarding the type and number of events helps to reassure the buyer that estimating models are accurate.

So what does all of this mean? Discussions with your customers and prospects about probability, based on historical weather data, lead to discussions about risk/reward trade-offs, liability and pricing. All too often customers and prospects are uneducated about these matters and the sales process becomes very difficult for the snow business professional. Showing the above information to your customers and prospects in an educational manner will immediately position you as a professional and inject confidence into your proposal.

Now is a great time to evaluate your use of weather data in your renewal and sales processes. What are you already doing well? What needs improvement? Who is going to spearhead these improvements? What are the deadlines? The selling season for snow will soon be in full force. The time to prepare is now.

Harwood, LIC, CSP, is president and CEO of Pro-Motion Consulting. Reach him at phil@mypmcteam.com.

» WEB EXTRA

To learn how to calculate the probability of snowfall totals or for examples of the charts Harwood references, visit the Web Extras section of [Landscape Management.net](http://LandscapeManagement.net).

SNOW + ICE GUIDE PRODUCTS



Plow Terminal Cleaners

The Plow Terminal Cleaners are designed to clean plow electrical connectors. This three-piece set is made for removing corrosion from common round pin (male and female) plow connectors found on electrohydraulic grill-mounted plow connectors. The set is housed in a leather-type holster with magnetic clasp.

Innovative Products of America // IPATools.com



Front Mount Snow Blower

The KIOTI Front Mount Snow Blower offers quick hitch, front mount to a sub-frame and operates on a mid-PTO drive. There are four models, with cutting width ranging from 50 in. to 72 in. The loader joystick controls lift, lowering and chute rotation. Each snow blower operates on PTO horsepower ranging from 15 to 40 hp, has four blades and has auger diameter ranging from 14 to 15 in. It fits all CS and CK and most DKSE models.

KIOTI // KIOTI.com



Central Enhanced Ice Melter

Central Enhanced Ice Melter is a new private-label ice melt line and, according to the company, is safer than higher grade ice melters on vegetation, concrete and pets. The pellets are triple-screened and stay dry to prevent clumping in spreaders, thus reducing maintenance. Color-coding makes it easier to monitor how much ice melt is being spread, which reduces waste.

Central Turf & Irrigation Supply // CentralTIS.com



Fabric buildings

Legacy's fabric buildings incorporate structural steel beams instead of open web trusses. This engineering concept provides a cost-effective, long-lasting solution for salt and sand storage facilities, the company says. Legacy offers assistance with renderings, foundation design, installation and project management.

Legacy Building Solutions // LegacyBuildingSolutions.com

I Series snow blowers

The I Series, part of the SnowLogix line of snow blowers, includes four models of industrial-duty, tractor-mounted units—available in 9- and 10-ft. widths for efficiently moving large amounts of snow. Engineered for large tractors with tall tires, all models in the I Series offer a two-stage design, with 16-in.-diameter augers and 36-in.-diameter fans. Maintenance is simple, the company says, with easy-access shear bolts, extra-large skid shoes and a bolt-on cutting edge.

Loftness // Loftness.com



SS-4000 snow broom

Powered by a 160cc Honda GXV Series engine, the SS-4000 features a floating pivotal broom head with five angle settings to adjust the trajectory of snow and other materials. The 16-in.-diameter broom is centrally driven, allowing the unit to work against curbs, walls and other obstacles from either the left- or right-hand side. For heavier snow conditions, the operator can install a front-mounted blade attachment, which comes standard. The 40-in. blade uses an exclusive pin system for easy installation and removal.

SnowEx // SnowExProducts.com



DL300-3 and DL350-3 wheel loaders

Advancements to the Doosan DL300-3 and DL350-3 wheel loaders include improved lift capabilities, increased fuel efficiency and enhanced cab comfort, the company says. This interim Tier 4-compliant machine also delivers higher horsepower.

Doosan Infracore Construction Equipment America // DoosanEquipment.com



Skid-steer loaders

JCB skid-steer loaders feature an exclusive single-arm "PowerBoom" and side-entry door for safety. The spacious cab offers 270° visibility. They feature Tier 4 Final engines that use 16 percent less fuel, while meeting emission standards without diesel particulate filters (DPFs). More than 31 attachments are available, including snow blades, snow pushes, snow blowers and snow buckets

JCB // JCBVision.com

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