STATE OF MICHIGAN

Department of Attorney General

Road Salt 2014-2015 Winter Season Pricing Report

January 2015

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Introduction

Snow and ice-covered roads can pose significant risks to public safety and can negatively impact economic activity. Many areas of the country, including Michigan, have historically relied upon the application of road salt to allow safe passage for travelers. The efficacy of road salt is well established. For example, a Marquette University study examined highway accidents occurring in winter-road conditions and found that road salt reduced the instances of crashes by 88 percent while injuries and accident costs were reduced by 85 percent.[1]

However, like any commodity, the cost of road salt can vary, and such changes in cost structure can impact normal business operations and budgets. Recent market prices for road salt have done just that and the price increase warrants the Attorney General's close scrutiny to ensure it is not a result of illegal activity.

Our office previously reviewed road salt pricing in 2009 after receiving complaints of higher prices and possible anticompetitive conduct by the salt suppliers. Following an investigation, which included reviewing the suppliers' extensive responses to our civil investigative demands; we found that the evidence did not support an outcome that anticompetitive conduct was the cause. Rather, the concerns were explained by what appeared to be a legitimate salt shortage.

In 2014, prices for entities buying road salt through the MiDEAL purchasing program for the 2014-2015 winter season rose by more than 46 percent from the previous year.[2] Our office received a number of complaints from state and local agencies questioning the high price of road salt, and some local agencies complained of large price differences between neighboring communities. Upon receipt of these recent complaints, we again conducted a thorough investigation into road salt pricing. In addition to using the information obtained from our 2009 investigation, we reviewed all the road salt bids and awards for the MiDEAL program for the past two years; reviewed other relevant documents related to the 2014-2015 request for proposals (RFPs); interviewed representatives from the four road salt suppliers for the 2014-2015 MiDEAL RFPs; spoke with representatives from local municipalities, as well as Michigan Department of Transportation (MDOT), Michigan Department

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[1] Kuemmel & Hanbali, *Accident Analysis of Ice Control Operations*, Marquette University, Department of Civil & Environmental Engineering (1992). Available at http://www.trc.marquette.edu/publications/IceControl/ice-control-1992.pdf

[2] Michigan Department of Transportation, *Salt Prices Jump Nearly 50 Percent as Road Agencies Prepare for Winter*, 11/6/14 bulletin. Available at http://www.michigan.gov/mdot/0,4616,7-151--340721--,00.html

of Technology, Management and Budget (DTMB), Federal Trade Commission (FTC), and county roads associations; spoke with other states' attorney generals' offices to discuss road salt prices; toured a salt supplier's production facility; and conducted additional research.

Findings

Our investigation focused on anticompetitive conduct. This report summarizes the information obtained during this investigation and supports the conclusion we reached as a result.

- We did not uncover any evidence of illegal price-fixing by road salt suppliers. The most recent price increase was due to legitimate market conditions caused by last winter's harsh weather. Road salt suppliers and government agencies depleted existing inventories at the end of last winter, which was one of the harshest on record. Suppliers consequently had less road salt to supply for this season while agencies were simultaneously purchasing above-average amounts in order to restock. In addition, due to heavy market demand, fewer road-salt suppliers were willing to bid for supply contracts under the MiDEAL program, which adversely influenced pricing for purchasers.

- Additionally, it appears there are legitimate explanations for the noted price differences between certain municipalities. The decrease in road salt inventories and less willing bidders resulted in more limited bidding in certain counties and cities. And it appears the timing of the MiDEAL bid played a role in some suppliers' decisions not to bid for certain contracts. Also, some entities locked into lower prices well before the current increase, but neighboring municipalities did not.

- Moving forward, we recommend that DTMB review the timing of its MiDEAL bidding process to see if it may be beneficial to issue requests for bids earlier in the year which may alleviate similar bidding situations in future years. Based on our investigation, it appears that opening bids earlier in the year may generate more bids and at lower bid prices. However, following mild winters, it may not be beneficial to issue bids earlier, especially if there is a large supply of salt. Additionally, we recommend that DTMB and MDOT continue to review ways in which MiDEAL can further utilize alternative products, such as sand, and implement technology improvements to potentially reduce road salt usage, and thereby lower costs. Finally, we recommend seeking opportunities to better utilize the Detroit Salt Mine, a significant Michigan resource.

- See recommendations at the end of this report.

Price-Gouging Versus Price-Fixing

"Price-gouging" and "price-fixing" are terms that need some explanation. People often talk about price-gouging whenever prices for goods or services suddenly increase. But the Michigan Consumer Protection Act (MPCA) does not use the term "price-gouging." Rather the section in the statute that most directly prohibits high pricing says that it is unlawful to charge "a *consumer* a price that is *grossly in excess* of the price at which similar property or services are sold." [3]

The specific language of the statute includes some major limitations in this case. It applies to prices charged to consumers, which means that it limits prices charged for products "primarily for personal, family, or household purposes." [4] And the price charged must be grossly in excess of prices charged by other suppliers for the same or similar product. That means that the statute's limit on pricing does not apply if all businesses are charging the same or nearly the same price for a product, even if the price is high.

Price-fixing, on the other hand, is an antitrust violation. Under the Michigan Antitrust Reform Act (MARA) it is unlawful to enter into "[a] contract, combination, or conspiracy between 2 or more persons in restraint of, or to monopolize, trade or commerce in a relevant market…."[5] MARA was modeled on federal antitrust statutes, primarily the Sherman Act.[6] While there are many intricacies in these statutes, antitrust law is basically about preserving competition in the marketplace. When two or more suppliers of competing products agree to limit the competition between them, for instance by agreeing to maintain or raise the price of their product, it may be an antitrust violation. Proving that competitors fixed prices requires having proof of their agreement to do so. Documents that formalize the agreement or show that an agreement existed are strong proof, but often difficult to obtain or non-existent. But other circumstantial evidence may also show that a price-fixing agreement existed, including facts showing that the competitors had a meeting and shortly thereafter they raised prices in a similar fashion.

In the context of this investigation, price-fixing was the appropriate analysis for review, not price-gouging. As the buyers at issue under the MiDEAL program are governmental agencies, not consumers, the MCPA's limitation on pricing is not

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[3] MCL 445.903(1)(z).
[4] MCL 445.902(1)(g).
[5] MCL 445.772,
[6] 15 USC 1, *et seq.*; *Bristol Window & Door, Inc v Hoogenstyn*, 250 Mich App 478, 485; 650 NW2d 670 (2002).

applicable. Moreover, simply being charged a high price does not mean that the amount charged is grossly in excess of prices charged by others for road salt. And, as further detailed in this report, our investigation did not find evidence of price-fixing or other illegal anti-competitive conduct.

Road Salt and Mining Information

Road salt is one of the most popular methods of deicing roadways because of its ease of use, effectiveness, and relatively low cost compared to alternative de-icing methods. Road salt, also known as rock salt, is larger and heavier than table salt. Both are the same molecule—sodium chloride—but table salt is ground, purified, and often has additives like iodine and anti-clumping agents.[7] Road salt's size and weight keep it from being easily pushed off the road, and it is used to keep roads and bridges free of snow and ice during wintery weather. Driven by an increased public expectation for safe and clear roads, and fueled by relatively low costs, Michigan has steadily increased its use of road salt over the last 30 years. It was recently reported that public agencies in Michigan use nearly 2 million tons of salt annually to clear snow and ice.[8]

There are approximately 15 salt mines in the U.S. One is owned by Detroit Salt Company and is located in Detroit, Michigan. The salt under Detroit was first discovered in 1895. Development of the resource proceeded slowly until 1914, when the salt mine produced 8,000 tons of rock salt each month. Because of this local resource, Detroit was the first city in the world to apply salt to its roads in 1940.[9] Two mines are located in Ohio, two in New York, and the remainders are in Kansas, Louisiana, Utah, and Nevada.[10] Overall, approximately 35-40 million metric tons of

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[7] Howard, *The Surprising History Of Road Salt*, National Geographic (2014). Available at http://news.nationalgeographic.com/news/2014/02/140212-road-salt-shortages-melting-ice-snow-science/.

[8] Cornwell, *Michigan Road Salt: What is it costing us*, Mackinac Center for Public Policy (2011). Available at http://www.mackinac.org/15189

[9] Howard, *The Surprising History Of Road Salt*, National Geographic (2014). Note: there are some reports that salt was used on an experimental basis to de-ice roads in New Hampshire in 1938.

[10] See Appendix A. See also Salt Institute, *Major Salt Deposits and Dry Salt Production Sites in North America Map* (2013), available at http://www.saltinstitute.org/wp-content/uploads/2013/05/Salt-Map-Final.pdf

Note: There are two salt mines in Ontario, Canada, that produce deicing salt. Morton Salt, which is owned by K+S AG, operates a mine in Windsor, Ontario, and Sifto Canada, which is wholly owned by Compass Minerals, operates a mine in Godderich, Ontario salt are mined annually in the U.S., of which rock salt for ice control accounts for approximately 30 percent.[11]

Mining takes place about 1,000-2,000 feet below the ground. Most rock salt mines use the "room and pillar" system of mining. Shafts are sunk down to the floor of the mine, and rooms are carefully constructed by drilling, cutting and blasting between the shafts, creating a checkerboard pattern.[12] The salt is then crushed and screened to the desired size and brought to the surface to be bagged or shipped in bulk to the customer via railroad cars, trucks, river barges, or lake boats.[13]

MiDEAL Road Salt Program and Other Procurement Methods

In Michigan there are multiple avenues for a government agency to procure road salt. The agency can solicit its own bids or it can join a consortium of local governments to give it added purchasing power.

MiDEAL is an extended purchasing program that allows Michigan local units of government to use state contracts to buy goods and services, including road salt. MCL 18.1263. Through MiDEAL, municipalities across Michigan order salt in two rounds: early fill and seasonal fill. The first "early fill" delivery arrives in December and by December 31 agencies must take delivery of 100% of the early fill tonnage that they ordered. For seasonal fill awards, the agencies can take as little as 70% of the amount they ordered or as much as 130%. The agencies must take delivery of at least 70% of the seasonal fill road salt by the following October.

DTMB has contracts with four road salt suppliers: Cargill, Compass Minerals (f/k/a North American Salt), Detroit Salt Company, and Morton. The contracts expire on August 31, 2016, with two 1-year options, but prices are rebid every spring. The contracts serve MDOT, and approximately 300 local public entities.

On an annual basis, DTMB collects the salt requirements for MiDEAL participants for the upcoming season and supplies the requirements to DTMB for inclusion in the RFP. Suppliers bid county by county for both the early and seasonal fills.

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[11] US Department of the Interior, *US Geological Survey 2012 Minerals Yearbook*, pp 1-2 (2012). Available at http://minerals.usgs.gov/minerals/pubs/commodity/salt/myb1-2012-salt.pdf.

[12] Freeman, *How Salt Works*, How Stuff Works (accessed November 17, 2014). Available at http://science.howstuffworks.com/innovation/edible-innovations/salt4.htm.

[13] Thomas, *Where's the Salt?* Snow Magazine, p 19 (Sept 2014). Available at http://www.saltinstitute.org/wp-content/uploads/2014/10/Snow-Magazine-1-Sept-2014.pdf; American Rock Salt FAQ (accessed November 17, 2014). Available at https://www.americanrocksalt.com/faq.asp.

Wayne County is handled somewhat differently than other counties. For the seasonal fill, Wayne County is divided into over 50 separate "drop points," and salt suppliers can bid on any or all of those areas.

Besides MiDEAL, some local agencies contract directly with suppliers or through purchasing consortiums. For example, Genesee County Road Commission (GCRC) has a contract with Detroit Salt.[14] The Michigan Inter-governmental Trade Network (MITN) is a purchasing consortium comprised of over 100 local government agencies that also purchases road salt. And another group salt purchaser is the Downriver Community Conference (DCC), which has approximately 20 members.[15]

Road Salt Pricing

Because of its solubility and the difficulty of large scale storage, surface salt inventories are usually kept at minimal levels.[16] Inventories kept underground in salt mines are stored for short-term imminent sale, such as near winter use for highway de-icing. The basic difference between salt production and salt sold or used is the mathematical change in inventory.[17]

Generally, road salt prices are based on the costs of mining, transportation, and distribution. Mining costs include labor, energy, heavy equipment, explosives, and the purchase of mineral rights.[18] Transportation costs vary considerably across road salt suppliers, given that the suppliers transport the salt to customers via shipping vessels, barges, trains, and trucks, depending on the location of the mines and the suppliers' stockpiles.[19] Since shipping vessels and barges can carry larger

[14] The GCRC supplies the City of Flint and several other municipalities and school districts. GCRC's contract allowed it to extend last year's prices of $43 a ton to this year, if both Detroit Salt and GCRC agreed (which they did). Available at http://www.mlive.com/news/flint/index.ssf/2014/09/salt_prices_staying_the_same_f.html.

[15] DCC website, available at http://www.dccwf.org/. DCC locked in road salt prices from two years ago through its multi-year contract with Detroit Salt.

[16] Kostick, *The Material Flow of Salt*, Bureau of Mines Information Circular (1993). Available at http://pubs.usgs.gov/usbmic/ic-9343/

[17] Id.

[18] Interview with Detroit Salt Company representative, 9/24/14; See also Nystuen, *Metropolitan Mining: Institutional and Scale Effects on the Salt Mines of Detroit*, University of Michigan (1999). Available at http://www-personal.umich.edu/~copyrght/image/solstice/sum99/salt.html.

[19] US Department of the Interior, *US Geological Survey 2012 Minerals Yearbook*, p 6 (2012). Available at http://minerals.usgs.gov/minerals/pubs/commodity/salt/myb1-2012-salt.pdf.

amounts of salt than trains or trucks, moving salt by water is usually the least expensive method of transport. As such, delivery locations nearer to the Great Lakes may see cheaper road salt prices. The price of gas/fuel is another important factor in pricing.

Suppliers' prices are presumably also impacted by market forces, including the prices charged by competitors and information available regarding industry inventory. Competitor pricing is somewhat transparent as governmental RFP bid awards are generally public information.

Supplier bidding is also impacted with uncertainty caused by the bid process. Nine Midwest states, including Michigan, typically open their bids in a short span of time, between May and July. This causes uncertainty because suppliers will not know the tonnage they will be required to supply until the awards are made.

After awards are made, suppliers still face uncertainty because most states require suppliers to commit to supplying anywhere between 70% and 130% of the actual amount of road salt awarded. Some salt suppliers consider spreading their bids out over a wide geography, in spite of transportation costs, because of the 70-130 contract requirements and the unpredictability of snow. If any single geographic area ends up with little to no snow, suppliers run the risk of the community taking only 70% of what was ordered.

Thus, the timing of the bids in other states, the 70-130 structure of the contracts, and the supply left over from the previous season are factors affecting bids as they are developed.[20]

2014-2015 Winter Season Road Salt Prices

According to MDOT, the 2014-2015 winter season average cost of road salt for the state and local road agencies was $65.81 per ton, an increase of about 46 percent over the 2013-2014 average of $44.99 per ton.[21] According to news reports, Washtenaw County reported a 46 percent and 122 percent price hike in 2014 for early and seasonal fills, respectively. And Oakland County expected to pay 25 percent more to get ready for the 2014-2015 winter.[22]

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[20] *Id.*; interviews with Cargill representative, 9/23/14, and Compass representative, 9/26/14.

[21] Michigan Department of Transportation, *Salt Prices Jump Nearly 50 Percent as Road Agencies Prepare for Winter*, 11/6/14 bulletin. Available at http://www.michigan.gov/mdot/0,4616,7-151--340721--,00.html

[22] Greenwood, *Detroit Metro Counties Feel Pinch of Salt*, Detroit News (September 24, 2014). Available at

Wayne County reported that in 2013 it was paying $32.67 a ton from Morton Salt for early fill through the MiDEAL program. In 2014, Wayne County ordered 33,000 tons from Compass Minerals for the early fill at a price per ton of $74.42, representing a cost increase to the county of about $1.5 million over last year. Wayne County's 2014 seasonal fill RFP through the MiDEAL program was for 168,800 tons. Detroit Salt bid $47.01 in 11 drop points and won all 11, while Compass bid $58.95 in all 50 drop points and won the drop points where Detroit Salt did not bid. According to Wayne County representatives, the fact that Compass quoted higher prices for the early fill compared to the late fill – $74.42 versus $58.95 – is very unusual.

The City of Dearborn reports that it was paying $74.42 per ton in 2014 for road salt through the MiDEAL program while the Downriver Community Conference (DCC) was paying $50.71 per ton. Jim Perry, the DCC Executive Director, explained that DCC does not obtain its road salt through the MiDEAL program. Rather, the DCC is in the third year of a three-year contract directly with Detroit Salt. Hence, the DCC locked into the $50.71 price two years before prices went up.

Missaukee County has also raised concerns about the high costs of road salt it purchased through MiDEAL, particularly relative to surrounding counties. Compass was the only bidder in 2014 in all of the counties in the top half of the Lower Peninsula. Missaukee County is paying $82 per ton for the early fill while some neighboring counties are paying just under $70 per ton. For the 2014 late fill, Missaukee County is paying $78.61 per ton, while other nearby counties are paying under $70.

The City of Grand Haven reported that its 2014 price through the MiDEAL program went from $48.28 per ton in 2013 to $64.89 per ton in 2014, a 34% increase.

Most recently, the City of Jackson complained to the Attorney General about high road salt prices. Under the MiDEAL program for the 2014 season, the City is paying $80.22 per ton, a 75 percent increase from the $45.98 it paid in 2013. Conversely, Jackson County, which did not participate in the MiDEAL program in 2014, paid $56.17 per ton.

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http://www.detroitnews.com/story/news/traffic/2014/09/02/detroit-metro-counties-feel-pinch-of-salt/14950309/

Investigation

The Michigan Attorney General's Corporate Oversight Division took the following actions to investigate road salt prices:

- Reviewed emails between DTMB and the four road salt suppliers for the 2014-2015 RFP.
- Reviewed bid amounts, prices, and awards for 2013-2014 and 2014-2015 RFPs.
- Reviewed the Civil Investigative Demand responses from the four salt suppliers relating to our 2009 road salt investigation.
- Reviewed materials relating to concerns raised by Wayne County, City of Dearborn, and Missaukee County about road salt prices.
- Interviewed each of the four suppliers that submitted MiDEAL bids.
- Toured the Detroit Salt mine production facility.
- Communicated with staff at DTMB.
- Communicated with staff at MDOT.
- Communicated with a representative from the County Roads Association of Michigan.
- Communicated with a representative from the Downriver Community Conference (DCC).
- Communicated with representatives from Wayne County.
- Communicated with other state AAGs to discuss road salt prices.
- Communicated with an attorney at the FTC.
- Reviewed and followed road salt news.
- Conducted independent research on road salt pricing.

<u>2014-2015 Winter Season Road Salt Bids</u>

According to DTMB, two factors combined to create scarce supply and significantly higher prices. Vendors had not sufficiently rebuilt their stockpiles from last year's unusually harsh winter, and some states went out to bid before Michigan. Therefore, bids for the 2014-2015 winter season came in unusually high. DTMB actually conducted second round pricing negotiations, had discussions with all bidders, and then conducted "Best and Final Offer" (BAFO)/third round negotiations in an attempt to get lower prices.

The 2014-2015 road salt bids for the Midwest states were opened in this order:

1.	Minnesota	April 29
2.	Iowa	May 7
3.	Wisconsin	May 13
4.	Ohio early fill	May 13
5.	Pennsylvania	May 28
6.	Indiana	May 30
7.	Missouri early	June 10
8.	**<u>Michigan</u>**	**<u>June 16</u>**
9.	Illinois	July 1
10.	Ohio seasonal fill	July 8
11.	Missouri seasonal	July 22

Notably, Minnesota, Iowa, Wisconsin, Ohio-early fill, and Pennsylvania did not experience the significant price increases seen in Indiana, Missouri, Michigan, Illinois, and Ohio-seasonal fill.

For Michigan's 2014-2015 winter season, DTMB posted the RFP on May 15, 2014, opened the bids on June 16, 2014, and posted the awards on July 24, 2014. The bids were opened over a week later than the year before. And, as mentioned earlier and explained in more detail below, the date of the bid opening appears to be an important date that can influence road salt suppliers' pricing and whether to bid for certain locations.

For the 2014-2015 MiDEAL RFP seeking 1,459,879 tons of road salt:

Cargill bid 0 tons, which is 554,335 tons less than last year.
Detroit Salt bid 226,820 tons, which is 401,680 tons less than last year.
Morton bid 348,295, which is 539,720 tons less than last year.
Compass bid 1,291,079, which is 292,240 tons more than last year.

The Suppliers

Cargill

Cargill, headquartered in Minneapolis, Minnesota, is a privately owned business that provides food, agriculture, financial, and industrial products and services. Cargill Deicing Technology operates three salt mines in the U.S. The mines are located in Cleveland, Ohio; Avery Island, Louisiana; and Lansing, New York. The Cleveland mine, which services Michigan and other Great Lakes states, produces approximately 3.6 million tons of road salt annually. Cargill stockpiles its road salt in the Great Lakes region in Cleveland, Duluth, South Chicago, Green Bay, Milwaukee, Burns Harbor IN, Detroit, and Gladstone, MI.

In Michigan, in response to the 2013-2014 MiDEAL RFP, Cargill bid 236,100 tons of road salt for the early fill and 318,235 in the seasonal fill (but was awarded only a nominal amount). Cargill did not bid any of the 2014-2015 MiDEAL RFP.

In the Midwest, Cargill bid on 4.956 million tons of salt in 2013-2014 and was awarded 2.434 million tons. Cargill bid on 2.808 million tons for the Midwest states in 2014-2015 and was awarded 2.8 million.

Cargill reported that it had very little supply left over after last winter. It also notes that the 2014 demand for salt was high because many expected this to be another rough winter, and states raced to restock their supplies. According to a Cargill representative, crews worked all summer, including on Saturdays, at the company's three salt mines, and the company has even imported salt from Chile to replenish its supply.

Compass Minerals

Compass Minerals, formally North American Salt, is headquartered in Overland Park, Kansas. Compass operates two salt mines that service the U.S. Compass' Godderich, Ontario mine is located on Lake Huron. The mine produces 7.5 million tons of salt annually. It serves areas surrounding the Great Lakes in both the U.S. and Canada and areas that border the St. Lawrence Seaway. Salt is transported to customers via the Great Lakes and the St. Lawrence Seaway. Compass serves Michigan from three stockpiles located on the east coast of Lake Michigan and four stockpiles located on the Detroit River and the west coasts of Lake Huron and Lake Erie.

Compass' second mine is located in Cote Blanch, Louisiana, and services southern states and the southern portions of Indiana, Ohio, and Pennsylvania, plus Wisconsin, Minnesota, and Missouri. Salt is transported from this mine to customers via the Mississippi, Ohio, and Tennessee Rivers.

Compass normally has substantial inventory at the end of a season but had virtually none after the 2013-2014 season. Nonetheless, Compass submitted a bid for every agency on the MiDEAL RFP for both the early and seasonal fills, albeit at higher prices than last year. It appears that their practice is to bid on everything for every RFP with the expectation that they will only get part of the award. In 2014 Compass bid 551,285 tons in the early fill and 739,794 tons in the seasonal fill. Compass was awarded significant tonnage because of the reduced number of tons bid by Morton, Detroit Salt, and Cargill.

Compass was the only bidder for the Wayne County 2014 early fill, priced at $74.42 per ton. Compass quoted $58.95 per ton for all of the Wayne County seasonal drop points and was awarded the drop points not bid on by Detroit Salt. Wayne County representatives explained that it is unusual to see an early fill price higher than a seasonal price. However, as evidenced by the email from Compass asking to have its award reduced, it is apparent that Compass did not expect to win as much of the award as it did. In the 2013-2014 season, Morton Salt won the Wayne County early fill contract and Detroit Salt and Compass won the Wayne County seasonal fill drop points. In a repeat of previous season, for the 2014-2015 season Compass may have bid higher on the Wayne County early fill because it expected to lose and lower on the Wayne County seasonal drop points because it expected to win.

Compass was also the only bidder in 2014-2015 in all of the counties in the top half of the Lower Peninsula, including Missaukee County. As mentioned previously, Missaukee is paying $82 per ton for the early fill while some neighboring counties are paying just under $70 per ton, and for the late fill Missaukee County is paying $78.61 per ton, while some neighbors are paying under $70. A possible reason for the difference in prices between counties this season can be found in last season's prices. In 2013-2014, Compass won almost all of the early fill bids in the North and Grand Regions,[23] except Detroit Salt won those in Missaukee, Roscommon, Osceola, and Montcalm. Hence, it is likely that Compass bid higher in those counties in 2014-2015, expecting to lose to Detroit Salt, but if Compass won it would be able to command higher prices. Compass did win, given that it was the only bidder in those counties.

[23] The North Region consists of those counties north of Oceana, Newaygo, Mecosta, Clare, Gladwin, and Arenac. The Grand Region consists of Oceana, Newaygo, Mecosta, Muskegon, Ottawa, Kent, Montcalm, and Ionia counties.

The same is true for the seasonal fill bids. Compass won almost all of the seasonal bids in 2013-2014 for the North and Grand Regions, except Detroit Salt won Missaukee, Morton won Roscommon, Osceola, Oceana, Newaygo, and Muskegon, and Cargill won Kent. Compass bid higher in the counties of Missaukee, Newaygo, and Kent, apparently expecting to lose to Cargill (Kent), Detroit Salt (Missaukee), and Newaygo (Morton).

Similar to the situation in Missaukee County, Compass was the only MiDEAL bidder for the City of Grand Haven in 2014-2015. Compass' prices increased everywhere across the State year over year, and Grand Haven's increased by 34%, which was typical. The increase is explained by the inventory shortages discussed previously.

In total, Compass was awarded over 1 million tons of salt in Michigan for the 2014-2015 season. Because the amount awarded was higher than Compass expected, they requested a reduction in the amount of their award which DTMB denied.

Detroit Salt Company

The Kissner Group, a privately held equity group out of Cambridge, Ontario, purchased the Detroit Salt Company from the Ferrantino family in 2010. Kissner made some investments in the mine this past year with additional contract employees and equipment, so production may increase. The mine is currently running at full capacity. It produces more than one million tons of salt annually. Detroit Salt stockpiles salt for delivery to Michigan customers in Detroit and a new facility (as of November 2013) in Lansing. Detroit Salt delivers salt to its Michigan stockpiles via truck.

In 2014 a substantial portion of Detroit Salt's production was slated for renewal contracts with the City of Chicago, the State of Illinois, Livingston County, Genesee County, and Ft. Wayne, Indiana. Additionally, Detroit Salt provides at least five percent of its production to Kissner for retail sales every year.

For the 2014-2015 season, Detroit Salt bid on the Indiana and Ohio-early fill RFPs before the MiDEAL RFP. The MITN RFP was also opened before the MiDEAL RFP, and MITN awarded 280,000 tons to Detroit Salt. Detroit Salt backed out of the Indiana bid, citing lack of inventory, when Indiana asked it to correct a technicality.

On the MiDEAL RFP, Detroit Salt bid 628,500 tons for the 2013-2014 season and only 226,820 tons for the 2014-2015 season, which is a decrease of 401,680 tons. Detroit Salt was awarded 214,070 tons for the 2014-2015 season. Detroit Salt's representative says that it had virtually no inventory at the end of the 2013-2014 season so all of the salt produced now is being shipped directly to customers. Where

Detroit Salt did bid, their prices were lower than their competition. For example, Detroit Salt bid $47.01 per ton on the MiDEAL Wayne County seasonal fill drop points, while Compass bid $58.95 and Morton bid $65.07. (Cargill did not bid).

Detroit Salt chose not to bid on the City of Jackson's request for 4,525 tons through the MiDEAL program, so the City had to go with the Compass quote of $80.22 per ton it received through MiDEAL. However, Detroit Salt contracted directly with Jackson County for 30,000 tons of road salt at $56.17 per ton. Detroit Salt's choice to bid on Jackson County's RFP but not on the Jackson local units in the MiDEAL RFP appears to be attributable to the timing of the RFPs and the location of the bidder. Just two weeks before the MiDEAL bid was opened, Detroit Salt was awarded the 30,000 ton RFP in Jackson County and another 11,000 ton award in Calhoun County. Detroit Salt did not have enough inventory to bid on all of the MiDEAL requests. It chose not to bid on the City of Jackson's MiDEAL request because it did not want to commit to delivering an even larger amount of salt in the same geographic area, especially in the event of a significant snow event.

During our interview with Detroit Salt's representative, he recommended that the State bid as early as possible following a harsh winter because depleted inventories will push prices higher. In contrast, he recommended the State bid later following a mild winter, when inventories are closer to capacity.

Morton Salt

Morton is headquartered in Chicago, Illinois. It operates the Ojibway mine in Windsor, Ontario, Canada, which can produce approximately 2.569 million tons of road salt per year, and a mine in Fairport, Ohio that can produce approximately 1.4 million tons annually. Morton can stockpile road salt for delivery to Michigan in Benton Harbor, Detroit, Muskegon, Saginaw, and Toledo. Morton transports salt from its mines to its stockpiles by truck.

In Michigan, for the 2013-2014 MiDEAL RFP, Morton bid 888,015 tons and was awarded 162,400 but actually sold 194,856 tons to Michigan agencies because of the harsh winter. In 2014-2015, Morton no-bid the early fill and bid 348,295 tons in the seasonal fill. Morton was awarded only 30,000 tons. In the Midwest states, Morton bid 4.502 million tons in 2013-2014 and sold 1.82 million tons. In 2014-2015, Morton bid 3.147 million tons and was awarded 1.473 million tons. Morton reported it cannot take additional business due to its inventory levels, salt production capacity, and service commitment goals.[24]

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[24] Shaver, *Morton Unable to Provide Bulk Road Salt to Wellston*, Jackson County Daily (October 16, 2014). Available at http://www.jacksoncountydaily.com/news/article_72b82f86-436b-570d-abfd-7eb76eba90bc.html.

2014-2015 Winter Season Road Salt Prices in Other Midwest States and Canada

The issue of high road salt prices for the 2014-2015 winter season was not unique to Michigan:

Ohio

Increased salt prices appeared to hit hardest in Ohio, where most counties paid between 43 percent and 128 percent more for salt in 2014 compared to 2013. Some counties rejected bids that were too expensive or received none. The state has stepped in to try to help those counties by buying 170,000 additional tons of salt from an Indiana supplier, Midwest Salt.[25] Midwest Salt reported that it plans to obtain the salt from Morocco and bring it in through the port of Toledo.[26]

Ohio used more than 1 million tons of salt on state roads during the 2013-2014 winter season, which was a nearly 60 percent increase over the average. In 2014, the road salt prices, which are bid on by county, were higher for the first round of bidding for early fill between $36 a ton and $81 a ton, compared to the state average of $35 per ton in 2013. Some communities waited until the second round of bidding for the seasonal fill in hopes of getting a better price, but prices went up, including one quote of $165 per ton. Furthermore, 15 counties received bids of more than $100 per ton, and 10 counties received no bids from suppliers.[27]

Cargill and Morton are the only two companies with salt mines in Ohio. And they have been the only two suppliers of road salt to Ohioans since 1997, probably because Ohio has a "Buy Ohio" law that favors companies that mine salt in Ohio over out-of-state competitors (Ohio miners received a 5% pricing advantage). ODOT only awarded contracts to one of these two companies, even if a non-Ohio salt company submitted a lower bid. This practice discouraged out-of-state vendors from bidding on Ohio salt contracts.[28]

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[25] Karoub, *A Summary of Snow States' Road Salt Problems*, AP (September 29, 2014). Available at http://bigstory.ap.org/article/7623d35d1a6145e9b88ec6ade6db229e/summary-snow-states-road-salt-problems

[26] Patch, *Hard-up Ohio Buys Salt Supplies for Distant Morocco*, Toledo Blade (October 20, 2014). Available at http://www.toledoblade.com/local/2014/10/20/Hard-up-Ohio-buys-salt-supplies-from-distant-Morocco.html.

[27] *Id.*

[28] See *Erie County v Morton Salt, Inc.*, 2011 WL 4361615, *1-2, (ND Ohio 2011).

The Ohio Attorney General filed a state antitrust case against Cargill and Morton in Ohio state court in 2012. *State of Ohio v Cargill et al*, Docket No. 12-cv-030268, Tuscarawas County Court of Common Pleas. The complaint alleges that the two vendors allocated public purchasers, including ODOT, geographically, and therefore were able to raise prices. The State of Ohio survived a motion to dismiss its claim. Discovery is ongoing, and a trial is scheduled for May 12, 2015.

Another complaint making similar allegations was filed by Erie County, Ohio, on behalf of itself and other Ohio counties, in 2011. *Erie County v Morton Salt, Inc et al*, 2011 WL 4361615 (ND Ohio 2011). The district court granted Morton's and Cargill's motions to dismiss, opining that the suppliers' duopoly and increased profits were the result of "'marketplace dysfunction' caused by ODOT's erroneous interpretation of the Buy Ohio law, not of any wrongdoing by the defendants."[29] Erie County appealed to the U.S. Court of Appeals for the Sixth Circuit. While the appeal was pending, Erie County discovered that the counties have never been bound by the Buy Ohio law.[30] The Sixth Circuit affirmed on other grounds, holding that while it appeared that the salt companies engaged in parallel conduct, plaintiffs did not "allege facts sufficient to raise a plausible inference of an unlawful agreement to restrain trade."[31]

Had the counties been bound by the Buy Ohio law, however, the Sixth Circuit court opined that facts were sufficient to raise an inference that the companies engaged in sham bidding.[32] That is because under the Buy Ohio law, for one of the two defendants to automatically win, there has to be bids from at least two suppliers that mine salt in Ohio. As a result, the suppliers bid everywhere, but it appeared that they purposefully submitted losing bids in each other's historical territories.[33]

Indiana

An Indiana procurement agent supplied DTMB with copies of the Indiana road salt awards for 2013-2014 and 2014-2015. Those awards show that Indiana paid between $48.75 and $79 per ton in 2013 and between $71 and $106 per ton in 2014. All four suppliers responded to the initial 2014-2015 RFP, but Detroit Salt withdrew its bid during an initial clarification round. For the past five years, the state has used on average 352,000 tons of salt. During the 2013-2014 winter season,

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[29] *Erie County, Ohio v Morton Salt, Inc and Cargill, Inc*, 702 F.3d 860, 866 (CA6 2012).
[30] *Id*. at 867.
[31] *Id*. at 869-874.
[32] *Id*. at 871.
[33] *Id*. at 871.

which saw heavy snow and bitterly cold temperatures, the state used more than 437,000 tons of salt.[34]

Illinois

Illinois officials said the 2014-2015 season's prices ranged from $75 a ton to more than $130 per ton, up from the previous year's statewide average of about $55. Like other states, Illinois offered centralized purchasing to local governments, but many did not receive bids. Illinois said that it is continuing to work with those communities by connecting them with vendors, and believes that those who need salt ultimately will be able to get it.[35]

Illinois reported to DTMB that it coordinates road salt bids for over 500 local entities, with RFPs requested for half of the locals each year, in alternating years. One of the two-year contracts in their portfolio has a cap on price escalations during the second year. That vendor did honor the 5% escalation contract cap for the usage specified ($55-$60/ton) for the 2014-2015 season.

The locations being taken to market for 2014-2015 pricing had a different experience. In the initial round of bidding, 195 of the local public entities received no bids. Of the locations bid, pricing ranged from approximately $70 - $140 per ton. Illinois chose to issue a second bid, along with 90 local entities, and only 20 locals received bids. Some pricing was over $140.

Missouri

MoDOT said the department paid an average of $80 per ton for road salt for the 2014-2015 winter season. In 2013, it was paying an average of $60 per ton. The department headed into this winter with 220,000 tons of road salt, and on average it uses 180,000 per winter. During the 2013-2014 winter, however, the department used 215,000 tons and bought additional road salt during the season.[36]

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[34] Karoub, *A Summary of Snow States' Road Salt Problems*, AP (September 29, 2014). Available at http://bigstory.ap.org/article/7623d35d1a6145e9b88ec6ade6db229e/summary-snow-states-road-salt-problems

[35] *Id.*

[36] Staff and Wire Reports, *Road Salt Supply Low, Demand High as Winter Looms*, Columbia Daily Tribune, (September 30, 2014). Available at http://www.columbiatribune.com/news/local/road-salt-supply-low-demand-high-as-winter-looms/article_dbfa9e58-4652-53bb-b9c5-c29751958cd4.html

Pennsylvania

Pennsylvania reported a modest 8 to 9 percent increase in salt prices for the 2014-2015 winter season. State transportation officials said they used about 1.2 million tons of road salt during the previous winter, a 43 percent increase over the five-year average.[37] Pennsylvania opened its bid before Indiana, Illinois, Michigan, Missouri, and Ohio-seasonal.

Wisconsin

Officials in Wisconsin paid on average 14 percent more for salt in 2014. A Wisconsin state highways official said he knew the increase was coming but was grateful the state was able to secure salt for all of Wisconsin's 72 counties and hundreds of municipalities.[38] Wisconsin was the third of the Midwest states to open its bid.

Iowa

Iowa officials said that planning ahead enabled the state to lock in a good price for the 2014-2015 season. The Iowa DOT was proactive in putting together a contract for the year and no supply issues were reported.

Statewide prices went up an average of $10 per ton, depending upon which part of the state. The overall average price per ton is $82, about a 13 percent increase over 2013.[39] Iowa was the second state to open its bid.

Minnesota

Minnesota communities paid about 4 percent more on average in 2014 for salt, which the state is crediting to securing prices in early spring before prices jumped. Some local governments paid about 15 percent more, but most increases were more moderate.[40] Minnesota was the first of the Midwest states to open their bid.

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[37] Karoub, *A Summary of Snow States' Road Salt Problems*, AP (September 29, 2014). Available at http://bigstory.ap.org/article/7623d35d1a6145e9b88ec6ade6db229e/summary-snow-states-road-salt-problems

[38] *Id.*

[39] Sutter, *Ready for the Roads*, The Messenger, (October 17, 2014). Available at http://www.messengernews.net/page/content.detail/id/580122/Ready-for-the-roads.html?nav=5010.

[40] Karoub, *A Summary of Snow States' Road Salt Problems*, AP (September 29, 2014). Available at

Canada

Governmental agencies in Canada did not experience the price increases and shortages that we saw in the U.S for the 2014-2015 winter season. In Canada, regional, and provincial government agencies typically contract with private entities to provide winter services. The services include plowing, salt application, sidewalk clearing, etc. These private entities have contracts with the road salt suppliers that are typically multi-year agreements for the purchase of a specified amount of salt. The contracts contain negotiated annual price provisions, which specify the size of a price increase, irrespective of any significant fluctuation in year-to-year demand. Additionally, the salt suppliers' contracts have staggered end dates, so they start each bid season with a known, "committed" amount of salt to be sold to Canadian purchasers.

Investigation Conclusions

Our investigation did not find evidence of price-fixing or other illegal anti-competitive conduct. The 2013-2014 winter was the snowiest winter on record in many Great Lakes states. Michigan's four suppliers report that they depleted their inventories by spring 2014, which is highly unusual as they typically have 15-20 percent inventory remaining at the end of a season. In addition, many states, counties and local municipalities depleted their inventories as well, so the tonnage they requested increased.

A review of road salt contracting in eight other Midwest states indicates that road salt prices increased as the states' bids were opened between May and July 2014. In other words, the later the bid was opened, the higher the price of salt. This timing issue is consistent with salt suppliers having insufficient inventories to cover the demand.

When salt suppliers bid for states' business, they try to win only as much business as they can serve with their expected inventories, and this year their inventories were low. They might bid higher prices in areas where they don't expect to win and lower prices in areas that they want to win. With decreased inventory, they bid higher in a greater number of areas than usual. If they win the higher priced bids, they can meet their obligation with higher cost product, such as salt mined in South America. Due to heavy market demand, fewer road-salt suppliers were willing to bid for supply contracts under the MiDEAL program, which adversely affected pricing for purchasers.

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http://bigstory.ap.org/article/7623d35d1a6145e9b88ec6ade6db229e/summary-snow-states-road-salt-problems

It also appears that there are legitimate explanations for the salt pricing issues raised by Missaukee County, the City of Grand Haven, the City of Jackson, Wayne County, and the City of Dearborn. Due to low salt supplies, only one supplier bid in Missaukee County and City of Grand Haven for the 2014-2015 winter season. This same rationale also applies to the City of Jackson. Detroit Salt did not bid for Jackson under the MiDEAL program in 2014 due to low salt supplies and a need to not overextend itself in the area, since two weeks before the MiDEAL bid was opened Detroit Salt was awarded a 30,000 ton contract with Jackson County and an 11,000 ton contract with Calhoun County. Likewise, Wayne County's pricing anomalies were likely caused by low inventories and the fact that only one supplier bid on the 2014 early fill. Lastly, the City of Dearborn's higher prices compared to the Downriver Community Conference are a result of DCC's three-year contract with a salt supplier.

Recommendations

1) Consider updates to the State bidding process

While this investigation focused on anticompetitive conduct, based on our findings, it appears the timing of the bidding is a crucial factor affecting road salt prices. Understanding that pricing of road salt is a complex process, we recommend further discussions with DTMB and MDOT to identify ways to improve Michigan's position in MiDEAL's road salt bidding process. One potential option is to set an earlier bid date to enable local governments to buy salt earlier in the season and to negotiate multiyear contracts. It appears that opening bids earlier in the year can generate more bids and at lower prices. We understand, however, that following mild winters it may be advantageous to delay the bidding process since stockpiles are high and prices may be lower. Accordingly, we recommend that DTMB review the timing of the bid process and work closely with municipalities to lock in competitive road salt prices.

2) Consider alternatives to road salt and modifying distribution methods

During our investigation we learned that one way to stretch the limited supply of salt is to combine it with other materials. Sand is most commonly used, but it is not the only option. It is our understanding that public works agencies are working with local businesses to obtain manufacturing byproducts to mix in with the salt. They are experimenting with additives such as cheese brine and molasses, rum and vodka distillery leftovers, and sugar beet juice.[41] We recommend that DTMB and MDOT reevaluate how MiDEAL can further utilize alternative products, including products already available under the MiDEAL program.

[41] This report does not address any environmental issues concerning the use of road salt or alternative road de-icing materials.

MDOT is already looking for ways to make salt distribution more efficient and implement techniques to reduce "bounce and scatter" and we encourage this continued review. Properly calibrated dispensing equipment can cut waste by nearly 35%.[42] Washtenaw County, for example, is having salt trucks drive slower and pre-wetting the salt to prevent bounce and scatter.[43]

Combined, new materials and efficient distribution can potentially reduce usage, and thereby lower costs.

According to Mackinac Center for Public Policy, there is no single "silver bullet," but rather a collection of practices that improve overall efficiency and effectiveness. The Center recommends improved plowing technologies, greater focus on calibration procedures, operator training, materials-placement strategies, greater use of liquids, advanced forecasting of weather and pavement conditions, improved material-spreading equipment, and greater public awareness.[44]

3) Evaluate ways to better utilize the Detroit Salt Mine

A major Michigan salt resource is the Detroit Salt Mine. This mine has been in operation for almost 100 years and the Detroit Salt Company appears to have potential to improve its delivery and production methods. Such improvements may potentially result in lower salt prices for the State of Michigan and its citizens. The mine is located 1,200 feet beneath Detroit's surface, spreads out more than 1,500 acres and has over 100 miles of underground roads.[45] As stated previously, it produces more than one million tons of salt annually. This is a smaller operation compared to the other mines in the area.

We recommend that the appropriate state agency meet with Detroit Salt to see if there may be ways to encourage better use of this resource. The company provides jobs to Michigan citizens and the mine is part of Detroit's history. One area to address is Detroit Salt's current delivery methods. It delivers salt to its Michigan stockpiles via truck, and does not use shipping or rail for Michigan deliveries. Increasing Detroit Salt's access to Michigan docks, thereby improving their ability to deliver its salt may allow it to bid in more Michigan communities. Due to its close proximity there may be an opportunity to reduce transportation costs if

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[42] Kozen, *Buyers Beware: Road Salt Prices Are Way Up,* Public Works (September 23, 2014). Available at http://www.pwmag.com/snow-and-ice-control/buyers-beware-road-salt-prices-are-way-up_o.aspx

[43] Karoub, *A Summary of Snow States' Road Salt Problems,* AP (September 29, 2014). Available at http://bigstory.ap.org/article/7623d35d1a6145e9b88ec6ade6db229e/summary-snow-states-road-salt-problems

[44] Cornwell, *Michigan Road Salt: What is costing us*, Mackinac Center for Public Policy (2011). Available at http://www.mackinac.org/15189

[45] Detroit Salt Company homepage. Available at http://detroitsalt.com/

delivery methods improve. In theory, increased competitive bids will result in better pricing. We also recommend discussing ways that the State can support improving Detroit Salt's production methods. An increase in production may allow Detroit Salt to bid in more Michigan localities.

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APPENDIX A

Midwest Salt Production Sites

Source: Salt Institute, Major Salt Deposits and Dry Salt Production Sites in North America Map
http://www.saltinstitute.org/wp-content/uploads/2013/05/Salt-Map-Final.pdf