



## Adequate Storage

According to the Salt Institute's Salt Storage Handbook, an agency should have at least 100% of a normal year's supply stored for its winter operations. Adequate storage is vital for any agency to ensure it will have enough material for a normal winter season. Agencies that have less than 100% of their yearly supply stored onsite will depend on the vendor to store their needed material and be able to deliver that material throughout the winter season. This is critical because many factors can hamper the delivery of the material and the agency assumes a great deal of risk. Demand for delivery is greatest during the winter season and this is normally when delivery conditions are at their worst. Contracts require that salt be delivered in a timely manner to all agencies so vendors must meet these demands. This means agencies compete with one another to resupply their stockpiles. Delivery from mines can also be affected during the season should waterways become impassable. Most salt is moved by barge or ship before being distributed locally by truck. A variety of weather conditions can hamper movement of waterway traffic, but frozen waterways virtually cease any deliveries.

Agencies that can store 100% of their seasonal needs should have the salt in place prior to the beginning of the winter season. Agencies that do not have it in place are subject to the same delivery issues stated above. Agencies that have multiple sites need to consider if the storage they have is adequate for the area it serves.



Polem Silos

A best practice is agencies having storage for 150% of average annual salt usage, appropriately placed throughout their region of operations. The greater the storage capacity that an agency has, the less their salt costs will be impacted by changes in demand for salt especially after high salt

Having 100% of your seasonal needs means you will have enough material in a normal winter. Depending on the contract some agencies may purchase additional material, but this may be subject to higher prices. In times of salt shortages price can be less of a factor than availability but higher prices are inevitable because salt must come from less traditional sources and shipping costs increase.

Agencies that store 150% or more of their yearly needs rarely run out even in extreme winters. For those agencies, mid-winter deliveries will only be required during extremely severe winters, although as a matter of practice take salt deliveries during the winter season to maintain their stockpile readiness

Practice in salt procurement	Impact of practice
Having storage for 100% to 150% of average annual salt needs (AASN)	Lowers costs
Having emergency stockpile for 20% to 40% of AASN	Lowers costs
Specifying desired salt quantities as tightly as possible	Lowers cost
Requiring mid-winter delivery in short time period	Raises Costs
Having Multi-year contracts	Lowers costs
Allowing salt deliveries at any given time (rather than during work hours) Requesting bids earlier in the year	Lowers costs
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Having multi-year contracts	Lowers costs
Taking pre-season fills of salt	Lowers costs



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**The numbers:** Agencies with adequate storage are less likely to face shortages, less likely to be impacted by delivery issues and less likely to encounter higher costs.

**The Alternatives:** Implement a long-term plan to increase storage. Consider shared facilities with other agencies. Consider vendor holding reserves for your agency.

**The needs:** With many changes in the types of storage facilities more storage may be possible at reasonable costs. Additionally, many facilities have met their useful life and when replacing them today's needs may be addressed in additional storage and proper placement. Consider adding conveyor systems to maximize the full potential of any facilities capacity.

