

Parking Lot Deicing

DuPage River – Salt Creek Watersheds Salt Application Rate Guidance



DuPage River Salt Creek Workgroup



Effective Salt Spreading

Effective salt application rates will be different at different pavement temperatures. Pavement temperature sensing is considered best management practice and essential for best estimating salt application rates. Pavement temperature sensors have become very affordable and readily available from deicing equipment suppliers, including very simple to use hand-held sensors.

Per other deicing guidance (Winter Parking Lot and Sidewalk Maintenance Manual, Fortin Consultants), the practice of pre-wetting or pre-treating salt can reduce the application rate for solid salt up to one-third of the normal application rates. The practice of pre-wetting salt involves adding a liquid to the salt as it comes off of the truck. The practice of pre-treating salt involves adding a liquid to the salt stockpile before spreading occurs.

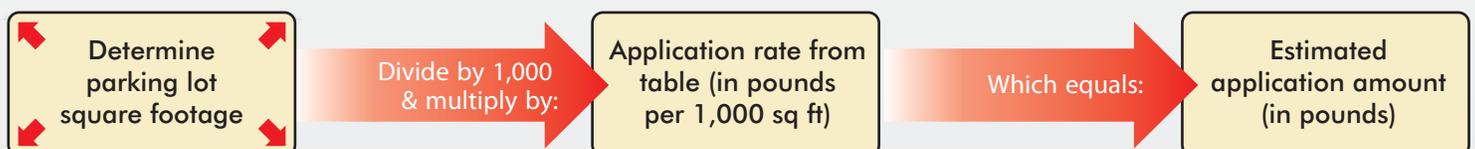
The table to the right provides application rates suggested for a range of pavement temperatures.

PARKING LOT SPREADING TABLE	
Pavement Temperature Range	Pounds per 1,000 Square Feet
Greater than 30° F	3
25°- 30° F	5
20°- 25° F	6
15°- 20° F	7
5°- 15° F	8
Less than 5° F	Ineffective

The application rates contained within this guidance have been developed by combining the experience of deicing program managers and information contained within numerous deicing program reference documents. Your own experience and trials with the application rates suggested in this guidance will produce the optimal results.

SPREADING CALCULATION TEMPLATE

Use this template to estimate the amount of salt needed for your parking lot.



See www.drscw.org for more information

Parking Lot Deicing

DuPage River – Salt Creek Watersheds

Sample Calculations

Example 1: High School Parking Lot



Step 1: Check pavement temperature.

Measure pavement temperature. For this example, assume the pavement temperature is 23°F.

Step 2: Estimate parking lot size.

Assume a medium sized parking lot measuring 200ft by 300ft (60,000 square feet).

Step 3: Look up the application rate in the Parking Lot Spreading Table.

For this parking lot example, the estimated application rate is 360 pounds, about seven 50lb. bags.

$$(60,000 \text{ square feet}) \times (6 \text{ pounds}/1,000 \text{ square feet}) = 360 \text{ pounds}$$

Step 4: Spread salt evenly over the parking lot using your calibrated equipment.

Example 2: Department Store Parking Lot



Step 1: Check pavement temperature.

Measure pavement temperature. For this example, assume the pavement temperature is 28°F.

Step 2: Estimate parking lot size.

Assume a large size parking lot measuring 300ft by 500ft (150,000 square feet).

Step 3: Look up the application rate in the Parking Lot Spreading Table.

For this parking lot example, the estimated application rate is 750 pounds, about fifteen 50lb. bags.

$$(150,000 \text{ square feet}) \times (5 \text{ pounds}/1,000 \text{ square feet}) = 750 \text{ pounds}$$

Step 4: Spread salt evenly over the parking lot using your calibrated equipment.



DuPage River Salt Creek Workgroup



Funding for this guidance is provided in part by the Illinois Environmental Protection Agency through Section 319 of the Clean Water Act.

See www.drscw.org for more information