



FOR COMMERCIAL USE

THE ULTIMATE GUIDE

to

Winter Snow Removal



To learn more, or to purchase HeatTrak's Commercial Snow-Melting Mats,
Call to speak with a HeatTrak Specialist at (888) 586-4904 | info@heattrak.com | HeatTrak.com

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Getting Started

Having an effective snow removal plan for your facility is a necessity with today's unpredictable weather. A last-minute storm can have personnel scrambling to clear parking lots, sidewalks, and other areas before they pose a risk to site visitors; a significant snowfall can have employees working around the clock trying to keep up with snow accumulation.

The average person thinks of snow removal as an occasional problem dealt with using a shovel or maybe a snow plow. However, every facility manager and business owner who has to deal with this issue understands that the problem is much more complex.

This e-book will lay out the primary problems that can arise for facilities every winter, from cost considerations to issues with individual snow removal methods. It will also highlight how these problems can be exacerbated without the proper planning and approach to the winter months. After all, understanding what you and your property are facing is the first step to understanding how to tackle it, and help keep your facility safe and continuously running this winter.

CHAPTER 1:

The Real Costs of Snow Removal

Over the last few years, the world has seen a significant shift in climates and weather patterns. The US felt this in full force during the polar vortex cold wave of 2013-2014, and then again last year, when cities across the Midwest and Northeast set records for lowest temperature hit in a given month, as well as snowfall level. Along with the ever fluctuating levels of snowfall comes the ever increasing cost of snow removal. For large facilities, a full winter of snow removal can cost in the tens of thousands, and many have reported those prices doubling in heavier winters.

Supply and demand

In addition to the obvious factors affecting snow removal cost, such as the size of your facility and the amount of snow that needs to be removed, there are other causes to consider when budgeting your snow removal plan. Heavier winters don't just bring more snow to remove, but also a supply and demand structure that benefits snow removal contractors and de-icing salt suppliers. As snowfall rates increase, and more people in a given area require the supplies or contractors necessary to tackle large snow banks, those very supplies and contractors will cost a lot more.

Clearly defined terms

The other heavy costs of snow removal are not always as apparent, as they are hidden in poorly negotiated contracts or unforeseen lawsuits. Ensure that you have clearly defined every aspect of your snow removal plan with any hired contractor--cost per inch, which areas need attention, the use of deicing materials, etc. Otherwise, you might see unexpected charges on your bill at the end of winter, and find yourself suing or being sued over breach of contract.

Negotiate contracts early

Prepare for these costs by negotiating your contracts early. By agreeing on a cost in the summer, you're sure to pay a fair price no matter how heavy the snow hits. Further, should there be another rock salt shortage, such as the one that hit in 2013-2014 and then again in 2014-2015, a pre-negotiated contract will ensure that your facility doesn't have to scramble for this in-demand deicing tool.

Liability

Of course, all of these costs towards ensuring that snow and ice are properly removed are well worth it, as they pale in comparison to the cost that can be incurred due to injuries sustained on your property. Slip and fall accidents are major incidents for liability. The cost of a lawsuit, hiring attorneys, and going to court can seriously impact the financial state of even large companies. While the average slip and fall settlement is typically in the tens of thousands, some have been known to cost millions.

In short, snow removal for large facilities is a costly matter. You therefore might want to start outlining your snow removal budget early, in order to best consider any factor you might face in the impending winter, and prepare your facility and property accordingly.

CHAPTER 2:

The Trouble with Common Snow Removal Techniques

To assist in the removal of snow on a larger-scale property, facility managers often employ a variety of commonly used techniques, including shoveling, snow blowing, and de-icing tools. Although each method is known for its disadvantages, building maintenance managers are often tempted to stick with them as they have become the norm within their operations.

Some of the problems these common techniques pose for facilities include:

1.

Limited equipment and resources.

Most if not all facilities operate with limited human and financial resources, as well as finite equipment. This means it is not a cheap, easy, or often feasible task to maintain comprehensive motorized snow and ice removal 24 hours a day throughout an extended storm. Most snow removal plans therefore concentrate their efforts to accommodate visitors during operating hours. In addition, service is often adjusted for weekends, holidays, and break periods--leaving chunks of time where your facility is vulnerable to extreme weather conditions.

2.

Clean up usually cannot begin during the snowstorm.

During a storm, while precipitation is falling, snow removal efforts are usually geared towards providing accessible paths to, from, and between parking lots and buildings. Clearing of building entrances, stairs, and ramps may be ongoing, but it is highly dependent on the availability of custodians. The full maximum motorized clean-up effort, however, generally does not begin until the storm's snowfall is complete, making certain areas of the property risk zones.

3.

Shoveling is very human intensive.

For shoveling to truly be effective as a snow removal option, either your facility needs to be small or your workforce needs to be large. Besides being a very back-breaking exercise, shoveling often sees employees assigned to the task needing better equipment and methods. The work is time-consuming and can cause damage to your workers' health, making it an unwise choice for your staff long-term. Further, it is ultimately not the most effective snow removal method--it is impossible to remove enough snow and ice to prevent hazards through shoveling alone.

4.

Snow blowers aren't much better.

Snow blowers are a fast way to remove snow down to the concrete and are much more efficient than shoveling. Unfortunately, they often use a lot of electricity or gas to run, especially if you need to clear a large area. Gas snow blowers in particular create a significant amount of air and noise pollution; plus they require regular tuning up, cleaning, and oil changes, which can be time consuming.

CHAPTER 2:

(Cont.)

5.

Sand is more expensive than you think. Plus it's an environmental hazard.

Sand is one of the most common substances used to assist the melting of snow. However, the sand that was thrown down on the ice for traction and safety becomes a hazard after the ice is all melted. Sand, which is really just small gravel, acts like ball bearings on dry pavement, and requires a costly parking lot sweeper to clean up the loose pieces. It can also clog storm drains causing an increased risk of flooding. These clean up factors can cause sand, that had been cheap to throw down, to cost upwards of \$200/ ton by the end of winter.

Sand is also an extreme pollutant. It can be ground by tires into very fine particulate matter and become airborne, contributing to air pollution. Sand can also clog pavement joints and cracks, preventing the pavement from expanding in the summer and increasing stress. It has also been found to alter aquatic habitats in areas where roads are near streams and lakes.

6.

... And so is salt.

Deicing salts are known to be just as toxic as sand, if not more. Rock salt damages the infrastructure of bridges, concrete, and steel structures. It also increases the amount of replanting and reseeding each spring to account for salt damage to landscaped areas. Salt from deicing roads and walkways leach heavy metals into water supplies. Salt harms feeding animals when it enters the soil, and can lodge into the paws of pets, causing a painful burning sensation. It can also cause long-term damage to plants and vegetation.

CHAPTER 3:

How to Prepare

Having an effective snow response strategy is vital to the survival of any commercial business during the winter. But this preparation must begin way before the winter months roll around, as maintenance professionals know all too well.

“ We don’t just close the book, so to speak, when April 1 rolls around,” says Tim Holysz, director of landscape services at Western Michigan University. “We continue on throughout the year. We always have snow removal in the back of our minds because it is so important,” he says in an interview with **Chris Matt from Facilities Net**.

Here are some ways to confidently and preparedly approach the winter months:

Review and Re-strategize

First begin by taking a look at your current snow removal plan of action. Consider what didn’t work well last year, and ask your team for feedback. Consider factors such as how many areas need to be maintained, how long it takes to clear each area, the frequency of touch ups, how much additional labor it costs, and what methods are in place to monitor your walkways.

Check Equipment

The next thing you want to do is to take a full inventory of your current snow removal equipment, and to ensure that everything is tuned up, maintained, and working properly. The last thing you want is for the cold weather to arrive and then find out that a key piece of equipment is not performing to capacity.

Consider whether your current equipment matches the needs of your workload, and ensure that you have an adequate amount of backup equipment in case something fails in the midst of a snowstorm.

A Detailed Plan

Establish a clear and detailed snow removal plan of action for your team, to ensure that everyone is ready and knows their place when a snow event does loom. Some elements to consider include:

- Designate a supervisor and others in the chain of command.
- Identify snow removal personnel. It should be clear who is available during an emergency. A call-out list will get essential personnel on-site when the plan is activated.
- Prioritize key areas, so crews know where to start. Classify areas such as sidewalks, roadways, maintenance facilities, building entrances, parking lots, and others.
- Have contractual agreements with two snow removal companies, one with heavy equipment for roads and parking lots, the other for the sidewalks, etc.

CHAPTER 3:

(Cont.)

Key Performance Criteria

With a view to assisting property managers in meeting their wintertime goals, the Snow and Ice Management Association (SIMA) has created a checklist of seven key performance criteria (KPC), which you can use to assess and improve your snow removal plan. They are as follows:

- 1. Risk Management:** Your risk-reduction policies should enable you to securely stack snow and prevent its re-freezing on walking surfaces. It is also imperative to verify that outsourced snow removal services are handled by fully insured contractors.
- 2. Cost-Effectiveness:** Detailed planning allows you to make reasonable estimates of snow-related expenditures long before winter begins. Service any equipment early, and obtain budget estimates for supplies and personnel.
- 3. Rapid Execution:** You need a plan for fast, effective action to respond to heavy snowfalls. You should stockpile two weeks of different ice-melting products that work well at various temperatures. You should also optimally position your resources based on forecasts and designate reserve equipment.
- 4. High-Quality Service:** Quality service includes prioritizing snow-removal in handicapped parking spaces and around fire hydrants, using a site inspection procedure, and having at least one manager on-site during snow-removal activities.
- 5. Communication, Documentation, and Verification:** Phone trees and electronic notification systems can help to quickly communicate updates on the snow situation both during and following a storm. For legal reasons, you should document all snow-removal efforts, and for safety's sake, you should verify jobs are completed via site-visits and completion logs.
- 6. Certification and Education Standards:** Valuable ongoing training is available for snow-removal managerial staff. SIMA, for example, offers 30 online seminars and an advanced Certified Snow Professional course.
- 7. Professionalism and Expertise:** SIMA's recommendation is for snow-removal managers to have five years or more of experience and for staff members to have at least two years' experience.

Every facility manager must cope with the realities of winter and must strive to meet standards of excellence, such as those outlined in the SIMA checklist. By meeting these goals, a business keeps itself operational, accessible, safe, and on solid legal ground.

CHAPTER 4:

Take the Safest Route this Winter

Office buildings, hospitals, universities, and other facilities with heavy foot traffic can be hazardous places during inclement weather. Keeping visitors to your organization safe from weather-related mishaps requires careful planning and attention to detail. Here are a few safety precautions and best practices to follow during the winter season

Alert Your Visitors to Snowplow Trucks

In a best-case scenario, snowplowing contractors report to your facility at night, remove all snow and ice, and leave the parking areas clear and ready for business the next day. But during periods of heavy snowfall and for facilities that are open 24 hours, it is unavoidable that snowplow trucks will be in use while pedestrians are coming to and from the building.

Drivers scrambling to complete a fixed number of contracts move quickly through each job, making it even more dangerous to those walking from their car to the building. Visitors need to be advised that snowplow trucks are in the vicinity. Consider posting signs around your parking lot advising people walking to be on the alert for these trucks.

Check the Pavement for Dips

If you are using rock salt and other chemicals, remember that they can be corrosive to your pavement. Over time, this can lead to depressions and holes that are just as hazardous to pedestrians as snow and ice. Repair any uneven surfaces before the first snowfall.

Check All Lights and Outlets

Winter hours mean less daylight in the morning and even less at night. Each season, ensure that outer lamps are in working order and perform routine maintenance checks on each lamp regularly. Be sure to also check outdoor electrical outlets to ensure they are clear of snow and ice and that they are in proper working order. Check wires to ensure they are properly insulated.

Be Aware of Dripping Precipitation

When temperatures rise, snow collected inside gutters and other areas around the perimeter of your building will melt and drip down to the pavement below. When the temperature rises again, you now have a patch of ice. It is essential to prevent this type of dangerous pattern that occurs with changing temperatures. The Insurance Institute for Business & Home Safety provides maintenance tips for keeping your roof drainage system in good shape for winter.

Check the Lobby and Interior Walkways

It's not only the outside areas of your facility that you need to be concerned with. Visitors will track snow from their boots and shoes into the building. This liquid gathers on tiled lobbies and interior walkways, creating an indoor hazard. Ensure that absorbent mats are placed in interior areas to catch liquid before it can be tracked further into the building.

MOVING FORWARD

The challenges faced by facility managers and maintenance workers in the winter months are not small or easily overcome. As outlined above, successfully combating recurring winter storms, while keeping your property ADA compliant and minimizing all snow-related risks and delays, requires a detailed plan and a commitment to high standards of excellence.

Understanding the issues you might face, and preparing a general approach to the season, are the first steps to a safe and successful winter. Of course, that plan needs to be populated by specific snow removal solutions that can best address any particular needs on your property. Each segment of the facility grounds that needs attention, such as parking lots, sidewalks, emergency exits, crosswalks, walkways, stairways, and entryways, will need a customized response policy. One area may best be handled by one method, while another is better addressed in a different way.

For a more detailed look and analysis at the most common commercial snow removal solutions, and how they might fit into your winter plan, download our free guide, ***The Complete Handbook for Commercial Snow Removal Solutions.***

Just be sure that whichever snow removal solution you choose fits into your wider winter plan, and accounts for the safety of your facility, the efficiency of your workers, the flexibility of your budget, and all other factors presented above.

BONUS FEATURE:

The Winter Facility Maintenance Checklist



- Keep walkways, doorways, stairways, and high-traffic areas free of clutter and debris.
- Keep sidewalks, walkways and rooftops free of ice and snow.
- Fill holes and depressions around the building that may accumulate excess ice, snow, and water. Inspect all concrete, stone or brickwork and if needed, try to repair them before the snowy season begins.
- Inspect gutters and downspouts for leakage as this can cause dangerous ice patches to form.
- Ensure the facility has proper lighting both inside and outside.
- Regularly replace burnt-out light bulbs and be sure to use the appropriate wattage.
- Install light switches at the top and bottom of buildings' stairs.
- Make sure stair height and tread widths meet building codes, and that each step is identical in size.
- Use nonskid pads to secure area rugs and throw rugs.
- Make sure adequate insurance coverage is in place in case there is an accident on the organization's property.
- Know your assets – hardscape and softscape items as well as how many miles of sidewalk you have and how many steps and entrances so you can look at the whole general pattern.
- Guard your technology and data. Winter weather can result in costly power outages due to ice and wind. It is critical to backup all company and client data daily, either on site or through a hosted, off-site cloud service.
- Avoid electrical shutdowns. Determine if your office requires individual surge protectors or a large building surge protector with battery back-up. For data centers, it is recommended to use an uninterruptible power supply (UPS).
- Review your telecommuting protocol in case employees are unable to get to work during or after the storm.
- Replace belts and filters in order to purify air streams and optimize fan performance.
- Analyze all boilers performance to ensure that they will operate efficiently during the winter.
- Start up heating systems and program set points to maximize operational attributes.
- Perform an oil analysis on all compressors because lubrication is vital to properly shutting down compressors.
- Standardize equipment where possible to eliminate the need of dealing with several vendors when repairs are needed.
- Repair and prepare - inspect in detail and repair the problems found and make sure the budget has the required money to replace or fix any problems.
- Provide heated enclosures around operating equipment where possible.
- Make sure an emergency generator is available.
- Evaluate winter maintenance costs.
- Review your snow removal program and adjust as needed.

About HeatTrak

Heat Trak, LLC is the world's premier manufacturer of outdoor heated matting products. Founded in 2004, the company's products are an efficient and convenient way to eliminate snow and ice accumulation around the home or workplace. The company's products are sold in the US, Canada, and Europe.

Heattrak manufactures and sells portable snow melting mats for both home and commercial use. Both mats are designed to prevent snow and ice accumulation on walkways and stairs by melting snow on contact. HeatTrak Residential Products are smaller size mats, designed to connect together to fit most residential applications. HeatTrak's Industrial mats, however, products are large heavy duty mats, that come in a variety of large sizes suitable for commercial facilities. These products are ideal for hospitals, universities, restaurants, office buildings, and other areas with heavy foot traffic.

About Snow Melting Mats

The innovative of snow melting mats offers the perfect snow removal solution for commercial and residential properties. The primary benefits include the following:

Portable - No Expensive Installations

There is no need for expensive installation. The HeatTrak products are portable, designed to lie on top of existing surfaces. Place a HeatTrak mat over existing entranceways, stairs, loading docks, handicap ramps, rooftops, and many other surfaces to provide a clean and safe passageway for foot or wheelchair access.

Safer Walkways

HeatTrak's heated mats are a better solution for slip prevention. The HeatTrak products continuously melt snow and ice keeping surfaces constantly clear and safe. In addition, the HeatTrak mats are designed with a continuous chevron pattern to provide extra traction.

Cleaner

The HeatTrak mats are a better alternative than calcium chloride. Salted entranceways lead to messy floors indoors as calcium chloride gets tracked inside by foot traffic. In addition, HeatTrak mats help preserve sidewalks, as calcium chloride will eat away at walkways over time.

Durability

The engineers at HeatTrak have taken great care to develop a durable, safe and effective snow and ice melting system. The HeatTrak products are made of an electrically operated heating element sandwiched between two protective surfaces of non-slip rubber, making them as durable as automobile tires and allowing them to endure harsh wear. The HeatTrak products plug directly into any standard 120V or 240V outlet using its own ground fault circuit interrupter (GFCI).

A HeatTrak specialist is waiting to work with you today.



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