



## **Snow & Ice Management Standard Glossary of Terms**

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## Glossary Terms of Use

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## **Glossary Management Plan and Policy Governance**

As a standards creating body, SIMA values continuous feedback, openness, transparency and adherence to the law. In accordance with these values, SIMA created a management plan that will serve as the governing document for the process of managing, updating and reviewing the Glossary over time.

Any person or organization that has a recommended change, addition, or deletion to the glossary can follow a simple process outlined at [www.sima.org/glossary](http://www.sima.org/glossary). General questions can be emailed to [info@sima.org](mailto:info@sima.org).

## General Industry Terms

**Private Snow Management Industry:** Comprised of all companies, organizations and people, including suppliers, manufacturers, contractors, subcontractors, and clients, engaged in the exchange of money, services, and resources related to snow and ice management. Most often associated with service for private property owners (retail, commercial, industrial, office, HOA, residential homes, etc.) but includes government agencies that hire private snow contractors to service streets, facilities and sidewalks.

**Service Area:** Specific locations on a site where some portion of work will be performed as a part of the service agreement.

**Site:** The property or collection of contiguous properties where services are to be performed.

**Snow and Ice Management:** The combination of all business practices and operational procedures used to prevent or mitigate the effects of snow and ice accumulation on a site or set of sites.

**Snow Contractor:** A person, business, or private organization that provides billed snow and ice management services for one or multiple clients.

**Subcontractor/Independent Contractor:** A person, business, or private organization that is contracted to perform specific services for another party, and does not have legal status as an employee, as defined by federal, state or provincial laws.

## Contractual, Documentation, and Legal Terms

**Accumulation Threshold:** A Service Initiator (see glossary definition). The agreed-upon maximum amount of snow or ice accumulation acceptable. Not to be confused with Trigger Depth. Related term: Level of Service. Copyright Snow and Ice Management Association 2015.

**Level of Service (LOS):** A description of the expected outcome(s) on a site or set of sites from the completed performance of snow and ice management services. Level of Service typically defines expectations for surface conditions at specific times (completion times) or timeframes, or alternate/additional expectations for events that exceed a defined timeframe and/or a defined amount of accumulation(s). Synonym: Service Level Agreement (SLA).

**Scope of Work (SOW):** Defines the service criteria (e.g. snow clearing, ice management, etc.) and specific areas to be serviced on a site or set of sites. The SOW can include any issues that may impact the execution of service (i.e. poor site drainage, slopes/hills etc.). Synonyms: Statement of Work, Statement of Services. Related term: Level of Service.

**Service Initiator:** A contractually defined start of one or more snow services (plowing, deicing, snow relocation, etc.). Service Initiators can take many forms, including Trigger Depth (see glossary definition); Accumulation Threshold (see glossary definition); weather forecast; written request by a client;

automated or tech-enabled “service request” or work order; experienced judgment by a snow professional (site inspection, ice watch, etc.).

**Service Report:** A document or digital submission detailing the services provided during an event, often including some or all of the following:

1. Name and location of site
2. Operator(s) or account manager on-site
3. Date of service
4. Time of service (start and end times)
5. Conditions of physical site upon start of service (snow and ice specific)
6. Condition of physical site upon completion of service (snow and ice specific)
7. Weather-related conditions or circumstances
8. Services rendered
9. Materials applied (types and amounts)
10. Notes/Special circumstances or conditions
11. Photos
12. Videos

**Service Verification:** Any organized combination of plans, processes, actions, technologies, records, and documents designed to collect and store data related to snow and ice management services rendered. Collected data includes but is not limited to location (GPS, etc.), chemicals (deicers used, amounts, etc.), weather (temperatures etc.), and site details (conditions, hazards, etc.). Verification of services performed is a critical element of professional snow and ice management and helps to ensure accurate information for accountability, billing, risk management, and historical production rate tracking.

**Trigger Depth:** A Service Initiator (see glossary definition). The agreed upon measurable amount of accumulated snow or ice wherein snow and ice management services will be dispatched. Related term: Level of Service.

## Operations and Service Terms

**Anti-icing:** The act of applying a deicer chemical (a liquid or a solid) to a surface before the storm starts in an effort to prevent ice from forming and bonding to the surface or to enhance plowing efforts. Often referred to as ‘pre-treating’ a site, not to be confused with Pre-treating as defined in this glossary.

**Bare Pavement Regain/Recovery Time (BPRT):** The amount of time elapsed to expose at least 80% of a paved surface from snow & ice accumulation. (*Source: Hosseini, Hossain, Fu, San Gabriel, & Seters, 2015*).

**Completion Time:** The specific time, time range or set of times for completing service expectations agreed upon in the Level of Service (e.g. clear by 7 a.m.; clear between 7 - 8 a.m.; clear 2 hours after snow event ends, etc.). Copyright Snow and Ice Management Association 2015.

**Cycle Time:** The estimated time it takes to service a site, service area, or route once (aka a single cycle). Cycle Time is influenced by a variety of factors, including Level of Service and production rate(s).

**Deicing:** The act of applying a deicer chemical (typically a solid or pre-wet solid) to an accumulation of ice or snow in an effort to melt it and weaken its bond to the surface.

**Direct Liquid Application (DLA):** The process of applying a liquid deicer directly to a surface. (*Sources: Sexton/Witt Advisers 2017; Pam Buckley/Douglas Dynamics 2017; Roads & Bridges magazine September 2011 issue, article 'Liquid Only Diet' by Brian Hirt; Clear Roads Manual of Best Management Practices for Road Salt in Winter Maintenance, Wilf Nixon, PhD, Mark DeVries, 2015*).

**Event:** A meteorological weather system with a defined start and stop time that produces any type or combination of winter precipitation (ice, snow, hail, sleet, freezing rain, etc.). Synonym: Snow Event.

**Ice Management:** The mitigation of ice accumulation or potential ice accumulation using chemical or physical processes.

**Ice Melting:** The act of changing the freeze point of water to temperatures below 32°F (0°C) through deicing chemical application. (e.g. Sodium Chloride, Magnesium Chloride, etc.).

**Ice Monitoring:** A contractually agreed upon service in which one or more people visit a site to monitor for signs of ice accumulation. Synonyms: Ice Watch, Policing, Ice Patrol.

**Pre-treating:** The application of a liquid deicer to a solid deicer product (e.g. rock salt) to further enhance deicer performance. This is not the same as anti-icing.

**Roof Snow Management:** The act of clearing snow off of a roof structure or system.

**Sanding:** The application of an abrasive (typically sand) in an attempt to temporarily mitigate slick conditions. Sand does not melt anything but is often used at temperatures when it is too cold for deicers such as Sodium Chloride (NaCl) to work.

**Site Engineering Plan:** A visual representation of a site that includes some or all of the following related to snow and ice management: Areas to be serviced/high priority areas, key obstacles, and logistical information such as where snow will be piled, etc.

**Site Map:** A visual map of a site or set of sites used for bidding snow services and serving as a basis for creating a Site Engineering Plan.

**Snow Clearing:** The moving of accumulated snow from the surface of a defined service area. Synonyms: Snowplowing, or Snow Pushing.

**Snow Dump:** A defined area to store large amounts of snow from one or many sites. Synonyms: Snow Field, Snow Farm.

**Snow Hauling:** Part of the Snow Removal process, it is the act of transporting snow and other winter precipitation accumulations from a site to another offsite location for storage.

**Snow Management:** The mitigation of snow accumulation or potential snow accumulation using chemical or physical processes.

**Snow Melting:** The physical act of melting snow and other accumulations using heat generated by fuel or electrical means (e.g. snow melting machine, heated sidewalks, radiant heat, etc.). Snow Melting does not include the use of chemicals, as commonly seen in deicing.

**Snow Relocation:** The physical act of moving snow within the boundaries of a service area after the Snow Clearing process has occurred. Relocation is implemented to further stack, stage or manage piles of snow within a service area.

**Snow Removal:** The physical act of taking snow completely away from a site during or after an event. Snow Removal is not synonymous with Snow Relocation.

**Snow Response Plan:** A written service response plan for a site that outlines specific actions based on the Resource Allocation Projection and Site Engineering Plan. The plan may include contingencies tied to Level of Service (LOS) priorities, weather intensity and pre-/post-storm preparation.

**Snow Stacking:** The process of creating a large pile of snow for storage or temporary staging.

**Snow Storage:** Piling or stacking snow in a permanent location until natural melting occurs.

**Thaw and Refreeze:** A general phrase related to a series of changes in the physical state of snow or other winter accumulation, in which the accumulation changes from a solid to a liquid then refreezes due to temperature fluctuations. Synonym: Melt and Refreeze.

**Zero Tolerance:** A general term used to describe a low tolerance for snow and ice accumulation levels on a site or Service Area. The descriptor alone does not designate a Level of Service (LOS). See Level of Service (LOS), Trigger Depth, Accumulation Threshold, and Completion Time for definitions related to Level of Service outcomes.

## **Estimating and Fee Structure Terms**

**Efficiency Factor:** An approach used by a snow contractor to estimate the level of difficulty for servicing a particular site, parking lot, or area. Considers layout, topography, obstacles, and unique physical characteristics that will impact plowing and other services. Uses some type of multiplier applied to a Production Rate to determine a modified Production Rate taking loss of efficiency into account. (Example an A Lot = no obstructions; 100% efficiency, B Lot = moderate obstructions; 90% efficiency, etc.).

**Production Capacity:** The overall available service potential based on calculated production rates for equipment, materials, labor, and subcontractors.

**Production Rate:** The amount of time it takes to complete work in a specific area (e.g. 2 acre parking lot) with a specific resource (e.g. 8-foot straight plow, 2-person sidewalk crew, etc.).

Resource Allocation Projection: A process of estimating the amount of labor, equipment and materials required for meeting the Level of Service. It typically will include a synthesis of Accumulation Threshold and/or Trigger Depth; Completion Times; and historical weather data, including accumulation amounts and frequency. Also takes into account site logistics, route density, travel times and proximity of resources (labor, equipment, materials) allocated for other sites. Copyright Snow and Ice Management Association 2015.

Snow Portfolio: The total book of business managed by a snow contractor.

## Estimating and Fee Structure Terms – Fee Structures and Modifiers

Cap: A fee modifier wherein an upper limit, typically a frequency or measurement (e.g. number of occurrences or number of inches) modifies specific service fees. After the cap has been reached, additional fees or increased costs apply. Typically associated with Per-Season Service. Synonym: Ceiling.

Floor: A fee modifier wherein a discount, credit or fee adjustment is implemented if a lower limit or amount (e.g. number of occurrences, number of inches, etc.) is not reached during a specified duration of service (month, season, etc.). Typically associated with Per-Season Service. Synonym: Minimums.

Inclusion: 1) A request for a snow management estimate to include all estimated pricing related to labor, materials, and resources for a service contract. 2) A fee structure modifier typically associated with Per-Season Service, in which all materials to conduct the work, including deicers and sand, are included in the overall price of the service, generally with no Caps. Synonym: All-inclusive.

Per Event: A fee structure where agreed upon fees are assessed for a defined set of services each time an event has occurred. In this case, the parameters of an event are outlined in the contract and are typically restricted by specific timeframes and specific conditions, typically including amount of accumulation (range of inches/centimeters), ice events, and extreme conditions.

Per Season: A fee structure in which agreed upon fees are assessed as a standardized fee (typically monthly) paid over the period of the contract for a defined set of services. Synonyms: Seasonal, Lump Sum, Fixed Fee.

Per Service: A fee structure, in which agreed upon fees are assessed each time a salt application, snow clearing or both is completed. This fee structure can result in multiple billable services performed during one Event. Synonyms: Per Push/Per Salt, Per Visit, or Per Application. Synonym: Per Occurrence.

Time & Materials (T&M): A fee structure where agreed upon fees are assessed based on the amount of time (labor and equipment) and materials (deicers, sand, stakes, etc.) used, and any other contractually agreed upon services. Synonym: Hourly.



# Weather Terms

**Air Temperature:** The temperature observed at approximately 5 to 6 feet above ground elevation in order to represent how warm or cold it is at the average height of humans. This is the temperature reported by media sources in public weather forecasts and observations.

**Black Ice:** Patchy ice on a surface that is difficult to see because of its transparency. Black Ice forms when liquid water remains on ground surfaces and cools below freezing, regardless of the air temperature.

**Blizzard:** A storm that contains large amounts of snow or blowing snow, with winds in excess of 35 mph and visibilities of less than a quarter mile for an extended period of time (at least 3 hours).

**Dew:** The water vapor in the air that turns to liquid on a surface.

**Dew Point:** The temperature at which the moisture content in the air becomes liquid.

**Freezing Rain:** Rain that hits a surface with a temperature below freezing, causing the formation of ice since the rain freezes shortly after contact.

**Glaze:** A condition caused when clearing snow from a paved surface. It can occur in the same conditions that form black ice, but forming after snow is cleared from the surface.

**Hail:** Hail forms as a byproduct of strong updrafts during thunderstorms. Drops of water become hailstones as they rise upward with the wind into sub-freezing temperatures.

**Ice:** The solid form of water. Ice forms only when water is exposed to temperatures below freezing.

**Lake Effect Snow:** Formed when cold air masses move over warmer lake waters. As the warm lake water heats the bottom layer of air, lake moisture evaporates into the cold air. This moisture condenses and forms clouds, resulting in snowfall.

**Microclimate:** The climate or other associated weather-specific conditions of a small geographic area that can differ from the larger surrounding area (e.g. Lake Effect Snow, Wind Corridors, etc.).

**Properties of Snow:**

**Snow Density:** A measure of the amount of snow in a given volume or space. When the volume of the constant mass of snow decreases, the density increases; that is, the same amount of snow occupies a smaller volume. Undisturbed snow has a lower density than snow compacted by plowing, vehicle tires, or ice.

Density = Weight (lb.)/Volume (cubic ft.)

**Snow Hardness:** Refers to the snow's resistance to collapse or penetration. Snow hardness depends on the grain structure and temperature. The grain structure depends on the snow

density and extent of bonding between adjacent grains. Snow hardness can be determined by measuring the resistance to penetration.

**Snow Compressibility:** Compressibility is the compacting of snow (i.e., pressing the snow into a smaller area), resulting in increased density, weight per volume, and hardening. A volume of snow can be reduced by as much as eight times by compaction. The pores of cold, dry snow are filled with air and water vapor. In wet snow, the ice grains are coated with water. Thus, the degree to which the snow can be compressed will significantly influence the snow removal effort and the selection of snow removal equipment.

**Snow Cohesiveness:** Cohesion refers to the attraction between similar materials and the ability of the grains to interconnect. Fresh cold, dry snow lacks cohesion because it lacks intergranular contacts. As snow ages, the number of grain contacts increases, and thus, cohesion increases. The compressive strength of the displaced snow increases because of the cohesion of the increased number of closely packed particles

**Snow Adhesiveness:** The attraction of dissimilar materials (e.g., snow and pavement). New, dry snow falling on cold, dry pavement will not adhere (bond) strongly. As the temperature rises above about 20° F (-7° C), the amount of liquid surrounding the snow grains increases. This increases the adhesion of the snow to pavement because of the attraction water has for contact surfaces.

**Temperature Instability:** Temperature Instability affects the amount of liquid coating the snow particles, which in turn influences compressibility, hardness, density and cohesiveness. This characteristic is probably the most important factor affecting its properties, and thus the most important factor affecting snow management services.

**Snow Age Hardening:** Another consequence of Temperature Instability of snow is its change in structure with time. An undisturbed snow mass will densify (decrease in volume) and increase in hardness and compressive strength. The snow crystals will then grow, causing the bond strength between crystals to drop rapidly, leading to the formation of snow with a rough granular surface. This snow has very low cohesion and is easily penetrated.

**Effects of Mechanical Agitation:** The hardening process that occurs by breaking up the layers and particles of snow is accelerated by mechanical agitation, which occurs either from wind action causing drifting snow or plowing. This effect has very practical implications in snow management. For example, the time and effort in plowing will be reduced if the snow is plowed to its final resting place on the first run, rather than being plowed again after the snow's rapid hardening.

**Relative Humidity:** The amount of water vapor in the air relative to what it could hold at a given temperature.

Road Weather Information Systems (RWIS): A system that comprises automatic weather stations (referred to as environmental sensor stations) in the field; a communication system for data transfer; and central systems to collect field data from numerous stations. These stations measure real-time atmospheric and pavement temperatures, water level conditions, and visibility. Central RWIS hardware and software are used to process observations from ESS to develop forecasts, and display or disseminate road weather information in a format that can be easily interpreted.

Sleet: Frozen raindrops. Sleet occurs when rain falls through a deep enough layer of the atmosphere to freeze before reaching the ground surface. It can occur when surface temperatures are either above or below freezing; and unlike freezing rain, sleet hits the ground as frozen ice pellets that can accumulate. Synonym: Ice Pellets. (Source: [https://en.wikipedia.org/wiki/Ice\\_pellets](https://en.wikipedia.org/wiki/Ice_pellets)).

Slush: Wet snow with a water content in excess of 30%. It has no compressive strength but can refreeze, creating a hazardous condition.

Snow: Precipitation in the form of ice crystals. It originates in clouds when temperatures are below the freezing point, when water vapor in the atmosphere condenses directly into ice without going through the liquid stage. Once an ice crystal has formed, it absorbs and freezes additional water vapor from the surrounding air, growing into a snow crystal or snow pellet, which then falls to Earth.

Surface Temperature: The temperature of a ground surface (e.g. black top, concrete, grass) at a specific time and location.

Temperature: A measure of the coldness or warmth at a specific time and location expressed in either Fahrenheit (F) or Celsius (C) degrees.

## **Equipment and Technique Terms**

### **Equipment and Technique Terms – Snow Clearing Equipment**

Back Blade Plow: A plow that is mounted on the rear of a vehicle. As the vehicle moves forward, the blade is lowered to the ground to pull snow.

Containment Plow: A plow that differs from a conventional snowplow in two major ways: 1) the moldboard is affixed with end plates that are designed to contain the snow. Typically used with skid steer loaders, backhoe loaders, and wheel loaders. Synonyms: Box Plow, Pusher.

Fixed Wing Plow: A straight blade plow that has been up-fitted with wing attachments on one or both sides, providing more surface area for snow carrying capacity and minimizing loss. Wing attachments cannot be manually manipulated in different configurations.

Plow: A piece of equipment designed to physically move snow and ice.

**Sectioned Containment Plow:** A containment plow that has areas of the entire moldboard or a portion of the moldboard/blade that individually “trip” or release tension when pushed over an obstacle or object (e.g. curb).

**Straight Blade Plow:** A plow absent of any hinges within the moldboard that can be angled left or right with the use of hydraulic angling cylinders.

**V-Plow:** A plow with an inherent hinge in the center of the moldboard, which allows the plow to be configured multiple ways, including in “V” position, Scoop position, and Straight Blade position.

## Equipment and Technique Terms – Snow Clearing Technique

**Back Dragging:** A technique to move or clear snow by lowering the blade and driving in reverse, dragging the snow away.

**Bucking the Windrow:** A snow plowing technique where two pieces of plowing equipment work in tandem. One piece of equipment plows straight lines across an area, while the second cuts a perpendicular swath across the windrows created by the first piece of equipment, with a goal of reducing the volume of snow load for each pass. Copyright Snow & Ice Management Association 2017.

**Forced Air Blowing:** Moving snow using forced air (i.e. leaf blower etc.).

**Scoop Position:** The configuration of a V-Plow, Fixed Wing Plow, or other articulating plow in which the blade components form an inverse shape. Commonly used for moving/plowing larger amounts of snow.

**Snow Throwing:** Moving snow using a belt- or auger-powered unit (i.e. snow blower). Synonym: Snow Blowing.

**Snowplowing:** The act of moving, clearing, or manipulating snow or other winter precipitation using a snowplow.

**Sweeping:** Moving snow or ice accumulation using a broom, either powered by equipment or by hand.

**Windrow:** A row or line of snow or other winter precipitation plowed together for the purpose of clearing. Synonym: Berm.

**Windrowing:** A snowplowing technique that involves angling the snowplow to the left or right while plowing, which rolls the snow toward the direction of the angle. This results in the creation of a piled trail of snow (the windrow or berm) as a way to briefly accumulate such precipitation for further relocation or removal.

## Equipment and Technique Terms – Sidewalks

**Sidewalk Crew:** A team of laborers tasked with clearing snow and ice from sidewalks, using any combination of operational tactics, including shoveling, deicing, and plowing with sidewalk-specific equipment. Synonym: Shovel Crew.

Sidewalk Spreader: A piece of equipment designed to spread deicing materials (solid or liquid) in a sidewalk setting.

## Equipment and Technique Terms – Spreader and Spraying Equipment

Calibration: Determining a precise measurement of the material output of a given deicer spreading/spraying unit under different settings and vehicle speeds. The goal of calibration is measuring and applying a consistent rate/set of output rates over time.

Hopper Spreader: A piece of equipment with larger capacities than tailgate spreaders. Solid deicer material is normally loaded into the hopper in bulk, with a conveyor or auger system that feeds the material to the rear of the unit, dropping material onto a powered spinner assembly. Synonym: V-Box spreader.

Liquid Application System: Any truck-mounted spray system used to apply liquid deicers directly to the surface.

Pre-Wet Systems: Liquid application systems for pre-wetting salt in the auger or at the spinner just prior to spreading.

Tailgate Spreader: A piece of equipment that attaches to the back of a truck, often to the trailer hitch or vehicle frame and distributes solid deicer either by broadcasting the material with the use of a spinner, or dropping the material directly down.

## Equipment and Technique Terms – Spreading and Spraying Technique

Pre-wetting: Coating solid materials with liquid to increase effectiveness directly before application. Pre-wetting can be achieved in three main ways:

1. Applied at the spinner as material leaves the spreader.
2. Applied to each load prior to placing it in the spreader.
3. Applied to the entire load of salt in the spreader.

Stockpile Treatment: The application of a highly viscous liquid material to all of or a portion of the stockpile. With abrasives (e.g. sand) it is used to reduce freezing of material in the pile. With solid deicer products, it is used to help prevent freezing and to increase performance.

## Chemical and Material Terms

Abrasive: Sand or another solid material placed on a slippery surface to temporarily improve traction for walking and/or driving. Abrasives alone do not melt snow and ice.

Anticaking Agent: An additive typically added to deicer material to prevent caking/clumping. (*Source: [https://en.wikipedia.org/wiki/Anticaking\\_agent](https://en.wikipedia.org/wiki/Anticaking_agent)*).

**Blended Product:** Deicing product that contains two or more ice melt chemicals or other ingredients for the purpose of improved melting performance.

**Bounce and Scatter:** The movement of a deicing material after it strikes a surface and scatters across or off of that surface. Variables that impact the propensity of deicers to scatter across pavement include velocity, surface type, material type, density and hardness.

**Cake (verb):** Forming of a crust or lump(s)/clumping in a solid deicer material. (e.g. 'The salt was caking in the spreader.'). (Source: <https://en.wiktionary.org/wiki/cake>).

**Cation Exchange:** The displacement of calcium and magnesium ions in the soil by sodium ions, causing a decrease in soil permeability, aeration, and fertility. This exchange can have a negative impact on vegetation.

**Deicer:** A material to melt snow and ice. Commonly used deicers include sodium chloride, magnesium chloride, calcium chloride, and potassium chloride in either solid or solution (liquid) form. A deicer can be used in the anti-icing or deicing mode of operations. Synonym: Ice Melt.

**Effective Temperature:** The lowest temperature at which it is cost effective or practical to use a deicer. (i.e. salt works down to -6° but under 15° becomes less effective, etc.).

**Endothermic:** Noting or pertaining to a chemical change that is accompanied by an absorption of heat.

**Eutectic Temperature/Eutectic Point:** The lowest possible freezing point in a solution.

**Exothermic:** Noting or pertaining to a chemical change that is accompanied by liberation of heat.  
Synonym: Heat of the Brine.

**Hygroscopic:** A property of some materials to absorb or attract moisture from the air.

**Liquid:** General term used to describe any deicer chemical in a liquid state. It can be used to pre-treat solid deicers, anti-ice, deice, or pre-wet solid deicers or reapplications.

**Pickled Grit:** Grit/sand that has been treated with a deicer at the stockpile.

**Salt Brine:** Water saturated or strongly impregnated with salt.

**Sand:** A combination of granular rock or other material used to provide traction as an abrasive during winter conditions. As it is not soluble in water, it has no melting properties. Synonym: Grit.

**Spalling:** The physical breakdown of surface layers (typically concrete) that crumble under pressure. Cycles of wet-dry and freeze-thaw cycles can cause pavement spalling.

## Chemical and Material Terms – Types of Deicers

**Calcium Chloride (CaCl<sub>2</sub>):** An exothermic salt.

Calcium Magnesium Acetate (CMA): A biodegradable acetate deicer.

Magnesium Chloride (MgCl<sub>2</sub>): An exothermic salt.

Potassium Acetate (KC<sub>2</sub> H<sub>3</sub> O<sub>2</sub>): A water-soluble crystalline compound composed of Potassium/Carbon, Hydrogen and Oxygen.

Sodium Chloride (NaCl): An endothermic salt. Synonym: Rock Salt.

Urea: A water-soluble nitrogen based product (47-0-0) compound resulting from the reaction of liquid ammonia and liquid carbon dioxide.

## **Snow and Ice Management Association Terms**

Advanced Snow Manager (ASM): An individual who has successfully earned snow-specific certificates in the following Advanced Snow Management courses: Core Principles, Ice Management, Plowing Operations, and Sidewalk Operations. The Advanced Snow Manager designation is a training designation not a certification. Copyright Snow and Ice Management Association 2014.

Certified Snow Professional (CSP): An individual who has met all prerequisites, passed the Certified Snow Professional exam, and actively maintained certification in good status via annual submission of continuing educational credits and an annual certification renewal fee. Copyright Snow and Ice Management Association 2015.

Snow and Ice Management Association (SIMA): A 501-c6 non-profit trade association serving the Private Snow Management Industry. Copyright Snow and Ice Management Association 1996.

## References

Best Practices Checklist for Snow & Ice Management, Snow & Ice Management Association.

Cation Exchange White Paper, Author Phil Harwood, CSP, published by the Snow & Ice Management Association, 2009.

Certified Snow Professional training modules 1-6, Snow & Ice Management Association.

Dictionary.com

National Oceanic and Atmospheric Administration

National Snow & Ice Data Center

Wikipedia - Road Weather Information Systems definition specifically

## Stakeholder Reviews (April 2015 – January 2016)

Special thank you to all of the individuals who reviewed terms:

*Snow contractors/Facilities Management/Subject Matter Experts/SIMA Staff*

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*Contracted reviews:*

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**Snow and Ice Management Standard Glossary of Terms – Full Term Index, Alphabetical by Category and Subcategory**

<b>Term</b>	<b>Category</b>	<b>Subcategory</b>
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<b>Site</b>	General Industry Terms	
<b>Snow and Ice Management</b>	General Industry Terms	
<b>Snow Contractor</b>	General Industry Terms	
<b>Subcontractor/Independent Contractor</b>	General Industry Terms	
<b>Accumulation Threshold</b>	Contractual, Documentation and Legal Terms	
<b>Level of Service (LOS)</b>	Contractual, Documentation and Legal Terms	
<b>Scope of Work (SOW)</b>	Contractual, Documentation and Legal Terms	
<b>Service Initiator</b>	Contractual, Documentation and Legal Terms	
<b>Service Report</b>	Contractual, Documentation and Legal Terms	
<b>Service Verification</b>	Contractual, Documentation and Legal Terms	
<b>Trigger Depth</b>	Contractual, Documentation and Legal Terms	
<b>Anti-icing</b>	Operations and Service Terms	
<b>Bare Pavement Regain/Recovery Time (BPRT)</b>	Operations and Service Terms	
<b>Completion Time</b>	Operations and Service Terms	
<b>Cycle Time</b>	Operations and Service Terms	
<b>Deicing</b>	Operations and Service Terms	
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<b>Event</b>	Operations and Service Terms	
<b>Ice Management</b>	Operations and Service Terms	
<b>Ice Melting</b>	Operations and Service Terms	
<b>Ice Monitoring</b>	Operations and Service Terms	
<b>Pre-treating</b>	Operations and Service Terms	
<b>Roof Snow Management</b>	Operations and Service Terms	
<b>Sanding</b>	Operations and Service Terms	
<b>Site Engineering Plan</b>	Operations and Service Terms	
<b>Site Map</b>	Operations and Service Terms	

<b>Snow Clearing</b>	Operations and Service Terms	
<b>Snow Dump</b>	Operations and Service Terms	
<b>Snow Hauling</b>	Operations and Service Terms	
<b>Snow Management</b>	Operations and Service Terms	
<b>Snow Melting</b>	Operations and Service Terms	
<b>Snow Relocation</b>	Operations and Service Terms	
<b>Snow Removal</b>	Operations and Service Terms	
<b>Snow Response Plan</b>	Operations and Service Terms	
<b>Snow Stacking</b>	Operations and Service Terms	
<b>Snow Storage</b>	Operations and Service Terms	
<b>Thaw and Refreeze</b>	Operations and Service Terms	
<b>Zero Tolerance</b>	Operations and Service Terms	
<b>Efficiency Factor</b>	Estimating and Fee Structure Terms	
<b>Production Capacity</b>	Estimating and Fee Structure Terms	
<b>Production Rate</b>	Estimating and Fee Structure Terms	
<b>Resource Allocation Projection</b>	Estimating and Fee Structure Terms	
<b>Snow Portfolio</b>	Estimating and Fee Structure Terms	
<b>Cap</b>	Estimating and Fee Structure Terms	Fee Structures and Modifiers
<b>Floor</b>	Estimating and Fee Structure Terms	Fee Structures and Modifiers
<b>Inclusion</b>	Estimating and Fee Structure Terms	Fee Structures and Modifiers
<b>Per Event</b>	Estimating and Fee Structure Terms	Fee Structures and Modifiers
<b>Per Season</b>	Estimating and Fee Structure Terms	Fee Structures and Modifiers
<b>Per Service</b>	Estimating and Fee Structure Terms	Fee Structures and Modifiers
<b>Time &amp; Materials (T&amp;M)</b>	Estimating and Fee Structure Terms	Fee Structures and Modifiers
<b>Air Temperature</b>	Weather Terms	
<b>Black Ice</b>	Weather Terms	
<b>Blizzard</b>	Weather Terms	
<b>Dew</b>	Weather Terms	
<b>Dew Point</b>	Weather Terms	

<b>Freezing Rain</b>	Weather Terms	
<b>Glaze</b>	Weather Terms	
<b>Hail</b>	Weather Terms	
<b>Ice</b>	Weather Terms	
<b>Lake Effect Snow</b>	Weather Terms	
<b>Microclimate</b>	Weather Terms	
<b>Properties of snow</b>	Weather Terms	
<b>Relative Humidity</b>	Weather Terms	
<b>Road Weather Information Systems (RWIS)</b>	Weather Terms	
<b>Sleet</b>	Weather Terms	
<b>Slush</b>	Weather Terms	
<b>Snow</b>	Weather Terms	
<b>Surface Temperature</b>	Weather Terms	
<b>Temperature</b>	Weather Terms	
<b>Back Blade Plow</b>	Equipment and Technique Terms	Snow Clearing Equipment
<b>Containment Plow</b>	Equipment and Technique Terms	Snow Clearing Equipment
<b>Fixed Wing Plow</b>	Equipment and Technique Terms	Snow Clearing Equipment
<b>Plow</b>	Equipment and Technique Terms	Snow Clearing Equipment
<b>Sectioned Containment Plow</b>	Equipment and Technique Terms	Snow Clearing Equipment
<b>Straight Blade Plow</b>	Equipment and Technique Terms	Snow Clearing Equipment
<b>V-Plow</b>	Equipment and Technique Terms	Snow Clearing Equipment
<b>Back dragging</b>	Equipment and Technique Terms	Snow Clearing Technique
<b>Bucking the Windrow</b>	Equipment and Technique Terms	Snow Clearing Technique
<b>Forced air blowing</b>	Equipment and Technique Terms	Snow Clearing Technique
<b>Scoop position</b>	Equipment and Technique Terms	Snow Clearing Technique
<b>Snow throwing</b>	Equipment and Technique Terms	Snow Clearing Technique
<b>Snowplowing</b>	Equipment and Technique Terms	Snow Clearing Technique
<b>Sweeping</b>	Equipment and Technique Terms	Snow Clearing Technique
<b>Windrow</b>	Equipment and Technique Terms	Snow Clearing Technique

<b>Windrowing</b>	Equipment and Technique Terms	Snow Clearing Technique
<b>Sidewalk Crew</b>	Equipment and Technique Terms	Sidewalks
<b>Sidewalk Spreader</b>	Equipment and Technique Terms	Sidewalks
<b>Calibration</b>	Equipment and Technique Terms	Spreader and Sprayer Equipment
<b>Hopper Spreader</b>	Equipment and Technique Terms	Spreader and Sprayer Equipment
<b>Liquid Application System</b>	Equipment and Technique Terms	Spreader and Sprayer Equipment
<b>Pre-Wet Systems</b>	Equipment and Technique Terms	Spreader and Sprayer Equipment
<b>Tailgate Spreader</b>	Equipment and Technique Terms	Spreading and Spraying Equipment
<b>Pre-wetting</b>	Equipment and Technique Terms	Spreader and Sprayer Technique
<b>Stockpile Treatment</b>	Equipment and Technique Terms	Spreading and Spraying Technique
<b>Abrasive</b>	Chemical and Material Terms	
<b>Anticaking Agent</b>	Chemical and Material Terms	
<b>Blended Product</b>	Chemical and Material Terms	
<b>Bounce and Scatter</b>	Chemical and Material Terms	
<b>Cake (verb)</b>	Chemical and Material Terms	
<b>Cation Exchange</b>	Chemical and Material Terms	
<b>Deicer</b>	Chemical and Material Terms	
<b>Effective Temperature</b>	Chemical and Material Terms	
<b>Endothermic</b>	Chemical and Material Terms	
<b>Eutectic Temperature/Eutectic Point</b>	Chemical and Material Terms	
<b>Exothermic</b>	Chemical and Material Terms	
<b>Hygroscopic</b>	Chemical and Material Terms	
<b>Liquid</b>	Chemical and Material Terms	
<b>Pickled Grit</b>	Chemical and Material Terms	
<b>Salt Brine</b>	Chemical and Material Terms	
<b>Sand</b>	Chemical and Material Terms	
<b>Spalling</b>	Chemical and Material Terms	
<b>Calcium Chloride (CaCl<sub>2</sub>)</b>	Chemical and Material Terms	Types of Deicers
<b>Calcium Magnesium Acetate (CMA)</b>	Chemical and Material Terms	Types of Deicers

<b>Magnesium Chloride (MgCl<sub>2</sub>)</b>	Chemical and Material Terms	Types of Deicers
<b>Potassium Acetate (KC<sub>2</sub> H<sub>3</sub> O<sub>2</sub>)</b>	Chemical and Material Terms	Types of Deicers
<b>Sodium Chloride (NaCl)</b>	Chemical and Material Terms	Types of Deicers
<b>Urea</b>	Chemical and Material Terms	Types of Deicers
<b>Advanced Snow Manager (ASM)</b>	Snow and Ice Management Association Terms	
<b>Certified Snow Professional (CSP)</b>	Snow and Ice Management Association Terms	
<b>Snow and Ice Management Association (SIMA)</b>	Snow and Ice Management Association Terms	