



# Snow and Ice Treatment and Removal Plan

## ***United Methodist Conference Locations and Local Churches***

*This plan is designed to be customized by  
Local Churches and Conference Offices to meet their needs.  
The purpose of this plan ensure safe, prompt  
snow and ice treatment and removal.*

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### Notification of Essential Personnel

Every attempt will be made to notify essential personnel before the end of their work shift, but no later than 9:00 pm the night before they are to report [edit to meet local needs]. However, there may be times when the weather conditions necessitate an immediate call-in of all available staff to assist in snow removal efforts.

### Reporting to Work

On workdays with overnight snowfall forecasted, the pre-selected Contractor shall begin work at 6:00 a.m. to begin clearing driveways, parking lots, and walkways for staff reporting to work, early childhood customers, and congregants attending services [edit this paragraph to meet local needs]. Designated on-foot contractors and/or staff will work from 7:00 a.m. to 6:00 p.m. [edit to meet local needs] to shovel and salt/sand stairs, building entrances and isolated walkways. If the weather forecast predicts continued snow, additional personnel may need to continue shoveling and salting/sanding, as predicated by scheduled evening events.

### Employee Training

Training of all employees involved in snow and ice removal operations must occur prior to any winter storm activity. Appendix A includes cold weather hazards. Depending on experience, employees will be trained on the safe operation of the types of equipment they will be operating and on tasks to be performed, and shall include the use of personal protective equipment and foul weather gear. Equipment may include tractors, utility vehicles and trucks with implements such as plows, spreaders, sprayers, blowers, etc. This also includes walk-behind and hand held equipment. Exhibit D includes "Safe Snow Shoveling".

### Personal Protective Equipment and Foul Weather Gear

The following are guidelines for foul weather gear which should be included in employee training:

- Layer clothing to adjust to changing environmental temperatures.
  - Wear a hat and gloves, in addition to underwear that will keep water away from the skin (preferably made of polypropylene).
  - When wet, cotton loses its insulation value and should not be worn directly next to the skin.
  - Wear insulated boots with good treads (see below for ice/snow cleats).
  - Keep a change of clothing available in case work clothes become wet.
  - Do not wear tight clothing. Loose clothing allows better ventilation of heat away from the body.
  - Venting perspiration is often more important than protecting oneself from the snow.
  - Provide custodians with ice/snow cleats to enhance their grip on slippery surfaces.
- Following are a few options (inexpensive and available on Amazon):



Yaktrax Walk Traction Cleats for Walking on Ice and Snow



STABILicers Maxx 2 Heavy Duty Traction Cleats for Safety in Ice and Snow  
Blisstime Crampons Ice Cleats 11 Teeth Snow Traction Cleats



and



### **Warning Signs of Exposure to Cold**

Employees should know the warning signs of weather related illnesses should inform their supervisors of concerns (refer to Appendix A, “Cold Weather Work”).

### **Shoveling Safely**

Shoveling can be a strenuous activity, particularly since cold weather can be taxing on the body and can create the potential for exhaustion, dehydration, back injuries, or heart attack. There are precautions that should be taken to avoid injury when shoveling snow (see Appendix C, “Safe Snow Shoveling”). Post this information pre-season.

### **Inclement Weather Policy**

Occasionally, if weather conditions are severe enough to preclude safe travel on a given day, the Church Pastor may declare an Inclement Weather Day by 6:30 am [edit for local needs]. Following is the means of communication [edit here the means of communication to be used for the local church/office - phone chain, email, and/or text, etc.].

### **Prioritization of Work**

The Conference location and local church shall determine the prioritization of snow removal and ice treatment areas, based upon the types of programs and services. Effort shall be directed toward high traffic walkways, parking lots, and entrances. Ensure the prioritization of the following areas:

- Parking lots and sidewalks leading to early childhood and before/after care and office entrances
- Fire lanes
- Vehicular routes
- Weekend event parking lots
- Pedestrian pathways and those with ADA requirements

### **Snow and Ice Removal Operations**

Following are instructions regarding snow and ice removal operations.

- Snow removal operations will start upon one inch snow accumulation; the Pastor and/or delegate determines when to commence and when to notify contractors and employees of its commencement.
- Complete Snow/Ice Treatment log, Appendix B, to document activities related to ice/snow treatment and removal. This is important in the event the Conference needs to defend a General Liability claim.
- When accumulations exceed one inch, plow trucks, tractors, and/or loaders driven by Contractors or Custodian Staff (if qualified), will be deployed. Shoveling will be accomplished by designated shovelers (see Appendix D, “Safe Snow Shoveling”).
- Emergency areas such as fire lanes, fire hydrants, and emergency exits or entranceways must be monitored more frequently.
- Methods of ice treatment shall be identified and supervised, including when and where to use salt or sand.
- Ensure the remove of icicles from above doors, porches, and pedestrian walkways.



- Ensure adequate drainage of melting snow/ice by clearing storm drains.
- Monitor and retreat areas of melted snow/ice to prevent refreezing.
- Allow sufficient time (if possible) for chemical treatments to take full effect.
- Consider type of treatment for given conditions. For example, calcium chloride is more effective in extreme cold.
- High piles of snow can reduce visibility around corners. Ensure piles of snow do not block equipment or fire hydrants or impede opening of exterior evacuation doors.
- Review drainage and puddle formation, correct if it is in frequent foot traffic areas.
- Consider engineering controls such as heated walking surfaces when practical. Relocate downspouts if they discharge water onto walking surfaces.
- Remove or provide warning of “hidden” hazards that could be inadvertently struck by cars or trip pedestrians if covered by snow (fire hydrants, curbs, grates, etc.).
- Review municipalities’ ordinances or codes dealing with snow and ice removal. Likewise, states and counties may have statutory and/or case laws that establish or influence the level of care or specific activities associated with property care.

See Appendix C for comparison of various ice melt products, as per Consumer Reports (Dec. 2018).

### **Post-Storm Activities**

Ensure employees know exactly the tasks they are to perform d after the storm. Below are activities to ensure that hazards on walking surfaces are minimized after the storm:

- Widen sidewalks and clear secondary entrances
- Ensure emergency exits doors are operable (no snow blocking)
- Re-salt any ice covered areas
- Clean equipment to help avoid corrosion
- Take inventory of ice melt supply and purchase additional supply if necessary
- Check and service all equipment

### **Equipment and Ordering of Supplies**

Appropriate snow and ice removal tools and equipment should be inventories pre-season and periodically throughout the winter season, including:

- Snow shovels
- Ice melting compounds
- Ice chippers
- Wheel barrows
- Snow blowers
- Snowplows
- Interior door mats or nonskid runners (and replacement mats)

### **Pre-Season Preparation and Post-Season Wrap-Up**

See appendix F for checklists covering essential pre- and post-season work.

### **Prevention of Roof Collapses**

Building codes vary but requirements have generally increased over the years, and as such, older buildings may be designed to lesser requirements. If you are unaware how much snow



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your building(s) can safety handle, contact a structural engineer or a qualified builder (in advance of a snow event) to assist in determining the snow load design for these buildings. The following steps can be taken to prepare for the next winter storm (see Appendix E, Prevention of Roof Collapses, for additional information).



## Appendix A – Cold Weather Work

Use this to inform employees of the hazards of working outdoors in cold temperatures.

When are you at **Risk**?

- When you work outside for long periods of time.
- When your skin is exposed to the cold weather elements.
- When your clothing is wet.

What are the **Hazards**?

- **Hypothermia** – your body loses heat faster than it can be produced which causes a low body temperature. Body temperature that is too low affects the brain, making the victim unable to think clearly or move well. This makes hypothermia very dangerous because a person may not know it is happening to them.
- **Frostbite** – an injury caused by freezing which can cause a loss in feeling and change of skin color to affected areas. The nose, ears, cheeks, chin, fingers, and toes are at highest risk.
- **Dry or Cracked Skin** – Skin exposed to cold air and wind can become irritated, causing a loss of moisture which can lead to cracks in the skin. If cracks in the skin occur, increased precautions should be taken when handling chemicals.
- **Numb Fingers** – loss of feeling in the fingers can decrease accuracy and may be a safety concern when precision is required.

How can you **Prevent** a problem?

- You should reduce your time outside in the cold when possible and wear layers of warm clothing.

How do you **Recognize** a problem?

- **Hypothermia** – shivering, exhaustion, confusion, fumbling hands, memory loss, slurred speech, drowsiness.
- **Frostbite** – white/grayish-yellow skin area, skin feels unusually firm or waxy, numbness.

How should you **React** to a problem?

**Hypothermia:** check the body temperature; if below 95°F it is an emergency and must receive immediate medical attention. Start warming the body by:

- Stay in a warm room
- Remove any wet clothing
- Warm beverages can help increase body temperature, but DO NOT give alcohol!
- Seek medical attention

**Frostbite:** seek medical attention and check for symptoms of Hypothermia.

- Stay in a warm room
- Unless absolutely necessary, do not walk on frostbitten feet or toes
- Immerse the affected body area in warm water (not hot!)
- Do not rub the frostbitten area at all
- Do not use a heating pad, heat lamp, or heat of a stove or fireplace to warm
- Seek medical attention



## Appendix B – Snow/Ice Treatment Log

Date: \_\_\_\_\_ Building Location: \_\_\_\_\_

Current Temperature: \_\_\_\_\_

Precipitation:  Snow  Sleet  Freezing Rain  Rain

Area	Type of Treatment						Time			
	Plow	Blow	Shovel	Salt	Sand	Anti-Icing Chemical	Time	a.m.	p.m.	
Stairways/Steps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
Sidewalks/Walkways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
Entrances/Exits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
Ramps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
Parking Areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
Person Completing Log:							Title:			
Start Time:		<input type="checkbox"/> a.m. <input type="checkbox"/> p.m.	Finish Time:				<input type="checkbox"/> a.m. <input type="checkbox"/> p.m.			
Comments:										

## Appendix C – Ice Melt Comparison

	Effective temp.	Asphalt/concrete damage	Best for	Benefits	Precaution(s)
 \$10 to \$19* <b>CALCIUM CHLORIDE</b> <small>(residential and commercial use)</small>	-25° F	Minimal to moderate	Those in a time crunch	More effective than sodium chloride Fast acting	Can damage grass and plants when overapplied
 \$20 to up* <b>CALCIUM MAGNESIUM ACETATE</b> <small>(Parking garages and airports)</small>	20° F	Moderate	Contractors	Environmentally friendly Less corrosive than chloride products	Can damage concrete
 \$10 to \$19* <b>MAGNESIUM CHLORIDE</b> <small>(residential and commercial use)</small>	-13° F	Moderate to significant	Pet owners Gardeners Those in a time crunch	Environmentally friendly Safer around pets More effective than sodium	Can damage plants when overapplied Lethal to pets that suffer from kidney disease if ingested

 \$20 and up* <b>POTASSIUM CHLORIDE</b> <small>(residential use, especially homes with pets)</small>	25° F	Minimal to moderate	Pet owners Gardeners	Environmentally friendly Safer around pets	Can damage grass and plants when overapplied Lethal to pets that suffer from kidney disease if ingested
 \$10 or less* <b>SODIUM CHLORIDE/ROCK SALT</b> <small>(residential and commercial use)</small>	20° F	Minimal to moderate	Bargain hunters	Inexpensive	Can damage asphalt, concrete, brick, stone, metal, grass, plants, and wood decks. <i>Don't use on concrete less than 1 year old.</i> Lethal to pets if ingested
 \$10 or less* <b>UREA/CARBONYL DIAMIDE</b> <small>(residential use, especially homes with pets)</small>	10° F; better at 25° to 30° F	Minimal (almost nonexistent)	Pet owners Gardeners	Environmentally friendly Safer around pets	Can damage plants when overapplied Not very effective as deicer

\*Price per 50-lb. bag

## Appendix D – Safe Shoveling

### Shoveling Snow?

*Following are a few reminders to prevent injuries from shoveling snow.*

#### **Select an Ergonomic Shovel:**

- Lighter than normal shovels
- Contoured handle is designed to reduce or eliminate bending and decrease lifting
- Some have adjustable handle lengths
- A small, lightweight, plastic blade helps reduce the amount of weight that you are moving - Each shovelful of snow can weigh 20 pounds



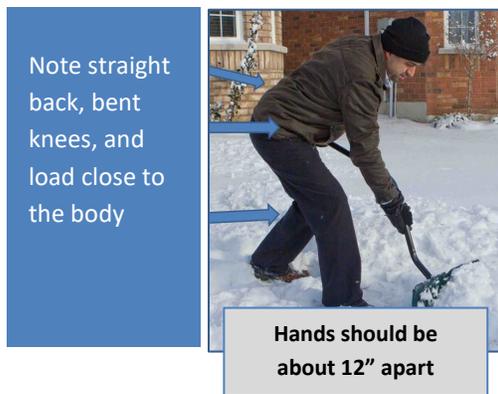
#### **Before Shoveling:**

- Cold, tight muscles are more prone to injury than warmed up, flexible muscles.
- Get your blood moving with a brisk walk, marching in place, or another full-body activity.
- Stretch your low back and hamstrings
- Limber up your arms and shoulders with a body hug that you hold for 30 - 60 seconds.



### During Shoveling:

- Always face the snow you intend to lift - your shoulders and hips should squarely face it.
- Bend at the hips, not the low back, and push the chest out, pointing forward.
- Then, bend your knees and lift with your leg muscles, keeping your back straight.
- If you must lift a shovel full, grip the shovel with one hand as close to the blade as comfortably possible and the other hand on the handle
- Avoid twisting the back to move the snow to its new location - always pivot your whole body to face the new direction.
- Keep the load close to your body - do not extend your arms to throw the snow.
- Walk to the new location to deposit the snow rather than reaching or tossing.



- Take breaks - every 15 minutes or so, stand up straight, walk around
- Pay attention to your body's signals, including pain, shortness of breath, or chest discomfort.
- Drink water to prevent dehydration and overheating
- If you see your breath, you are losing hydration



## Appendix E – Prevent Roof Collapse

Building codes vary but requirements have generally increased over the years, and as such, older buildings may be designed to lesser requirements. If you are unaware how much snow your building(s) can safely handle, contact a structural engineer or a qualified builder (in advance of a snow event) to assist in determining the snow load design for these buildings. The following steps can be taken to prepare for the next winter storm:

- Consider weight that may have been added to the roof, which will reduce the available live load or roof design (HVAC unit, hanging equipment from the roof steel, etc.).
- Be aware of drifting snow potential that could result from new additions of different elevations, large roof-mounted signs, etc.
- Inspect the roof and structure (inside and out) for any damage, cracks, or corrosion.
- Inspect all roof drains and gutters to ensure they are clear from debris.
- Check windows and doors to ensure they continue to open and close as designed. A change in their operation could be the first indicator that structural members or the foundation is moving and could fail under a heavy snow load. Additionally, listen for any unusual creaking or popping sounds.
- If the building has a standing seam metal roof and was built before 2000 or a wood bowstring truss roof there may be a design weakness present; consult with a structural engineer.
- The snow removal plan should be reviewed by a structural engineer and roofing contractor to ensure that it does not increase the danger of collapse or cause damage to the roof covering and to ensure that work performed will be conducted in a manner that is safe for those working on the roof. For example, use of equipment such as snow blowers on an already heavy, snow-loaded roof may present an excessive load. Snow removal should be done in a manner that keeps the roof load as symmetrical as possible. Additionally, the use of metal shovels or ice chippers could damage the roof covering and allow leakage, wetting of insulation, and damage to the building contents.



In most instances, a contractor should be hired to perform snow removal from roofs. If using a contractor, ensure a contract is signed early and make sure they have the ability to respond quickly to your call. The contract should contain appropriate risk transfer language and that the contractor has adequate insurance coverage to do this work. If the work will be done in-house, ensure appropriately trained individuals are on hand to safely perform this work and the proper equipment is available to avoid damaging the roof covering.



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During the winter storm season, ensure the following is practiced and implemented to prevent roof collapses:

- Monitor weather conditions.
- Monitor roof conditions.
  - Monitor snow and ice accumulation across the entire roof of all buildings.
  - Monitor the amount of snow drifting along ridge lines on lower roof levels.
- When deemed safe, implement the snow removal plan and monitor snow depth on roofs.
- Be cautious of where snow is placed when removing it from the roof; do not block building exits. Additionally, ensure equipment is not buried (i.e. fire hydrants, gas/utility valves).
- Be aware of any warning signs that the building structure may be under significant stress and perhaps in danger of collapse. Inspect interior structural members as well as interior and exterior walls and ceilings for signs of deflection and cracking that may have recently developed.

After the storm, inspect the property to damage and implement your contingency plan, as necessary. Prepare for the next storm and make any needed changes to your snow removal and contingency plans. Also, report any damage and claims promptly to your insurance agent or broker.



## Appendix F - Pre-Season Preparation and Post-Season Wrap-Up

The following checklists are designed to assist Conference office and local churches prepare for and recover from the winter season.

### Pre-Season Preparation

During the pre-season, ensure all equipment is inventoried, inspected, and serviced. Employee training should also occur during this time. Below is a helpful pre-season preparation checklist:

Item	Status (Yes/No)	Comments
Update snow response plan to reflect the addition or deletion of properties, changes in staffing, changes with equipment and usage, budgeting constraints, changes with contracted services, and all other information that is necessary to keep the response plan up-to-date.		
Train employees in the safe operation of snow removal equipment and in handling snow and ice melting materials.		
Establish notification process for employee call-ins and issue a memorandum indicating responsibilities and guidelines for individuals involved in snow and ice removal.		
Perform inventory and inspection of equipment, parts, and materials to ensure that they are in proper working condition and/or stocked in appropriate quantities (plow blades, tire chains and repair links, snow blowers, shovels, scrapers, spreaders, tractors, trucks, boots, gloves, rain gear, goggles, anti-freeze, hydraulic oil, hoses, belts, chains, gear boxes, ice melting agents and abrasives, snow stakes, hydrant markers, winter windshield wiper blades, and snow fencing).		
Attach snow removal implements to equipment.		
Arrange for mechanical services to address major breakdowns beyond in-house capabilities.		
Ensure adequate stock of snow and ice melt materials.		
Locate hand tools and ice melt for easy access.		
Identify areas where snow can be disposed of. Include areas that are accessible to large vehicles.		
Install sand barrels on identified roadways, parking lots, and walkways		
Make necessary repairs and eliminate any protruding obstacles in parking lots, roads, and walkways.		
Update maps and listings of priorities, equipment routs, assignments, and zones of responsibility.		
Update snow removal specifications/contracts.		
Update lists of local emergency services such as hospitals, ambulance, police, fire, etc.		
Inspect roofs to determine if there is a need for snow guards.		



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**Post-Season Clean Up**

Following is a checklist of items to be completed during the post-season.

Item	Status (Yes/No)	Comments
Review snow removal operations and record successes and areas that need improvement in order to modify the snow response plan and improve services for the future.		
Evaluate performance of equipment and materials.		
Quantify equipment, material, labor and contractor costs to help establish future budget needs.		
Evaluate contractor performance.		
Sweep and remove, and/or power wash all winter salt/sand materials from roads, walks, and parking areas.		
Repair potholes and curb damage.		
Check all gates, fences, and pole for damage and repair as necessary.		
Clear drains of any winter debris or materials.		
Check trees for winter damage and conduct maintenance as necessary.		
Inspect lawn and plant areas for salt damage and add amendments as necessary.		
Store all equipment not used during other seasons in a secure location.		