



## Hail Doesn't Discriminate; Damage Severe

The number of hail events spanning the last several decades has been on the rise according to the National Oceanic and Atmospheric Administration (NOAA). While hailstorms can occur in any part of the Country, hail losses occur most often in the states of Texas and Oklahoma, with Colorado, Missouri, South Dakota, Nebraska, New Mexico, Kansas and Wyoming seeing frequent hail losses as well.

What is hail? Hailstones are composed of water layers and can vary in density and size. They typically range up to 3 inches in diameter but have been as large as 8 inches in diameter. Hailstones typically develop 3-4 miles above the earth's surface where air temperatures are -40 degrees Fahrenheit or lower. The moist vapor carried by air moving upward inside a storm condenses and ice crystals form.

According to a recent study by the Insurance Institute for Business & Home Safety (IBHS), 75% of damage from hail is to roofs, 13% to awnings, 7% to wall paint, and 5% to glass. The good news is that measures can be taken to protect against hail. Ideally the measures should be implemented during new construction but existing construction can also be protected. Recommendations are for churches within Hail Risk Zones, but can be applicable to all churches.

*Insurance Board's largest hail claim was in 2016 and cost more than \$3M.*

*In 2018 hail claims represented 7.46% of filed claims, but costs for those claims represented 14.21% of total 2018 claims costs.*

### I. Existing Construction

1. For roofs, there is generally not much that can be done to improve hail resistance. However, if possible, the following can be considered:
  - Over low sloped built-up and modified bitumen roofs, apply at least a 1 inch layer of pea gravel over the existing roof surface. Prior to installing the pea gravel, a licensed structural engineer should certify that the additional dead load weight can be supported by the existing structure.
  - Over low sloped Single Ply Membrane (Rubber) roofs, apply at least a 1.75 inch layer of min ballast stones larger than 4 inches in diameter. A licensed structural engineer should certify that the additional weight can be supported by the existing structure.

- When it comes time to replace your Single Ply Membrane (Rubber) roof, recover the roof with a system that includes a fully adhered SPM system with the following traits:
  - a. Thicker membrane is better
  - b. Fleece back SPMs are preferred over smooth SPMs
  - c. Heavier fleece is better
  - d. A cover board is ALWAYS needed below the SPM and over the insulation layer
  - e. ½ inch HD polyisocyanurate cover board is preferred as it performs better than ¾ inch gypsum
  - f. The cover board should not have any fasteners on the top surface
- 2. Rooftop equipment should be properly constructed and protected. If constructed of lighter gauge metal or aluminum, they will be susceptible to hail damage.
- HVAC Cooling fins should be protected with steel wire mesh with a maximum opening of 1 inch and supported on a steel frame. The mesh should be at least 1 inch away from the fins.
- Fiber reinforced plastic (FRP) and glass

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# Ladder Safety Time!

Spring is here and with it comes the task of inspecting and repairing roofs, cleaning gutters, trimming trees and other activities that require the use of ladders. These are activities many of us perform at home without incident. However, when church members, including elderly volunteers, wish to volunteer their time to perform these tasks, extra precautions need to be taken.

Before mobilizing your (free) labor, be sure to follow these ladder safety precautions. It all starts with choosing the right ladder.

- Make sure you choose the right size and style ladder for the task you wish to accomplish. Some questions you should consider when choosing the correct ladder are:

1. How high will the ladder need to reach? Keep in mind that your ladder should extend at least 3 feet beyond the point of contact with the roof, gutter, building, etc.
2. How much weight will your ladder need to hold? This not only includes the person who will be climbing the ladder, but any protective clothing they are wearing, and any tools or equipment they will carry while using the ladder. Be sure to check the duty rating prior to usage.
3. Is the ladder in good condition? When looking at the ladder, check for damaged rungs and side rails. Also be sure to check the rungs to be sure that the

anti slip material has not worn off.

4. Will you be working near power lines or other electrical sources? If you will be in areas where your ladder is at risk of coming in contact with an electrical source, do not use metal.

- Once you have chosen the correct ladder for the job, the next thing you need to do is find the proper place to erect your ladder.

1. Be sure that you place the ladder on a firm, solid ground. If the ground is soft, place a board under the ladder's feet.
  2. Be sure to place ladders in an area that is clear of any opening doors. If you must place a ladder near a doorway, make sure signs are posted or another volunteer is nearby to ensure the door does not open into the ladder.
  3. Once you find the correct surface, be sure the ladder is 1 ft away from the building for every 4 ft of height.
  4. Do not place the ladder on a box, barrel or other item to gain additional height. If the ladder is too short, obtain a ladder that is the correct height or hire a professional.
- Climb safely. Many of us have been on a ladder enough in our lifetime that we go up and down without giving thought to what we are doing. This complacency can lead to injury if safety precautions are not followed.
1. Face the ladder as you climb and al-



ways keep three points of contact while climbing, two hands and one foot or two feet and one hand.

2. Do not climb higher than the third rung from the top of the ladder.
3. Do not lean or reach too far to the left or the right. If you cannot reach your intended work area, move the ladder.
4. Only one person should be on the ladder at any given time.
5. If winds pick up, or if weather changes for the worse, climb down immediately and wait for it to pass.

**Open Your Doors, But Not Your Risk:** Churches frequently extend the use of their premises to third parties for one-time only events such as weddings, and for recurring events such as AA Meetings. The use of church premises for these activities exposes the church to liability in the event someone is injured on church premises, or inadvertently causes damage to the church.

It is recommended that when outsiders use the church premises, the church obtain a signed Facility Use Agreement and obtain a Certificate of Liability Insurance from the party. The Agreement spells out who is responsible for what, and the Liability Insurance is there to pay for accidents that result in Bodily Injury or Property Damage. What if the third party does not have insurance?

Through a product called TULIP (Tenants and Users Liability Insurance Program), a third party can obtain liability insurance specifically for use of your church. TULIP allows the Tenant or User entity to purchase a low cost general liability product to cover their liability related to the utilization of the church premises, protecting the entity as well as protecting the church by providing an extra layer of insurance protection and including the church as an additional insured.

Upon approval of a short application, and premium payment from the third party user, Insurance Board is able to provide TULIP coverage. If your church is a participant in the IB program, and has interest, please contact your agent for more details.



# Playground Equipment Check

According to the American Academy of Orthopedic Surgeons, there are 220,000 estimated emergency room treated injuries annually due to playgrounds. More than 20,000 of those visits were for traumatic brain injuries, such as concussions. The most recent study by the National Program for Playground Safety indicated that falls are the most common hazard (80% of injuries). Other hazard patterns involved equipment, such as breakage, tip over, design, and assembly and entrapment; and colliding with other children or stationary equipment. Playground-related deaths involved entanglement of ropes, leashes, or clothing; falls; and impact from equipment tip over or structural failure.

So what can you do to reduce the risk of injury on your playground? There is a very thorough document by the Consumer Product Safety Commission, titled “Public Playground Safety Handbook.” Some of the key ways to reduce the potential for significant injury include:

- Signs should be posted near the equipment giving guidance as to the age appropriateness of the equipment.
- Appropriate surface materials to protect from falls. Ensure that an appropriate surfacing material is under the equipment. These include materials (rubber mats and tiles) or loose –fill surfacing materials (engineered wood fiber or rubber mulch products designed specifically for playgrounds). Loose-fill materials will compress at least 25% over time due to use and weathering. These surface materials should be maintained and replenished to maintain their appropriate level. Hard surfaces are not recommended, such as asphalt, carpet, concrete, dirt, grass, or wood mulch.
- A comprehensive maintenance program should be developed for each playground. The manufacturer’s maintenance instructions and recommended inspection schedules should be followed. Playgrounds should be inspected at least monthly. All repairs and replacements of equipment parts should be completed following the manufacturer’s instructions. Worn out equipment should be removed.
- Records of all maintenance inspections and repairs should be retained, including manufacturer’s maintenance instructions and any checklists used. Also, any injuries should be recorded.

If you are just starting to think about installing a playground, check with local ordinances to ensure compliance! In addition to the CPSC’s resources, some additional information and suggested checklists can be found on the Insurance Board’s website, Volume 4 Loss Control Manual Youth Activities: Day Care, Trips, and Camps.

Our kids will thank you.



## Hail, continued from page 1

- panels, skylights, and domes on the roof should also be protected with a mesh as described above.
- Provide hail screens or guards as described earlier.
- 3. Verify that the roof skylights are rated for large hail impact resistance that is appropriate for your area of the Country. If existing skylights do not meet this requirement, they can also be protected as described above. Alternatively, skylights can be removed or replaced.
- 4. In hail prone regions or where there is risk of ponding from blocked drainage, roof drains will be susceptible to blockage. Drain guards should be provided.

## II. NEW CONSTRUCTION

1. The roof hail rating should meet American Society for Testing and Materials (ASTM), Factory Mutual (FM), and Underwriters Laboratories (UL) for the appropriate rating for the location of the facility.
2. Roofs in more hail prone regions mentioned at the beginning of this article should meet the Very Severe Hail (VSH) standard. At this time, since there are limited approved roofs systems that meet this standard, it is recommended to not install Single Ply Membranes. Acceptable alternative roofs for this region are:
  - Traditional built-up roofs with gravel or stone.
  - If a Single Ply Membrane system

must be installed, please see a.-e. on page 1. Same applies here.

3. Rooftop equipment should be protected as described previously for Rooftop/Outdoor Equipment.
4. Exterior Finish Systems (EIFS) construction: Construction in hail prone regions should meet Florida Product or Dade County Approved large missile impact resistance standard.
5. Solar PV Panels:
  - For rigid panels, use resistant panels rated for Very Severe Hail.
  - For flexible panels, use Severe Hail resistant panels.

Visit [fema.gov](http://fema.gov) for more information.

# Check Your Roof Now

With Spring bringing warmer temperatures and storms, it is time to inspect your roof to be sure your building remains watertight. Your building's roof is not impervious to damage and, if not maintained, will deteriorate, which increases the risk of water-related damage to your building and the valuables contained within.

By completing routine roof inspections, you will be able to detect and repair little problems before they become big problems. While it is important for church staff to periodically do visual inspections from the ground, rooftop inspections should be carried out by a roofing professional at least twice a year (spring and fall). The roofing professional should provide a report that evaluates the current condition of the roof covering/membrane, the flashing and seams, and the eaves and downspouts. If any damage is discovered, immediate action should be taken to repair/replace the damage before water can penetrate, and should be completed by a professional roofer with adequate commercial general liability and workers compensation insurance.

The following items should be included in any roofing inspection.

- Examine the underside of the roof deck, if possible, and the outside of the building. Look for cracks, stains, rusting, watermarks, wet spots, chipped mortar or other damage.
- Identify any debris to be removed.

- Check to be sure areas with louvers, ridge vents, roof vents, and soffit vents are clear.
- Check for cracked and worn rubber boots around vent pipes.
- Check for damaged chimney cap.
- Inspect all caulking and flashing.
- Check for flashing around roof drains and vents for deterioration, as well as damage to capping at parapets and expansion joints.
- For pitched or sloped roofs, check: granular erosion on asphalt shingles; deformed edges; curled or missing shingles; missing or loose tabs; loose, slipped or missing slates or roof tiles; and masses of moss and lichen, which could signal the roof is decaying underneath.
- For flat roofs, check: surface condition of the roof for punctures, blistering, granular loss, cracking or shrinkage; seams for open joints, ridging or the opening of lapped edges; areas where adhesion is lacking or deteriorating on fully-adhered roofing systems; ensure that no fasteners are popping or backing out on a mechanically-fastened roofing system; the weight and depth of the stone against the specifications in a Ballasted Roofing System; accumulation of water in certain areas, this can be caused by an insufficient slope to roof drains, building settlement or even structural movement.



In addition to the semi annual roof inspection, the following tasks should be routinely performed:

- Trim overhanging tree branches to prevent leaves, small branches and other debris trapping water on the roof or in downspouts.
- Make sure gutters and downspouts are working and securely anchored to the building. Clean regularly.
- Check that the roof space/attic is adequately ventilated throughout the year which ensures that heat and moisture do not build up in the attic. It prevents water from accumulating at the bottom of the roof and freezing, which can cause ice damming and further damage to your building. Improper ventilation of attic spaces can also result in curling, blistering and buckling of asphalt shingles.

Preventive maintenance and repairs can extend the life of your roof and prevent water damage to your building and its contents. Engaging professionals will bring you peace of mind.

## Art Contest Time!

Lightning is more common than you think. By educating our congregations and children, we can all do our part to keep our members and buildings safe. Our theme for 2019 is: "Lightning Awareness Saves Lives and Our Churches" This is an opportunity to put summer art activities directly to work in the care of your churches/camps. Discuss with children when and why lightning occurs as well as the risks associated with lightning. Ask them to create images/messages depicting lightning, its power, and the damage it creates.

**Three CASH prizes of \$1,000 each to the sponsoring Church/Camp in each group:**

7 and Under; 8 to 12; 13 to 17

**Winners** will be featured on Insurance Board's Facebook page and in the newsletter.

**First 12 Churches/Camps** to email Danielle Grasso confirming participation will receive a \$50 art supply reimbursement. Danielle will send you full details: [DGrasso@InsuranceBoard.org](mailto:DGrasso@InsuranceBoard.org)

