SENECA

Loss Prevention
Presents

Roof Leaks

Creating a Plan to Prevent Leaky Roofs

A leaky roof can cause devastating damage to your property and present a number of safety risks, including structural problems and the development of health-threatening mold. Leaky roofs account for millions of dollars in claims every year, and losses can mount quickly.

In cold climates, cycles of freezing and thawing can create ice dams and water flows, compromising the structural integrity of the building and necessitating expensive repairs.

Knowing what to look for and preventing roof leaks from happening in the first place is critical to protecting your property and business from this often quiet and sneaky threat.

What are the most common causes of a roof leak?

Bad weather: Hail, heavy rain, or snow may damage the roof. Shingles can be damaged or blown away in high winds, providing an entry point for moisture.

Improper or deteriorated roofing materials: Materials used for construction may have been improperly chosen or installed. Time can also cause wear and tear.

Missing or improperly-installed flashing: If bad weather causes the metal installed around the roof edges, chimneys, dormer windows, or skylights to become loose or broken, the edges of the roof membrane cover may be exposed. Moisture can then work its way through the roofing system and into the building.

- Rainwater can get through improperly sealed valleys, the places where two roof planes come together.

- Rainwater can find an opening through pipes and drains that may puncture the roof's membrane if not secured properly.

- Water leakage can occur because of improperly installed skylights or caulking that has decayed or worn out over time.

- Water can back up and travel into the building because of ice dams that form along the roof edges, preventing snow from draining as it melts.

How do I know I have a leaky roof?

- Bad air quality indoors.
- Curling / cupping shingles.
- Decaying / stained soffits and fascia.
- Decreased energy efficiency.
- Granules in the gutters.
- Indoor mold, especially in the attic and on ceilings.
- Musty indoor smell.
- Peeling paint, especially around skylights or windows.
- Water intrusion, especially with heavy rainfall or melting snow.
- Wet spots, discoloration, damp patches, stains.

A note about ice dams and flat roofs:
Flat roofs, common to many commercial buildings, including warehouses and manufacturing sites, are particularly vulnerable to the formation of ice dams.

The weight of ice and snow can cause seams to open and allow melting water to seep into the building. Water migration beneath the membrane can require replacement of the entire roof and insulation.

While flat roofs need special attention, here are some tips on preventing ice buildup and damming on all roofs:

- **Remove snow as soon as possible:** This will help prevent the formation of ice dams, particularly on flat areas where the snow is likely to accumulate and not slide off quickly as it would on a sloping area.

- **Make sure your attic insulation is sound and your roof is properly ventilated:** Heat flowing into the attic can cause warmer areas on your roof, leading snow to melt unevenly and then refreeze on the colder areas, creating ice dams.

How do I prevent leaky roofs?

Regular inspections and proper maintenance are your best protection against leaky roofs and the damage and disruption they can cause:

- **Look for signs of age and deterioration:** Your roof may be too old and require replacement or repair. Many roofs start to deteriorate after 15-20 years. In some places with severe weather or unrelenting UV exposure from bright sunlight, that could happen even sooner.

- The **gutters** may get clogged, preventing rainwater from draining away, so it pools in one area of the roof. Pooling (sometimes called ponding) water can add significant strain to the roofing system. One square foot of pooling water weighs roughly five pounds per inch of water and cause substantial water damage.

- **Clear debris such as leaves, twigs, and roofing materials from drainage systems.** This includes gutters, eavestroughs (built specifically at the edge of a roof for collecting and re-directing water), interior drains, and scuppers. The roof drainage system should be inspected and cleaned at least twice a year, usually in the spring and fall.

- **Check for and repair cracks around roof drains,** especially after any roof-related contractor services. Remove any loose objects and accumulated debris that could end up in the drainage system.

- **Remove roof cover granules from the gutters,** as they can alter the slope of the gutter when they accumulate, impeding the gravitational flow of water.

- **Check for long-term standing water in gutters and correct any blockages.** If there are no blockages but standing water is still occurring, this is a sign the gutter is not properly sloped to the downspout. Ensure downspouts funnel water away from the building and do not allow water to accumulate near the building's perimeter.

- **Keep trees trimmed and away from the roof.** This prevents branches from rubbing against the roof and leaves from accumulating and clogging drains and gutters.

- **Check all drainage systems for leaks** and ensure they are properly secured and operating after severe weather.

- **Consider larger-sized gutters** when replacing gutters to allow for greater water flow.

- **Use noncombustible metal gutters and downspouts** in locations that may potentially be exposed to wildfire, and make sure these gutters are always free from debris that may ignite.

- **Ensure the gutters are anchored by gutter straps** designed to resist high winds if the building is located in a hurricane-prone area.

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