

A MESSAGE FROM  
KEN ROBINSON*Master Restorer  
President*

While thoughts of sugar plums danced in our heads and a blanket of fresh fallen snow had just covered the earth....



This past Christmas marked the first time in many years that the entire country enjoyed a white Christmas. From Vancouver to St. John's the white stuff was abundant and

what appeared to be a blessing on the 25th is now the ice curse of January and February.

We have been experiencing record snow falls, and an influx of highs and lows in temperature. Aside from giving us infinite variations on weather chit chat we are facing a barrage of snow related claims. From snow loads to ice dams this has been a busy start to 2009.

So in anticipation of an inundation of snow claims we thought we would provide some insight into the wonderful world of Ice Dams.

ICE DAMS:  
PREVENTABLE LOSSES

Ice dams are a leading, yet largely unrecognized cause of preventable losses. Recurring claims are rare for most types of insured losses. Fire, water and windstorm claims are usually the result of unique circumstances or events.

The structural and water damage caused by ice dams frequently recurs year after year. Heavy snowfall followed by extremely cold temperatures, much as we are experiencing across Canada this year, are the ideal conditions for ice dam formations.

**Ice Dam Formation**

An ice dam is a ridge of ice that forms at the edge of a roof and prevents melting snow (water) from draining off the roof. The water that backs up behind the dam can seep between shingles and into the attic or wall cavities. This leaking water can cause damage to the walls, ceilings, insulation and other areas of the home. Ice dams are sometimes one to two feet thick and secondary ice dams often form around vents and skylights

**Ice dams are caused by the interaction of 3 factors:**

**Temperature** – Ice and snow melting at 2 C and water freezing at 0 C. Minor temperature differentials can lead to major problems.

**Roof Systems** – Layered roof systems such as shakes and shingles do not keep out standing water. They require continuous, uninterrupted slope to shed water.

**Attic Conditions** – Attics are warmer than the outside air because heat leaks from the heated portion of the structure up into the attic. Heavy snow cover effectively insulates the attic from cold outside air, allowing the temperature to rise even higher.

**Prevention of Ice Dams: The Cold Roof**

The best protection against ice dams is a properly designed “cold roof”. Minimizing heat gain in the attic while maximizing attic ventilation with outside air is the best way to reach this goal.



Continued on page 2



# Working with PDS Canada



## Professional Standards

- Every franchisee has IICRC and Mould Remediation Certification
- Emergency Response Program
- 24-hour emergency service
- 2-hour response time

## Consistent Job Costing

PDS Canada provides accurate and professional estimates within 48 hours of a claim, utilizing Xactimate software.

## Efficient Project Management

Projects are monitored and managed utilizing our Job Processing Program software to deliver high quality work on time, and on budget.

## Risk-Free Service

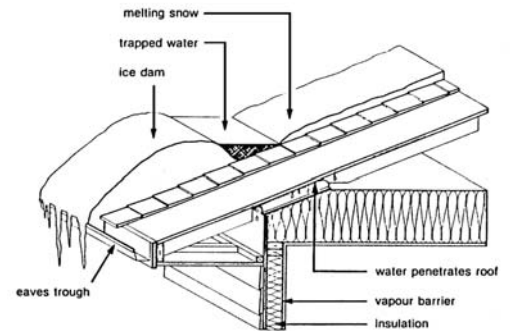
All PDS Canada work is guaranteed through our CSI Warranty Program.

## Services

- Full General Contracting
- Full Cleaning Services, Building and Contents
- Emergency After Hour Services
- Secure Contents Storage
- Mould Remediation

Attics gain heat in two main ways; conduction due to inadequate insulation and convection caused by warm air leaking through gaps, usually around plumbing, wiring, ducts and vents.

Conductive heat gain can be reduced by increasing insulation levels. Convective heat gain can be minimized by meticulously caulking and sealing even the smallest penetrations through the ceiling, as well as carefully gasketing around attic entrances.



Although some heat gain is inevitable, when the attic ventilation is adequate the temperature will not reach levels that cause extensive melting. A cold roof is easy to achieve with properly designed new construction while reaching the same goal in older homes may be both difficult and expensive.

## Other Preventive Methods

Method	How it Works	Comments
Metal roofing	Shed snow	Expensive, Hazardous snowslides, Requires re-roofing
Aluminum ice belts	Shed snow	Unattractive, Often ineffective
Heat tape on roof	Melt ice as it forms at eaves	Potential fire hazard, Wastes energy, Often ineffective
Self-sealing rubberized membrane installed under shingles	Additional line of defense against water penetration	Effective backup to a cold roof approach Requires re-roofing

## Correction of Ice Dams

Once an ice dam forms, the only relief is to remove the ice and snow from the roof. This is extremely dangerous work and should be left to qualified professional with the right tools and insurance. A roof can be severely damaged if this work is not completed properly.

## Obvious Damage from Ice Dams

Ice dams cause millions of dollars of damage every year: sagging, ice-filled gutters; delaminated or rotted roof decking; stained, sagging wall or ceiling drywall; damaged and/or dislodged shingles or shakes; and wet insulation (both temporary and permanent problems).

This damage is usually repaired when weather or funds permit. Unfortunately the obvious damage may be just the tip of the iceberg. The worst effects of ice dams are often hidden, caused by moisture trapped inside walls or floors.

## Hidden Damage

This damage is often not discovered until months after all the snow has melted. The insured seldom makes the connection between the damage found and their ice dam of the previous winter. Besides the cost of restoration, hidden damage can make future ice damming more severe, waste energy and even create serious health risks for building occupants.

Hidden damage is entirely preventable. With proper instruments, equipment and training, trapped moisture in building materials can be detected and removed before it causes severe damage.

Locating hidden damage can be done by carefully checking the roofing trim and underside of roof sheathing (A) to discover if it got wet, and whether it dried without damage. When you find discoloration from water leakage, you must consider the distinct possibility that areas below it may also have suffered damage, even if it is not visible.

### Insulation Damage

Wet insulation loses much of its insulating capacity. When wet, it may compress (B), reducing its insulating capacity even after it has dried. In walls, compressed insulation may create uninsulated voids (C). Damaged insulation wastes energy and increases heating and cooling costs for the structure. In winter, increased heat-loss into the attic tends to make ice dams more severe. Hygroscopic (water-absorbing) cellulose insulation is especially prone to water damage.

### Damage Caused by Trapped Moisture

Ice dams form along the eaves, immediately above the plateline of exterior walls. Leakage in this area penetrates directly into wall cavities, where it becomes trapped between exterior finished materials and interior vapour barriers. A surprisingly small amount of water can raise the relative humidity of a wall cavity to damaging levels. Tightly built, energy-efficient construction can make it even more difficult for moisture to escape.

Damage to structural integrity from extended or repetitive saturation may also include decay of wood framing members and corrosion of metal fasteners (D).

During the winter, the temperature of the wall cavity is probably low enough to keep mould and mildew growth (E) minimal. When spring arrives, microbial growth accelerates as the temperature in the still-wet wall cavity rises. The paper components of drywall and insulation facing are very vulnerable and mould growth may eventually become visible as it penetrates through to exterior and/or interior wall surfaces.

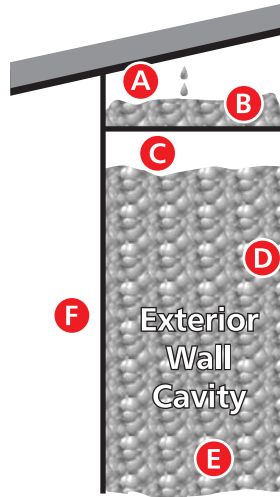
Sagging and/or peeling paint on both interior and exterior surfaces (F) can be caused by trapped moisture forcing its way out, either in a liquid or vapour state. Repairing the surface before the wall interior has thoroughly dried can cause discoloration or loss of adhesion to occur.

### Locating and Repairing Hidden Damage

Damage to insulation is difficult and expensive to locate and repair. Infra-red thermography or careful surface temperature measurements (the colder the weather, the better) are two non-destructive ways to pinpoint problem areas. Repair of damaged insulation usually involves its removal and replacement or thorough drying and additions to existing insulation levels.

The wide assortment of problems caused by moisture trapped in wall cavities is comparatively easy to detect and prevent, if done in a timely manner. Instruments used by specialists in water damage restoration can directly measure moisture content of materials, even those deep below the surface. When problem areas are detected, there are several different wall drying systems that can be used to directly dry the surfaces without significant damage to the finished surfaces.

To prevent ice dams from forming, property owners should properly insulate and ventilate their attics. When damage from ice dams occurs, owners should have the structure inspected as soon as possible by an experienced restorative drying specialist. This will allow trapped moisture to be detected and dried before it creates serious problems.



## CSI – Risk Free Services

CSI stands for Completion Services Inc. It is an independent corporation owned and funded by all authorized Paul Davis Systems' offices.

This warranty is unique in our industry as it allows us to provide our services risk-free.

Backed by the CSI Guaranty, a standard customer survey is used along with signed work orders and Completion Certificates.

CSI certificates are issued yearly at the insurer's request, and cover individual per job occurrences up to \$50,000.

This program guarantees job completion and payment and it also guarantees risk-free service for the Insurer.

### PACK-OUT SERVICES

Paul Davis Systems has integrated Assured Software's Pack-Out Inventory Program with our PDS pack-out and cleaning procedures. After contents leave the insured's property we are able to provide a detailed content listing with integrated photos.

This list breaks out damaged and salvaged items. It lists and photographs existing and pre-existing conditions and, it can be provided in many electronic formats.

For the contents being cleaned, the process is streamlined keeping a full chain of custody as the contents travel from the home to the cleaning facility where they are cleaned, stored and returned.

## PDS OFFICE FOCUS



### Meet Bruce Jaques – PDS of Windsor & Essex County

Bruce Jaques is a graduate of Construction Engineering Technology, at Fanshawe College in London. After working for a number of years in the construction industry Bruce and his wife Mary established PDS of Windsor in 1995.

Bruce and Mary are very proud of their customer service record. Their goal is to provide high quality work and service on time and on budget. Their 24 hour Emergency Response Program guarantees on-site action within two hours of an emergency call.



### Meet Alan Berdan – PDS of Huron Perth

After working for 13 years in the customer service industry, Alan Berdan joined the PDS Network and opened PDS of Huron-Perth in April 2008.

“We are excited at the opportunity to offer the advantage of a locally owned and operated business, combined with the support and integrity of the national PDS Network,” commented Alan. “Our goal is to ensure a positive PDS customer experience from the beginning to the end of every claim.”

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