

CATtales

e-newsletter of the Institute for Catastrophic Loss Reduction

Volume 9, Issue 6
November/December 2015



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ICLR makes two submissions to the Ontario Building Code review process

The Institute for Catastrophic Loss Reduction (ICLR) met a Nov. 30 deadline to make submissions for the next iteration of the Ontario Building Code. The Institute opted to submit two proposed code changes: to make backwater valves and hurricane straps mandatory in all new builds in Ontario.

Currently, the Ontario Building Code allows for the installation of backwater valves (i.e. devices that are placed in sewer

laterals that help to prevent water from backing up from the municipal sewer into the basement) “where a building drain or a branch may be subject to backflow.” However, there is ample evidence that almost any home connected to a public sanitary sewer system “may” be subject to backflow. The current wording of the code makes this unclear – as a result, new homes in most Ontario municipalities are not being built with appropriate ►

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sewer backflow protection. ICLR’s suggested wording of the relevant section of the code would see deletion of this problematic phrase.

ICLR research has shown that despite consistent application of code wordings related to backwater valves across Canada, there are differing interpretations of code wordings, which have resulted in differing reported frequencies of installation of backwater valves. Thus, the Institute has recommended in its research - and in this code submission - that sentences in the National Plumbing Code and provincial building and/or plumbing codes that relate to installation of backwater valves be reworded or clarified to ensure they are clearly and consistently interpreted and applied. Deletion of the “may be subject to” wording is part of this recommendation.

In its submission on backwater valves, ICLR also argues several additional reasons why backwater valves should be mandatory in all new builds in Ontario, including the health impacts of having raw sewage in homes following sewer backup events, increasing damage claims to insurers and municipalities from sewer backup, the expected growth of

sewer backup claims going forward, and the known effectiveness of backwater valves in reducing the risk of sewer backup.

ICLR’s submission to mandate the use of hurricane straps is intended to reduce damage caused by uplift forces exerted on roofs during extreme wind events. The current Ontario Building Code requires that roof joists be toe-nailed into the upper plate of walls using a minimum of three nails. That requirement (i.e. essentially to largely use gravity to keep a roof down) is adequate in the absence of extreme wind, but does little to keep a roof in place against the upward force that is caused by pressurization of a structure during a wind event. What’s more, work in the field by Western University’s Storm Damage Assessment Team at the site of the Angus tornado in June 2014 found noncompliance in many roof to wall connections (i.e. one nail or no nails where the code prescribes three).

Along with their superior performance over toe-nails, an additional benefit of using hurricane straps is that building inspectors do not have to go up on ladders to see if straps have been installed (they are visible from the ground). What’s more, the addition of hurricane straps adds virtually no cost to the construction of a new home (ICLR estimates that installing straps on an average new home would cost approximately \$150, parts and labour included. Additionally, they would replace the need to toe-nail roof/wall connections, meaning the labour that goes toward that could be



put into installing the straps).

ICLR’s recent code submissions will mark the end of the beginning of a long review process.

This effort marks the second time that ICLR has made code change submissions in the province of Ontario. The Institute, on behalf of Canadian property and casualty insurers, made three submissions to the last Ontario building code process and had one accepted. The accepted change, added to section 9.23.3.5 of the code, increased the number of nails in plywood roof sheathing on new homes from a 6x12 (inches) pattern to a 6x6 (inches) pattern.

CT



'Taking the comprehensive off' home insurance

By Glenn McGillivray, Managing Director, ICLR

In an age where losses from severe weather are driving changes to homeowners' policies that are not always seen as positive to insureds, it might be time to think about giving homeowners the option of a cheaper insurance product that limits covers for such things as roof damage from hail.

In an October 21, 2015 piece in Canadian Underwriter Online, I was quoted as saying that hail-resistant roofing should be added to Canadian building codes. My article was based on remarks I had made at AIR's Toronto Conference the day before.

As a direct result of this report, I soon received two emails from providers of hail-resistant roofing products agreeing with my statement that impact resistant (IR) roofing should be included in building codes and offering assistance in any efforts to make this happen. One email was from the manufacturer of composite rubber roofing (more on that another day) and the other from the manufacturer of steel for metal roofing.

And therein lies the issue.

Numerous roofing products have passed the Underwriters Laboratories 2218 Standard for Impact Resistance of Prepared Roof Covering Materials test, in which a large ball bearing is twice dropped at height onto the same spot on a product. The product can be considered a Class 4 IR product if the resulting damage is only cosmetic – and not functional – in nature (i.e. when the damage is not bad enough to allow water to seep into the structure). Products that have passed 2218 include wood shakes, slate, tile, composite rubber, and asphalt shingles.

The problem is that typical homeowners' policies in Canada cover the two types of

damage – functional and cosmetic. So even if a hailstorm leaves a roof in working order, the homeowner may file a successful claim to have the roof repaired or replaced strictly because of its appearance.

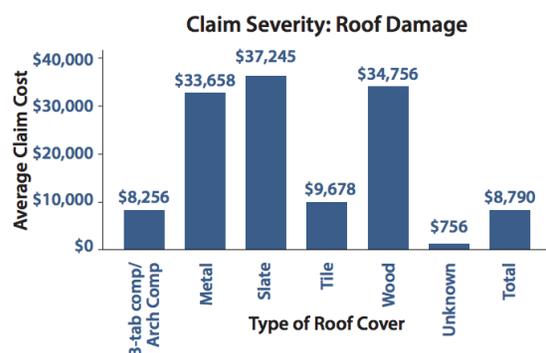
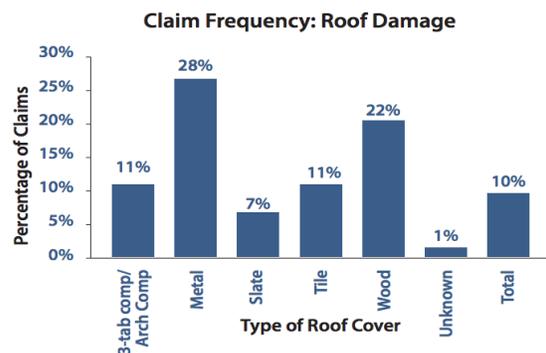
Needless to say, this adds up, particularly since such roofing products as metal and slate tend to cost considerably more to replace than average asphalt shingles.

As a result of the barrage of large hailstorms that has been affecting such places as southern Alberta in recent years (claims from the 2010, 2012 and 2014 hailers in the Calgary and Airdrie areas together added up to more than \$1.7 billion) many insurers have taken to placing separate, larger deductibles on hail-related damage, and some have capped hail-related payouts.

However, such strategies can be unsustainable in the long-run, particularly if competition in the marketplace is intense – as it is with personal property in Canada.

But what if the reduction in coverage is voluntary? What if it is initiated by the insured who, in exchange for knowingly and freely accepting reduced coverage, gets a break on his or her premium and, perhaps, a standard deductible and no cap on payouts?

A number of U.S. states have approved ISO and AAIS endorsements that allow insurers to exclude coverage for property



Distribution of frequencies with respect to roof covering materials (Claims Analysis Study: May 24, 2011 hailstorms in Dallas-Forth Worth, IBHS)

damage caused by wind or hail – that is only cosmetic in nature. In exchange for use of this wording, insureds may get a lower premium (or, at least, may dodge significant premium increases). This wording, it must be underscored, is non-voluntary in nature – if an insured doesn't want limited coverage, he/she would have to switch to a carrier that doesn't use the endorsement.

Might it be a consideration to have Canadian personal property writers offer such a wording as an option to insureds that are looking for lower cost insurance? The idea would be akin to an insured removing the comprehensive coverage from an older vehicle in order to save premium.

Is this an idea whose time has come? **CT**

Making room for the river

By Glenn McGillivray, Managing Director, ICLR

After the water receded, things settled down and Alberta politicians began the task of looking at how to prevent a repeat of the 2013 floods, one of the policy tools to emerge was use of voluntary buyouts for those located in the floodway.

But according to one media report, less than 100 of nearly 300 eligible homeowners accepted offers from the province to sell their homes. According to the Calgary Sun, 96 buyouts totalled \$92.9 million — including 17 properties in Calgary totalling \$48.8 million. Those who opted to stay received a one-time payment to make repairs, but will be barred from applying for provincial disaster assistance going forward.

The voluntary nature of the buyouts prompted immediate criticism from several corners that such a program needed to be mandatory if there was any hope of it being effective. Mandatory buyouts, it was pointed out, were used in parts of Long Branch and Etobicoke in the Toronto area after Hurricane Hazel in 1954. The expropriations saw the removal of 192 flood prone homes in Long Branch and a smaller number in Etobicoke, totalling more than 200 properties. And while few (if any) homeowners were pleased with the compensation they received, there was absolutely no chance they would ever again have to face the same carnage and personal danger they experienced from the October 1954 deluge. Because such policies were put into place after Hazel, Southern Ontario is seen as one of the leaders in flood management in Canada.

Don Barnett, Mayor of Rapid City, South Dakota, a city ravaged by severe flooding in 1972 that took 272 lives and injured 3,057 others, is ardent about getting people and assets out of the floodway and using



mandatory buyouts as a means of doing so. His impassioned speech delivered at the Inland Waters Directorate, Ontario Region, Environment Canada in September 1976 is a must-read for anyone whose job is related — even distantly — to flood management and public safety and every bit of it holds value to this day.

But according to Alberta Party leader Greg Clark, whose Calgary-Elbow riding was one of the hardest hit during the 2013 flood, the buyout program was a worse disaster than the flood itself. “It’s one of the worst policies I’ve ever seen,” he told the Calgary Sun. “It cost \$100 million-plus and achieved nothing. It was a waste of money.”

Clark told The Sun that the biggest problem was that the program was optional. “You’ve got two houses that take the buyout, two that don’t, then three that do and 10 that don’t, so the floodway is not clear,” he said. “There’s still houses [sic] in the floodway. Rather than buyout homeowners, Clark said the money should have gone toward upstream mitigation. “We need to unwind this policy, we need to

build upstream flood mitigation and then we need to look at re-selling those properties back into the neighbourhood because once mitigation is in place, they’re no longer in the floodway. There is also an issue with Clark’s statement in The Sun that “the rationale [to move residents out of the floodway] was not to make sure people aren’t impacted next time, the rationale was, give a place for the water to go.”

However, the point of moving people out of the floodway was about both ensuring that they aren’t impacted ‘next time’ and giving the water a place to go. This is precisely why many who work in the hydrology field live by the professional maxim “Keep people away from water, not water away from people.” (This is, by the way, not a new practice in Canada. We have been working to keep people out of floodways for several decades, particularly with new development. Buying homeowners out to get them out of the floodway would simply be an extension of this practice.) ►

Preliminary sigma estimates for 2015: Global catastrophes caused economic losses of USD85 billion: Swiss Re 5

- Total economic losses from disaster events to reach USD 85 billion in 2015
- Insured losses from disaster events estimated at USD 32 billion in 2015
- Approximately 26,000 people died in disaster events in 2015

Preliminary sigma estimates indicate total economic losses from natural catastrophes and man-made disasters will reach approximately USD 85 billion in 2015. Insured losses, however, were just USD 32 billion. Insured losses from natural catastrophes were lower than in 2014, while man-made losses were higher. The explosions at the Port of Tianjin in China are expected to lead to the year's biggest insured loss, and the biggest man-made insured loss in Asia ever. In total, approximately 26,000 people lost their lives in disaster events in 2015, double the amount in 2014.

In 2015, total economic losses are estimated to reach USD 85 billion, down from USD 113 billion in 2014 and the previous 10-year loss average of USD 192 billion. Natural catastrophes caused USD 74 billion in losses and man-made disasters the remaining USD 11 billion. Of the total economic losses, USD 32 billion were insured (vs. USD 35 billion the year before), with USD 23 billion triggered by natural disasters, down from USD 28 billion in 2014. This is also below the annual average of USD 55 billion for the previous 10 years of natural catastrophe insured losses.

A year of many disaster events

Losses were caused by various severe natural catastrophes across different perils in 2015, including windstorms, hurricanes,

Table 1: The most costly insured catastrophe losses in 2015 (USD billion)

Month	Insured losses ¹	Total losses	Event	Country
August	>2	N/A	Explosions at Tianjin port ²	China
Feb	2.1	2.7	Winter storm ³	US
May	1.3	2.0	Thunderstorms, flooding in Texas ³	US
Apr	1.2	1.6	Thunderstorms ³	US
Sep	1.0	1.6	Wildland fire "Valley Fire" ³	US
Apr	1.0	1.4	Winter storm Niklas ⁴	Europe

Note: (1) Property and business interruption, excluding liability and life insurance losses.

Source: (2) Swiss Re estimate; (3) US natural catastrophe figures with the permission of Property Claims Services and Swiss Re estimate; (4) Perils AG and Swiss Re estimate

earthquakes, flooding and wildfires. A February winter storm in the U.S. was the largest loss-making natural disaster of the year, resulting in insured losses of more than USD 2 billion. Low activity during the North Atlantic hurricane season kept the total global insured loss low.

Large disasters occurred in many other parts of the world also, contributing to the total number of fatalities more than doubling from the previous year to around 26,000. In April, a magnitude 7.8 earthquake struck Nepal and neighbouring countries, triggering a humanitarian catastrophe: around 9,000 people lost their lives and approximately 500,000 houses were destroyed. Economic losses are estimated to be more than USD 6 billion, of which only around USD 160 million are insured, owing to the country's low insurance penetration.

The year is likely to pass as the warmest on record, according to the World Meteorological Organization. Exceptionally high temperatures and lack of rainfall caused drought, wildfires and heatwaves in many regions. More than 5,000 people died in waves of extreme temperatures throughout the summer season in India, Pakistan, Europe, North Africa and the Middle East. In India and Pakistan temperatures soared to above 48°C in May and June, the highest recorded since 1995, claiming over 3,000 victims.

"It was another year of many disaster events, sadly resulting in a high number of victims," says Kurt Karl, Chief Economist at Swiss Re. "The overall economic impact of these events was devastating in the areas affected. Often these areas are the least equipped and have a low level of insurance penetration."

More lives were lost due to capsizing of many boats carrying migrants from conflict zones in northern Africa, while attempting to reach Europe, often in unseaworthy vessels. ►



Kurt Karl, Chief Economist, Swiss Re

Man-made insurance losses rise

Man-made disasters triggered USD 9 billion in overall insurance losses in 2015, up from USD 7 billion in 2014. The costliest event this year was the series of explosions at a storage facility in the Port of Tianjin in northeastern China on 12 August. The explosions claimed 173 lives and injured many more, as well as damaging and destroying vehicles, shipping containers, production facilities and surrounding property. The insured loss estimate is subject to a high degree of uncertainty due to the many different lines of business and coverage impacted, including potentially Contingent Business Interruption. Initial indications suggest claims of at least USD 2 billion, which would make this the largest ever man-made loss event in Asia for the insurance industry. Fires and

Table 2: Economic and insured losses, 2015 and 2014

USD billion (in 2015 prices)

	2015	2014	annual change	10-year average
Economic losses	85	113	-24%	192
Nat cat	74	104	-28%	180
Man-made	11	9	24%	12
Insured losses	32	35	-11%	62
Nat cat	23	28	-19%	55
Man-made	9	7	22%	7

explosions at other industrial sites and energy facilities in different regions added around USD 3 billion to the overall man-made insured tally.

Swiss Re warns that all data in its release is based on information available at the time of publishing. The estimates are preliminary and may change once full-year source data is complete. **CT**

Making room for the river cont...

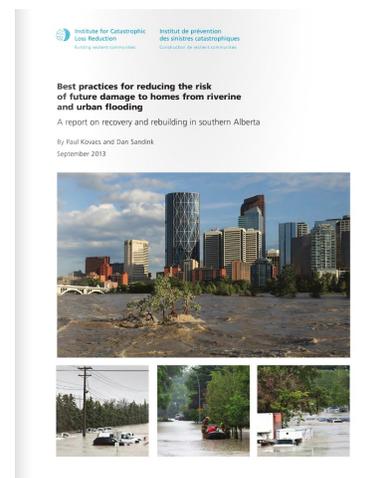
Learning from past events is key to ensuring that should a like event happen again, like mistakes aren't repeated. This includes learning from both the direct impacts caused by the events themselves, as well as the impacts of problematic public policies meant to better manage – and reduce the impact of – such events in the future.

Flood experts from around the globe – including the Netherlands – know through decades of practice that one of the reliable standby policy mechanisms that can be used to

prevent future flood damage and loss of life is to get people and assets out of the floodway – regardless of whether flood defence is planned or not – and keep them out.

The logic of buying people out to get them out of the floodway is sound public policy. Making such buyouts voluntary, perhaps not so much. **CT**

ICLR's Best practices for reducing the risk of future damage to homes from riverine and urban flooding: A report on recovery and rebuilding in southern Alberta, available at www.iclr.org



Institute for Catastrophic Loss Reduction

<p>20 Richmond Street East Suite 210 Toronto, Ontario M5C 2R9 Tel: (416) 364-8677 Fax: (416) 364-5889 www.iclr.org www.basementfloodreduction.com</p>	<p>Mission To reduce the loss of life and property caused by severe weather and earthquakes through the identification and support of sustained actions that improve society's capacity to adapt to, anticipate, mitigate, withstand and recover from natural disasters.</p>	<p>Western University Boundary Layer Wind Tunnel 1151 Richmond Street London, Ontario N6G 5B9 Tel: (519) 661-3338 Fax: (519) 661-3339 www.iclr.org www.basementfloodreduction.com</p>
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