

CATtales

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ICLR releases new book: Cities adapt to extreme heat

Local governments are taking action now to address the increasing risk to Canadians from extreme heat events that will only become more common and severe in the years ahead as a result of a warming. *Cities adapt to extreme heat: Celebrating local leadership profiles* 20 of the many successful local projects underway or already completed in communities across the country that are adapting to better address the risks associated with extreme heat.

The 20 communities profiled in the book include:

Winnipeg, MB
Hamilton, ON
Gatineau, QC
Leduc, AB
Vancouver, BC
Middlesex-London, ON

Fredericton, NB
Sherbrooke, QC
Ottawa, ON
Montreal, QC
Kingston, ON
Toronto, ON
Rosemont-La Petite-Patrie, QC
Oxford County, ON
Sudbury, ON
Melita, MB
Peel Region, ON
Windsor, ON
Surrey, BC
City of North Vancouver, BC

Seven experts from the Institute for Catastrophic Loss Reduction (ICLR) and Health Canada authored the report, which contains mini case studies that showcase successful local actions that can and should be used by communities across the country to confront the ►

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Dufferin County offers rebates to property owners, builders who install hurricane straps ²

Developers and property owners in Ontario's Dufferin County are eligible for rebates if they install hurricane straps in their buildings, a county official says.

Hurricane straps, which are metal bands that wrap around trusses and connect to walls, "can largely eliminate the risk of roof failures from an EF2 tornado," Western University engineering professor Greg Kopp stated earlier.

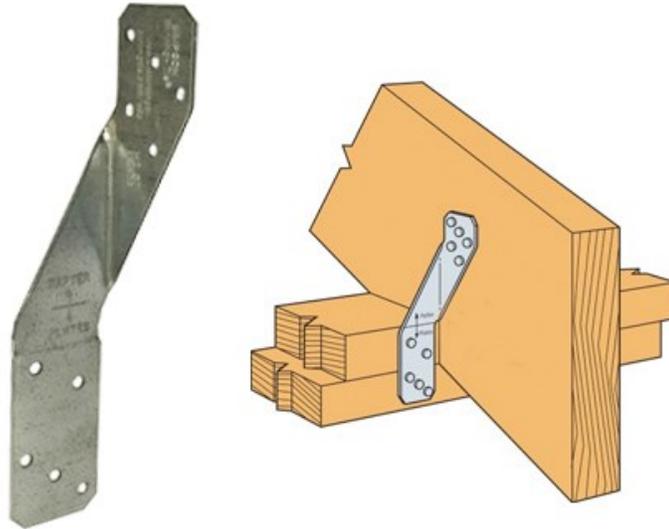
The Enhanced Fujita scale, which has six ratings, has been used by Environment Canada since 2013 to measure the strength of tornadoes. EF0 tornadoes have wind speeds of 90 to 130 kilometres per hour while an EF 5 would have wind speeds of more than 315 km/h.

After a tornado touched down in the community of Angus (adjacent to Canadian Forces Base Borden) in 2014, Kopp was quoted in media reports discussing hurricane straps. That caught the attention of Mike Giles, chief building official and director of facilities and property for Dufferin County.

Giles suggested to Canadian Underwriter that he met Kopp and got a tour of the wind research facilities in London, Ontario.

Kopp is also research director of the Boundary Layer Wind Tunnel. Research from that facility is used by the Institute for Catastrophic Loss Reduction (ICLR), founded by Paul Kovacs, president and chief executive officer of Property and Casualty Insurance Compensation Corp. ICLR, which is affiliated with Western University, partnered with Dufferin County to offer the \$4.50 rebate.

ICLR is kicking in \$1.50 per hurricane clip while the county is contributing the other \$3 per clip, Giles said in an interview.



"I can't make (hurricane straps) mandatory so I thought I would do a rebate program," he said.

"The Ontario Building Code, for whatever reason, has not made hurricane straps mandatory," Giles added. "It is not an expensive thing to do."

Dufferin County includes the community of Shelburne, about 80 kilometres northwest of Toronto International Airport.

"We have the highest elevation in southern Ontario and we are sitting between Lake Ontario and Georgian Bay and to the west of Lake Simcoe," Giles said of the county. Dufferin County is situated southwest of Barrie, which was badly damaged by a tornado in 1985.

"I personally was involved in the 1985 tornado that went through Grand Valley and Barrie," Giles said. "I heard a friend of mine lost a few shingles. So a buddy of mine and I, we headed out to go help him. He lost shingles all right. He lost his whole house. So that was something else."

A total of 12 people died as a result of a system of at least seven tornadoes that moved

through southern Ontario May 31, 1985, according to an ICLR paper – *A Tornado Scenario for Barrie, Ontario* – published in 2002. At least 16 factories were "heavily damaged or destroyed," according to the paper written by David Etkin, Soren Brun, Solomon Chrom and Pooja Dogra.

West of Barrie, the community of Angus had about 100 homes damaged June 17, 2014, as a result of a tornado. A week later, nearby Tottenham was hit by another tornado.

Elsewhere in the province, other notable tornadoes hit the Woodstock area in 1979, Vaughan in 2009, Leamington in 2010 and Goderich in 2011.

The fact that hurricane straps are not mandated by the Building Code "is kind of a pet peeve of mine," Giles suggested.

CT

Thank you to Canadian Underwriter for permission to reprint this article.

Are personal property insurers asking all the right questions?

By Glenn McGillivray, Managing Director, ICLR

When an insurance representative makes the decision to bind a new homeowner's policy, does he/she have all the information needed in order to get a full picture of the risk before it is taken onto the company's balance sheet?

Said another way, when a rep works with a potential new insured to fill out an u/w questionnaire are all the right questions being asked?

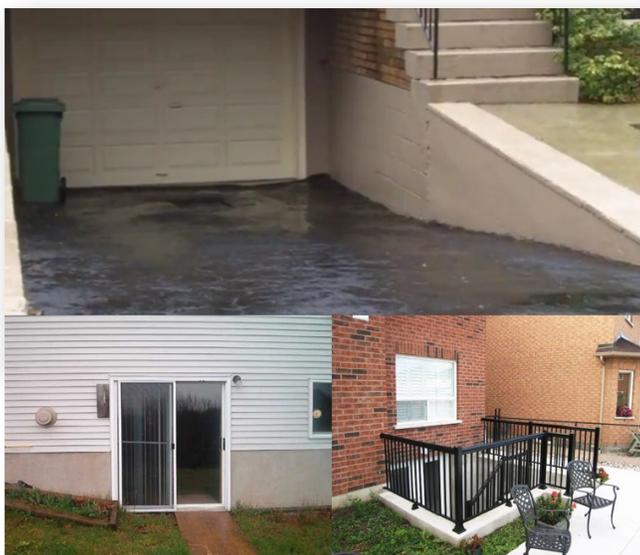
At ICLR, we find that a combination of lab results, post-loss forensic investigations and practical evidence indicates that essentially all homes have risk factors/features that can either cause or worsen a loss. It appears that many of these features are not being considered by insurers in their underwriting questionnaires and, thus, are not factored in when the risk is being priced and the bind/not bind decision is being taken.

And while it is true that some of our findings are state-of-the-science and not yet widely known, there are other more well-established – even obvious – factors that are not being considered when insurance reps bind homeowners' risks.

Some of the risk factors/features of homes that commonly fail to make it onto underwriting questionnaires include:

Basement flooding/sewer backup (for all homes)

- Does the house have a reverse-slope driveway?
- Does the house have sunken external basement stairs or other below-grade openings?
- Does the house have a below-grade walkout?
- Does the house have window wells and window well covers?
- Have the house's downspouts been disconnected from the foundation drains?
- Are the house's foundation



drains connected to the sanitary sewer system?

- Does the house have an operable sump pump system and how often does it turn on (give ranges)?
- Does the system include a back-up pump?
- Does the system have a back-up power source?

Wind (for all homes)

- How many stories is the house?
- What type of roof does the house have (flat, gable-end, hip, complex)?
- How steep is the roof?
- How is the house sided (vinyl or other)?
- Does the house have an attached garage and is the garage door single or double width?
- Is the garage door pressure rated or reinforced, if known?
- Does the house have double front entry doors?

Hail (for homes in high-risk hail zones)

- What is the roof covered with (asphalt, clay, metal, slate, wood shakes, other) and how old is it?
- If asphalt, what impact resistance level, if known (Level

1, 2, 3, 4)?

- Does the roof covering have underlayment, if known?
- How is the house sided (aluminum, vinyl, brick, fibreboard, cement board)?
- What type of windows does the house have (single, double or triple tempered glass)?

Wildfire (for homes in the Wildland/Urban Interface)

- What is the roof covered with (asphalt, clay, metal, slate, wood shakes, other)?
- How is the house sided (wood, aluminum, vinyl, brick, fibreboard, cement board)?
- What type of windows does the house have (single, double or triple tempered glass)?
- Does the home have a wooden (or otherwise flammable) porch, deck, balcony, car port etc. attached to it?
- Does the home have a wooden (or otherwise flammable) outbuilding (eg. shed, workshop, detached garage) close to it or a wooden fence close or attached to it?
- Are there trees or shrubs located within 3m of the house?



ICLR to hold workshop on Great Cascadia megathrust earthquakes

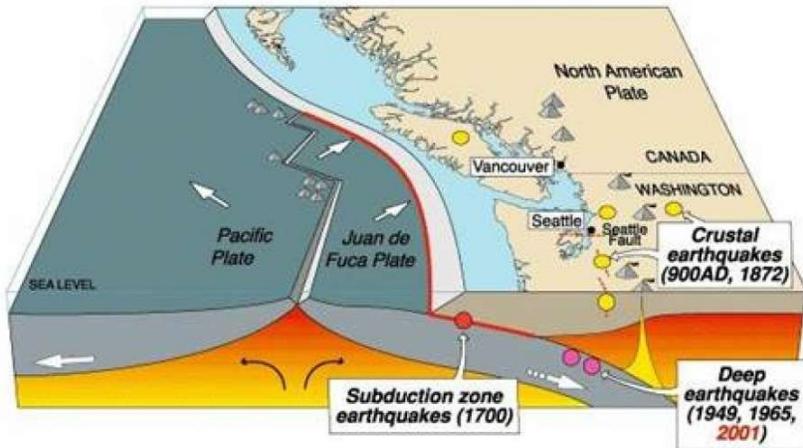
The Institute for Catastrophic Loss Reduction (ICLR) will be hosting a webinar on “Great Cascadia megathrust earthquakes” on Thursday, Jan. 26 from 10 a.m. until 11:30 a.m. EST.

The workshop, titled “Great Cascadia megathrust earthquakes: Past, present, and future,” will focus on megathrust earthquakes and the tsunamis caused by them and the threats posed to communities along much of the west coast of North America. However, “without an instrumentally recorded great Cascadia earthquake, our knowledge of these events that guides risk mitigation is based on geological observations, geodetic monitoring, geophysical modelling, and global comparison,” noted information from ICLR.

In this webinar, Kelin Wang, a senior research scientist with the Geological Survey of Canada, will review the state of knowledge of relevant observational and theoretical studies and discuss remaining scientific challenges regarding west coast megathrust earthquakes.

Wang completed his undergraduate studies in geology at Peking University in Beijing, China, and earned his PhD in geophysics from the University of Western Ontario in London, Ont. Most of his current research is on the geodynamics of subduction zones and related earthquake and tsunami hazards, but he has also worked on a range of other topics regarding the thermal, mechanical and hydrogeological processes of Earth’s lithosphere.

Wang is an adjunct professor at the University of Victoria in the British Columbia city of the same name and an



honorary or guest professor for several other scientific institutions. He is co-editor-in-chief for the Tectonophysics journal and was or still is on the editorial boards of several other scientific journals. In addition Wang is a fellow of the American Geophysical Union and was formerly the secretary of the Canadian Geophysical Union (CGU). In 2015, he was awarded the J. Tuzo Wilson Medal by the CGU, which is given annually to recognize scientists who make outstanding contributions to the advancement of knowledge in any research area of the union (such as solid earth, biogeosciences, geodesy, hydrology or earth surface processes). He was also named the 2015 Birch Lecturer by the American Geophysical Union. **CT**

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ICLR releases new book cont...

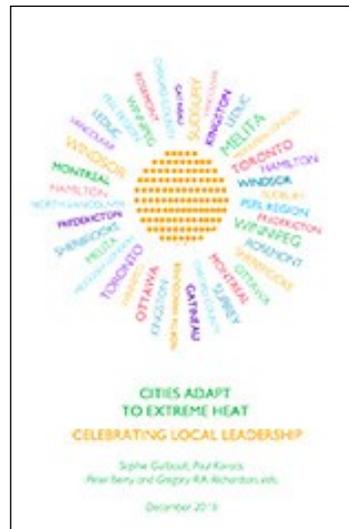
challenge of extreme heat events.

The 20 cases were chosen because they are innovative, and, in the opinion of the authors, could inform efforts in communities across the country. Some of the actions profiled in the book include issuing targeted warnings; opening cooling centres in public facilities such as libraries, community centres and public pools; providing water for those in need; educating the public; planting trees and other actions to cool urban environments and reduce urban heat islands.

Says Paul Kovacs, Executive Director of ICLR and one of the report authors: "Over the next 25 years, it is likely that many, and perhaps most

Canadians will experience high temperatures dangerous to their health. Fortunately, efforts are underway to address the health risks of extreme heat in a number of communities across the country. Public health officials as well as city and regional governments are adapting to prepare for changes in the climate and developing strategies to protect people's health during extreme heat events. In *Cities adapt*, we celebrate these actions with the hopes that other communities in Canada and elsewhere, learn from them and use them to design programs of their own."

Cities adapt to extreme heat: Celebrating local leadership can be downloaded for free in its entirety at www.iclr.org **CT**



Are personal insurers asking all the right questions? cont...

This list is by no means exhaustive. More questions can be gleaned from ICLR research and communication/outreach materials (much depends on 'how deep' an insurer may want to go). Homeowners may not be able to answer a few of these questions, but in some cases the insurance representative could request that the homeowner seek expert advice or provide photos. The rep could also check the home out on Google Earth and Google Street View.

What's more, if insurers send questionnaires to prospective insureds to have them fill out on their own time, insurers should consider using diagrams and pictures to help describe and explain certain

items that may be confusing to insureds, like roof-types and backwater valves (in a May 2011 ICLR survey of homeowners in a flood-prone neighbourhood in London, ON a high proportion of people who were asked if they had a backwater valve responded 'Don't know').

Another issue is that while most (probably all) insurers use underwriting questionnaires when evaluating homeowner risks, many seem to use them more loosely than they would a questionnaire for an auto policy. With auto, usually all questions must be answered and the insured has to sign and date a declaration certifying that all information is accurate.

Answering a question untruthfully

can lead to cancellation of a policy and/or denial of a claim.

Insurers don't appear to be quite as forceful with homeowner questionnaires, leaving many questions blank, not asking for follow-up, and not requiring insureds to sign and date a declaration.

Seeing as though profitability of the product has been on the decline in recent years, perhaps it's time to underwrite homeowner's insurance more like auto insurance.

The product is no longer the stable, reliable profit-maker that it used to be, and insurers cannot plod on like it still is. **CT**

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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.

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