

# CATtales

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## ICLR's Kovacs provides flood management testimony

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The Executive Director of Canada's Institute for Catastrophic Loss Reduction provided expert testimony for the U.S. Federal Emergency Management Agency this month [Dec.] in Washington D.C.

"What I was asked to do was challenge some of the assumptions of how floods are managed in the U.S.," Paul Kovacs told Thompson's.

"I was the only guest who was not from the U.S. and they appreciated having a different point of view."

After some major floods in the U.S. including the ramifications of hurricanes Katrina and Sandy, FEMA has set up a technical mapping advisory council that will be working for the next three years. Mr. Kovacs said the U.S. is very focused on the 100-year flood, which means they measure water flow and levels with the assumption that there is a 1% chance of that happening in any given year.

"In Canada that is not always how we do things and we have various different approaches (to flood mapping)," he said.

"I talked about not just assuming that you are dealing with 100-year flood but to think about what (different) floods you need to focus on."

He noted that in Canada there are different levels for safety for different parts of the country.

Other topics of discussion by the FEMA council included sewer back-up and urban flooding

issues.

"Much of the traditional focus of this group in the U.S. has been on rivers flooding and coastal flooding so I was encouraging them to think beyond that and think about the urban flooding issues," Mr. Kovacs said.

He also emphasized the importance of communication.

"Talking about flooding is very hard, and I think the maps are one of the key tools that could be used," Mr. Kovacs said.

He said proper flood mapping provides a lot of information that can help illustrate the risks involved.

"Communicating about risk is complicated," Mr. Kovacs said. "Once you have what you would like to communicate, having the maps to support that might make you do more detailed studies and more variations in the maps or more ►



## A look back, a look ahead

By Paul Kovacs

Executive Director, ICLR

Managing the risk of damage from severe weather, flooding and earthquakes has emerged as a priority for Canadians and the insurance industry following almost a decade of extraordinary losses. The insurance industry, through the Institute for Catastrophic Loss Reduction, has established itself as a critical source of research and information about best practices to protect buildings and infrastructure.

This year represents the third year of the Institute's current five-year research and outreach plan. We are focused on three priority issues:

- Reduce the risk of damage from water and sewer back-up, with a focus on the role of local governments and homeowners
- Identify actions to protect existing homes from water, wind, earthquake and wildfire
- Enhance new home construction and modify building codes.

### Water damage

In late 2014, we published *Cities Adapt to Extreme Rainfall Celebrating Local Leadership*. The book contains 20 case studies of local governments taking action to reduce the risk of sewer back-up. These examples were selected because they are based in sound science, and they are actions that local governments across the country can replicate. Please help us share these success stories widely.

This year we will complete research on best practices for preventing basement flooding in new residential developments. Local governments across Canada have been using ICLR's research for several years now to promote homeowner participation in

basement flood damage reduction, and have begun asking for information about the development of new housing as the next step in our support.

### Existing homes

Following a major loss event in August 2014, ICLR completed a home retrofit in Burlington to showcase actions that can be taken by homeowners to reduce the risk of basement flooding (see page 4). This was the 13<sup>th</sup> home retrofit for ICLR since 2003, a program that continues to generate positive response from the public and media as we showcase what can be done to protect existing homes against local perils.

We are exploring possible home retrofits in North Vancouver, Barrie and Windsor. We seek to complete two showcase homes this year. We will also review our wildfire assessment and advice manual for homeowners, and will update our earthquake brochure.

### New homes

ICLR completed a strategy paper for the Insurance Bureau of Canada to identify how the technical work of the Institute to develop building code proposals could be supported by IBC's advocacy to better achieve the loss prevention goals of the industry. ICLR and IBC are forging a strong partnership to champion disaster resilient home design and construction.

The Institute will soon complete research to help local governments promote the construction of new homes that are more resilient to damage from wildfire. Next year the findings will be shared with local governments at risk of wildfire damage, including model by-laws for development permits that promote wildfire resilient

construction. We will also complete research on the wildfire resiliency of several hundred homes rebuilt following fires in Kelowna, B.C. (2003) and Slave Lake, Alberta (2011) and lessons learned.

### Rebuild better:

The ICLR Insurance Advisory Committee has been working over the past year to explore how the Institute's research on loss prevention may be included in the claims response of insurers. Could, for example, the response to a sewer back-up claim include the installation of a backwater valve to reduce the risk of future damage?

This year, the Committee is challenging ICLR researchers to identify specific mitigation options for sewer back-up, severe wind and wildfire that are most likely to reduce the risk of future damage. The analysis will seek to include estimates of the cost of installation.

Thanks to the members of ICLR's Board of Directors. Their leadership and direction is critical to the Institute's success in providing a science foundation for insurers to champion reduction in the risk of disaster fatalities, injuries and property damage.

Also thanks to members of the Institute's Insurance Advisory Committee with Jocelyn Laflamme (Desjardin) and Kevin Smart (Aviva) as co-chairs. More than 90 percent of ICLR member insurers and senior researchers participate on the Committee as a primary opportunity to direct the Institute's ongoing work.

ICLR's research and outreach plan is ambitious but critical to confront the large losses that have taken hold in Canada. Most disaster loss and damage is preventable if emerging findings are applied. ►

## Key accomplishments in 2014

- Released the first book in our 'Cities Adapt' series. The 100-page publication, ICLR's first book, features 20 case studies of local leadership working to reduce the risk of loss and damage from extreme rainfall. ICLR is planning a series of volumes, with the second featuring case studies on cities adapting to extreme heat.
- Commissioned research to identify best practices for the design and construction of new subdivisions to reduce the risk of damage from sewer backup. We hope the report will provide provincial governments with information that can be used to guide local government practices.
- Completed a *Showcase Home* retrofit in Burlington, Ontario to demonstrate actions that can be taken to reduce the risk of sewer backup.
- The Insurance Advisory Committee has begun work on the idea of including loss mitigation in the claims response of insurers. The emerging *Insurers Rebuild Stronger Homes* program would set out mitigation ideas for insurers when responding to a total loss, a major water damage claim, or in response to a major disaster like a wildfire or tornado.
- Proposed a joint strategy for IBC and ICLR to seek to modify Canada's building codes to reduce the risk of damage from flood, extreme weather and earthquakes. IBC would focus on advocacy and public relations, while ICLR would focus on the science of building design and construction, within a joint strategy.
- Submitted five proposals to the national building code dealing with resilience to wind and water damage. We are also working with several builders to test the practicality of our resilient construction findings.
- Completed a paper *Building Permits: An emerging policy instrument for local governments to manage interface fire risk in a changing climate* advising local governments to use their planning powers to require safer construction of new homes.
- Worked with the Insurance Brokers Association of Canada to co-brand ICLR's 'Protect your home from...' series of homeowner disaster risk reduction brochures and make them available to independent insurance brokers across the country.
- Maintained ICLR's strong social media presence as a way of reaching out to key stakeholders who are interested in the Institute's work; continued producing *ICLR News*, a weekly electronic summary of key hazard-related news; and produced six issues of *CatTales*, the Institute's popular bi-monthly electronic newsletter.
- Advanced the Institute's strategy of promoting education and fostering dialogue with key stakeholders by holding nine Friday Forum workshops and three webinars throughout the year. Additionally, ICLR staff assisted in delivering or conducted several webinars for research affiliates and member companies.
- Hosted the 2014 conference of the Integrated Disaster Research Management Society (IDRiM), which brought together more than 100 experts in disaster research from more than 20 countries.
- Slobodan Simonovic was Chair of the 6<sup>th</sup> International Conference on Flood Management, held in Sao Paulo, Brazil.
- Gordon McBean was elected President of the Paris-based International Council for Science. Over the next three years Dr. McBean will be the primary spokesperson for the international science community.
- Continued to build on our longer-term strategy of fostering a strong science foundation to support actions that increase community resilience to earthquakes and severe

weather risks. Multidisciplinary disaster loss reduction research across a broad range of hazards remains the Institute's core function

- Completed all tasks within the approved budget for the 17<sup>th</sup> consecutive year.

## Planned activities in 2015

- ICLR will actively promote *Cities Adapt to Extreme Rainfall* setting out practices that local governments can take to reduce the risk of basement flooding. We will work with partner organizations, like the Federation of Canadian Municipalities and ICLEI Canada, to share these findings with local governments across the country.
- The Institute will actively promote the use of a new online tool for adapting IDF curves for change in the climate. This will include seminars, webinars and advisory papers directed to local government users.
- ICLR will promote emerging research on best practices for storm and sanitary water management in new developments to prevent urban flooding. This will include a research paper and active outreach program with local and provincial governments.
- The Insurance Advisory Committee will continue work on the *Insurers Rebuild Stronger Homes* proposal to include mitigation in the claims response. The major focus of the Committee will likely be on scope for industry action on water damage claims.
- The Institute will publish research providing a FireSmart audit of the homes destroyed by wildfire in Kelowna, B.C. and Slave Lake, Alberta. The study will assess whether homes were rebuilt, properties landscaped and neighbourhoods treated to mitigate the impact of future wildfire events.
- The *Showcase Homes* program will likely include an earthquake retrofit in North Vancouver, British Columbia and sewer backup retrofit in Windsor, Ontario. The media and local insurance officials will be invited to explore the home to learn about the specific actions taken.
- The Institute will publish a new homeowner safety brochure *Protect your home from earthquake*.
- The Institute will begin work on the second of the *Cities Adapt* books – *Cities Adapt to Extreme Heat*. Health Canada will be a partner in preparation of the report.
- ICLR will seek to partner with the Insurance Research Lab for Better Homes and the WindEEE Research Lab to prepare a simulation of a major urban tornado, like the 1985 Barrie event.
- The Institute will seek to influence new home construction by working with IBC to press for change in building codes and by encouraging local government by-law to prevent water and wildfire damage.
- ICLR will seek to launch a quick response grant program to support the travel of social scientists to conduct research immediately following a natural disaster. The program will be managed by ICLR and the Natural Hazards Center at the University of Colorado at Boulder.
- ICLR will conduct 9 to 10 Friday Forum seminars on various topics of interest to Institute members and others, and two 'Forecast' webinars, one on the 2015 wildfire season and one on the 2015 North Atlantic hurricane season. **CT**

# Burlington home retrofitted to reduce the risk of basement flooding

By Glenn McGillivray, Managing Director  
Institute for Catastrophic Loss Reduction

The Institute for Catastrophic Loss Reduction (ICLR) has retrofitted a Burlington, Ontario home to reduce the risk of basement flooding. More than 3,000 Burlington homeowners reported basement flooding to the city after a heavy rainfall event on August 4, 2014. However, Burlington is not alone in experiencing basement flooding, as many cities across Canada have been impacted by significant urban flooding events over the past few years. Indeed, in just the last year and a half alone, local governments in Canada experienced severe rainfall leading to urban flooding in southern Alberta and Toronto/Mississauga, as well as Burlington, leading to almost \$3 billion in insured damage.

Several basement flood mitigation measures were put into the Burlington home, which is located in an area of the city that was particularly hard-hit during the August 4 event. These measures include:

- Disconnection of the foundation drain from the sanitary sewer connection
- Installation of a sump, sump pump, and battery backup system
- Installation of a backwater valve on the sanitary sewer connection
- Alteration of lot-grading, including installation of a swale to better facilitate surface drainage
- Installation of window wells and window well covers to facilitate the change in lot grading
- Cleaning of foundation drain system

Other measures already completed included disconnection of the home's

downspouts from the weeping tiles.

"Basement flooding caused by extreme rainfall is a major concern for many urban municipalities and, consequently, homeowners and homeowner insurers in Canada," says ICLR Executive Director Paul Kovacs. "With an increase in the frequency and intensity of rainfall events, along with urbanization and aging infrastructure, more homeowners are experiencing basement flooding and no urban area in Canada is immune. What's more, the proliferation of finely appointed basements means that individual damage figures can be quite high, often running in the tens of thousands and sometimes exceeding \$100,000.

Effective management of flood risks requires investment and upgrading of municipal sewer infrastructure, but it also must include actions taken by educated homeowners to reduce the risk. Protecting private properties from flooding is a shared responsibility and this retrofit demonstrates a number of ways that property owners can help guard against basement flooding."

Among its many resources, ICLR has produced a 'Handbook for Reducing Basement Flooding', a publication that addresses the concerns of homeowners, local governments and insurance companies of the increasing instances of basement flooding. The booklet provides comprehensive information on how to mitigate flood risk for individuals and communities. It contains 20 measures that homeowners can take to reduce their risks and their neighbourhoods' risk of basement flooding. ICLR has

also produced a smaller, more readable version of the handbook that is more manageable for the average homeowner. Both the handbook and the booklet can be downloaded for free at [www.iclr.org](http://www.iclr.org)

The Institute has also produced a series of five 'how to' videos and six narrated animations on reducing the risk of basement flooding. These videos can be viewed on ICLR's YouTube channel at <http://www.youtube.com/ICLRinfo>

ICLR has also recently released a new book outlining how Canadian communities large and small are taking action to reduce the risk of basement flooding and damage to property from sewer back-up. 'Cities Adapt to Extreme Rainfall: Celebrating Local Leadership' describes 20 of the many successful local projects currently under way or already completed in communities working to address the risks associated with extreme rainfall. The book can be downloaded for free at [www.iclr.org](http://www.iclr.org) **CT**



Burlington Mayor Rick Goldring with ICLR Executive Director Paul Kovacs.

# Risky real estate: Negligent disclosure of flooding risks can pose future liability

By Joanna Kyriazis & Laura Zizzo  
Zizzo Allan DeMarco LLP

Property sellers could be exposed to significant legal liability for not warning buyers about past damage and potential risks to their property relating to natural hazards. In a recent case, the Ontario Superior Court of Justice found sellers of a home and their real estate agent liable for tens of thousands of dollars in damages for failing to disclose past flooding and other water-related problems to the buyer.

In 2008, Vance and Dorothy Overacker listed their Thunder Bay home for sale. Prior to selling, they experienced significant water problems for the three years that they owned their home. In 2005, the Overackers' basement flooded, costing their insurance company \$35,000 in repairs. From 2005-2008, the Overackers also experienced problems with their sump pump system and septic field. The Overackers sold their house to Daniel Fors for \$392,000. Prior to closing, their real estate agent Jack Mallon assisted the Overackers in completing a Seller Property Information Statement (SPIS) for the buyer—a form that is not required by law but that must be completed honestly and accurately if the seller opts to fill it out. When completing the SPIS, Mallon advised the Overackers that they were not required to disclose problems that had already been addressed, such as the 2005 flood. Following this advice, the Overackers did not disclose the 2005 basement flood or subsequent problems they experienced with the sump pump system, the septic field, moisture in the basement or leakage from the skylight.

After the close of sale, Fors, the buyer, experienced similar water-related problems in the house. Having not been informed of these issues prior to purchase, Fors sued the Overackers for negligent misrepresentation in completing

the SPIS, alleging that certain of the answers the Overackers provided on the SPIS form were false. The Overackers, in turn, brought a third party claim against Mallon, their real estate agent, for providing them with poor advice. The Court awarded Fors \$117,830.50 in damages (representing about 30% of the purchase price of the house) against the Overackers, finding that the Overackers acted negligently in completing the SPIS form. The Court also allowed the third party claim against Mallon, granting the Overackers \$42,459.75 in damages relating to Mallon's negligent advice.

The Fors case is one of many litigations concerning seller liability relating to disclosure of property defects. Often the defects at issue relate to past flooding or water problems, which, in light of climate change, will only become more prevalent. Particularly in the face of rising sea levels and increased storm surges, cases like this raise some interesting questions regarding what type of property information should be disclosed by sellers of property and their agents. For instance, should it be mandatory to disclose whether a property has been subject to flooding or other natural hazards in the past? Similarly, should there be disclosure requirements concerning whether a property is at risk of experiencing hazards in the future?

In Ontario the concept of "buyer beware" generally applies to real estate transactions. That is, absent fraud, mistake or misrepresentation, a buyer takes an existing property as he or she found it. However, there is a growing trend toward greater disclosure by home sellers to prospective buyers—both in Ontario and in other jurisdictions. For instance, buyers are increasingly asking sellers to

complete SPISs in Ontario real estate transactions. The SPIS asks questions such as:

- Is the property subject to flooding?
- Are you aware of any moisture and/or water problems?
- Are you aware of any damage due to wind, fire, water, insects, termites, rodents, pets or wood rot?
- Are you aware of any problems with the plumbing system?

If a seller elects to fill out a SPIS he or she must complete it accurately and honestly, or face potential legal liability for misrepresentation.

Other jurisdictions have made disclosure of certain property risks mandatory. For instance, under California's Natural Hazards Disclosure Act, sellers of real property and their agents are required to disclose when property being sold is located within flood hazard zones, fire hazard zones and earthquake fault zones, among others. This information is provided in a "Natural Hazard Disclosure Statement". A study conducted by the California Policy Research Center suggests that the disclosure requirements under this Act have been well adhered to and, at least in some cases, have had a noticeable effect on property prices.

In light of these developments, sellers would be wise to carefully consider any disclosures made in order to ensure the information provided does not negligently mislead prospective buyers. As climate change intensifies and flooding becomes more common, these disclosures promise to be more important to buyers and sellers and will be an interesting area to watch as risks increase. ►

variation on how you present your maps.”

He said that both the U.S. and Canada are doing their best when it comes to flood mapping, but there is room for improvement on both sides of the border.

Mr. Kovacs will continue to advise the council over the next three years.

“They made it clear that as their project moves forward in the next couple of years they will

be calling again.”

The FEMA hearing followed publication in the U.K. Nov. 27 of a Royal Society report indicating that exposure of human populations to extreme weather is set to increase more dramatically than previously thought.

“For example, it is normal to think about global warming in terms of the global mean temperature increase, which is dominated by the large ocean

area that warms much more slowly than the land,” said Prof. Peter Cox of Exeter University. “Unfortunately people live on the land, so they experience much more than the global average warming.” **CT**

*Thanks to Thompson's World Insurance News for kind permission to reprint this item.*

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## **Risky real estate: Negligent disclosure of flooding risks can pose future liability**

### **Notes**

<sup>1</sup> *Fors v Overacker*, 2014 ONSC 3084 at paras 209-210, 243 ACWS (3d) 197 [**Fors**].

<sup>2</sup> *Ibid* at para 30.

<sup>3</sup> *Ibid* at paras 5-16.

<sup>4</sup> *Ibid* at paras 7-8.

<sup>5</sup> *Ibid* at paras 5-16.

<sup>6</sup> *Ibid* at paras 53-54.

<sup>7</sup> *Ibid* at paras 31-40; *see also Krawchuck v Scherbak*, 2011 ONCA 352 at para 77, 106 OR (3d) 598 [**Krawchuck**].

<sup>8</sup> *Fors*, *supra*, note 1 at para 34.

<sup>9</sup> *Ibid* at paras 4, 34-35.

<sup>10</sup> *Ibid* at paras 65-75.

<sup>11</sup> *Ibid* at para 102.

<sup>12</sup> *Ibid* at paras 122-129.

<sup>13</sup> *Ibid* at paras 141, 209.

<sup>14</sup> *Ibid* at paras 141, 210.

<sup>15</sup> *See, e.g., Krawchuck*, *supra*, note 7; *Costa v Wimalasekera*, 2012 ONSC 6056, 2012 CarswellOnt 13808 (WL Can).

<sup>16</sup> *Robb-Sim v Solomes*, 2013 CarswellOnt 9432 (WL Canada) at para 21 (Ont Sup Ct J), *citing Krawchuck*, *supra*, note 7 at paras 86, 89.

<sup>17</sup> *Krawchuck*, *supra*, note 7 at para 77.

<sup>18</sup> *Cal. Civ. Code* § 1103(c).

<sup>19</sup> *Ibid* § 1103.2. **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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