Institute for Catastrophic Loss Reduction
Building resilient communities

Institut de Prévention des Sinistres Catastrophiques
Construction de resilient communities

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ICLR releases new book 'Cities adapt to extreme rainfall: Celebrating local leadership'

TORONTO: Local governments are confronting one of the most important issues of our time – the alarming recent increase in damage to homes from extreme rainfall. Communities large and small across Canada are now taking action to reduce the risk of basement flooding and damage to property from sewer backup. '*Cities adapt to extreme rainfall: Celebrating local leadership'* describes 20 of the many successful local projects underway or already completed in communities that are adapting to better address the risks associated with extreme rainfall.

The 20 cities profiled include:

Victoria, British Columbia
Quebec City, Quebec
Ottawa, Ontario
Kitchener/Waterloo, Ontario
Surrey, British Columbia
Toronto, Ontario
Saskatoon, Saskatchewan
Moncton, New Brunswick
Halifax, Nova Scotia
Winnipeg, Manitoba
London, Ontario
Welland, Ontario
Stratford, Ontario
Castlegar, British Columbia
Metro Vancouver, British Columbia
Collingwood, Ontario
Edmonton, Alberta
Markham, Ontario
Calgary, Alberta
Boucherville, Quebec

Mini case studies showcase successful local actions that can and should be used by communities across the country to confront the dual challenge of waste and stormwater management. The local policy decisions presented are, in ICLR's opinion, scientifically sound, and provide a sustainable foundation for long-term success.

In recent years, severe rainfall has replaced fire to become the leading cause of damage to Canadian homes. Damage to homes from sewer backup and basement flooding now exceeds $2 billion a year, and

has been rising at an unsustainable rate for more than 25 years. Moreover, it is inevitable that the frequency and severity of extreme rainfall events will escalate as a result of climate change, threatening to further increase the damage to homes unless we adapt.

“Much of the damage to homes is preventable if local governments and homeowners apply existing knowledge to the design and maintenance of buildings and infrastructure,” says Paul Kovacs, Executive Director of the Institute for Catastrophic Loss Reduction and the book’s lead author. “Fortunately, local governments, property owners and other stakeholders are starting to take action. Over the next few decades, it is expected that Canadians will experience more frequent and intense rainstorms. Nevertheless, if we adapt, it is possible that we could also experience reduced stormwater damage to homes.”

In ‘Cities adapt’, ICLR documents some of the ways local governments seek to influence private behaviour. For example, Ottawa, Ontario regulates the construction of new homes to ensure that builders install backwater valves. Kitchener and Waterloo, Ontario have stormwater fees based on usage. London, Ontario provides incentives for at-risk homeowners to disconnect weeping tiles from the municipal sewer system. Halifax, Nova Scotia provides public information about the options available to interested stakeholders.

ICLR has observed that the trigger for action by most governments across Canada involves responding to damage from an extreme rainfall event. However some communities have been proactive, seeking to take early action before large losses strike.. For example, Collingwood, Ontario has mandated the installation of backwater valves in new homes and Surrey, B.C. requires the replacement of storm laterals when substantial renovations to a home are planned.

“Considerable effort is required to regain control over the risk of damage to homes from extreme rainfall. Nevertheless the direction we must follow is becoming clear,” maintains Kovacs. “All stakeholders are encouraged to share the 20 stories in ‘Cities adapt’ and other stories of successful efforts by local governments, celebrating the actions of progressive communities that have begun to show the way forward.”

‘Cities adapt to extreme rainfall: Celebrating local leadership’ can be downloaded for free in its entirety or by chapter at **www.iclr.org**

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Established in 1998 by Canada's property and casualty insurers, ICLR is an independent, not-for-profit research institute based in Toronto and at the University of Western Ontario in London, Canada. ICLR is a centre of excellence for disaster loss prevention research and education. ICLR's research staff is internationally recognized for pioneering work in a number of fields including wind and seismic engineering, atmospheric sciences, water resources engineering and economics. Multi-disciplined research is a foundation for ICLR's work to build communities more resilient to disasters.

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