



Institute for Catastrophic  
Loss Reduction

Building resilient communities

Institut de prévention  
des sinistres catastrophiques

Bâtir des communautés résilientes



## ICLR TOOLS FOR LOCAL GOVERNMENTS

Local governments are confronting one of the most important issues of our time – the alarming recent increase in damage to Canadian homes, buildings and infrastructure from extreme weather. Communities large and small across the country are now taking action to reduce the risk of basement flooding, wind, hail and wildfire damage to property.

ICLR is a leader in working with local governments on strategies to involve property owners in the management of natural hazards and has developed a range of tools that municipalities can use to assist their residents and businesses in reducing the risk that they experience property damage and disruption.



▶ **Cities Adapt: Canadian case studies of best local practices**

100 case studies of local governments successfully adapting to climate extremes, lessons learned, and a description of best practices. Reports focus on extreme rainfall, heat, storms, wildfire, and infrastructure.

▶ **Resilience in recovery – Science advice to build back better**

ICLR recovery experts support communities seeking to use science to build back better in recovery from a major loss to I) promote public awareness of best resilience practices, II) explore financial incentives, III) joint development of regulatory reforms, and IV) co-ordinate collaboration with provincial government.

▶ **Building public awareness – Citizen empowerment**

Brochures and videos to inform the public about how to assess the risk of loss and take action to protect themselves and property from extreme rainfall, severe wind, winter storms, wildfire, hail, and earthquakes.

▶ **Showcase homes – Demonstrating resilience**

ICLR has partnered with local governments and the media to retrofit a home to demonstrate best practices to reduce damage from urban flooding, wildfire, severe wind, winter storms, hail, and earthquakes.

▶ **Climate-resilient public infrastructure – Engineering tools**

PIEVC and IDF\_CC are tools for municipal engineers and consultants to anticipate and manage the impact of the climate change on public infrastructure, including stormwater systems, and public buildings.

▶ **Inflow and infiltration management**

Collaboration with partner organizations to better understand why rain and groundwater enters sanitary sewer systems and identify best design, construction, and maintenance practices to reduce the risk.

▶ **Financial incentives for homeowners**

Identify and promote public and private sector incentives to install backwater valves and other risk reduction practices that will encourage action by property owners and reduce municipal recovery expenses.

▶ **Public and private sector collaboration**

ICLR has the capacity to develop and implement pilot studies that focus on collaboration and partnership between multiple public and private agencies, including universities, municipalities, builders, and insurers.

▶ **Collaboration with other local governments**

ICLR provides a forum for local participants to share best practices and explore ideas to overcome shared barriers to securing increasing local resilience to extreme events.

# ICLR tools by hazard

## Research foundation for action

Actions supported by evidence and research are more likely to be adopted and demonstrate their effectiveness. ICLR works to connect practitioners with researchers to develop evidence-based policy.

### ▶ **Basement flooding/extreme rainfall**

- > Public awareness brochure and videos
- > Lot-level measures for basement flood protection
- > Financial incentives: some insurance companies offer price expanded coverage
- > The IDF\_CC tool for understanding potential climate change impacts on local extreme rainfall statistics
- > PIEVC tool for assessment of engineering vulnerability of municipal buildings and infrastructure
- > Case studies of 20 communities across Canada successfully addressing extreme rainfall
- > Volunteer communities can participate in national I/I mitigation projects
- > ICLR Municipal Advisory Committee with a dozen communities concerned about basement flooding

### ▶ **Tornadoes/extreme wind/hail**

- > Public awareness brochure and videos
- > Guidance for new home construction
- > Financial incentives: Some communities offer incentives to builders paid by insurance companies
- > Resources on hail prone locations in Canada

### ▶ **Extreme heat/winter storms**

- > Public awareness brochure about winter storms
- > Proposed local requirements for new home construction
- > PIEVC tool for assessing vulnerability of municipal buildings and infrastructure
- > Case studies of 20 communities across Canada successfully addressing extreme heat

### ▶ **Interface wildfire**

- > Public awareness brochure
- > Proposed local requirements for new home construction

### ▶ **Urban earthquakes**

- > Public awareness brochure
- > Online postal code tool to assess the risk
- > Assessment of the risk of fire following an earthquake and best practices for fire agencies



[www.iclr.org/municipality/](http://www.iclr.org/municipality/)

## Institute for Catastrophic Loss Reduction

### 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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