

# Blueprints for Action

## Minimizing Homeowner Flood Risk in the GTHA

July 2017

**CivicAction**

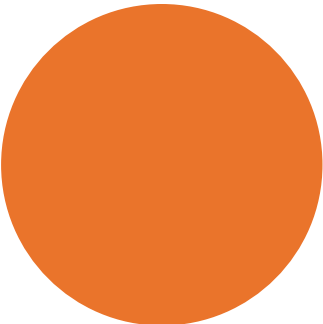
**INTACT CENTRE**  
ON CLIMATE ADAPTATION

 **IBC** | Insurance Bureau  
of Canada



# Table of Contents

p. 1	Introduction
p. 1	Kick-starting a Conversation
p. 1	Surveying the Land
p. 3	Renovations and Repairs
p. 4	Good Housekeeping
p. 6	Open Innovation
p. 6	Many Hands Make Quick Work



## About CivicAction

For over a decade, CivicAction has played the role of neutral sandbox, bringing together senior executives and rising leaders from all sectors to tackle challenges facing the Greater Toronto and Hamilton Area. CivicAction builds partnerships and takes action through campaigns, programs and organizations that transform our region. To find out more visit [civicaction.ca](http://civicaction.ca) or follow us on twitter at [@CivicActionGTHA](https://twitter.com/CivicActionGTHA).

## About Intact Centre on Climate Adaptation

The Intact Centre on Climate Adaptation (Intact Centre) is an applied research centre with a national focus within the Faculty of Environment at the University of Waterloo. The Intact Centre works with homeowners, communities, governments and businesses to identify and reduce the impacts of extreme weather and climate change. To this end, the centre is an incubator of new adaptation ideas, conducting research, knowledge mobilization and promoting initiatives aimed at de-risking the negative impacts of a changing climate and extreme weather.

## About Insurance Bureau of Canada

Insurance Bureau of Canada (IBC) is the national industry association representing Canada's private home, auto and business insurers. For more than 50 years, IBC has worked with governments across the country to help make affordable home, auto and business insurance available for all Canadians. IBC supports the vision of consumers and governments trusting, valuing and supporting the private P&C insurance industry. It champions key issues and helps educate consumers on how best to protect their homes, cars, businesses and properties.



## Sandbags, flooded crawlspaces, pumping stations, rubber boots—they're commons sights in 2017 for residents of Toronto's Ward's Island.

For many Torontonians in general, 2017 could be called "the year of the flood." Higher amounts of rainfall during the spring caused Lake Ontario to swell by 55 centimeters, submerging not only parts of the Toronto Islands, but also affecting regional shorelines and even seeping into lakeside condo parking garages.

But this isn't necessarily a new phenomenon. Four years prior, Toronto was witness to dramatic flooding brought on by a powerful summer storm that overwhelmed local sewer infrastructure and flooded homes and basements. This accounted for \$1 billion in insured property damage and allocated loss adjustment expenses. Combined with flooding in Alberta that same year, affected homeowners faced a \$40,000 repair bill on average. A year later, Burlington, Ont., saw the same—flooded roads, flooded homes, distraught residents.

The cause of these kinds of flooding isn't a secret. Climate change is having major local impacts across the Greater Toronto and Hamilton Area (GHTA) including major flooding. Extreme weather that typically happens every 20, 40, 80, to 100 years is now happening with increasing frequency. Learning how adapt to this new reality isn't just a question for our leaders to work on, it's also something each and every homeowner must consider as they maintain and protect their property.

---

<sup>1</sup> Beeby, Dean. "Expecting Ottawa to pay during the next major flood disaster? Not so fast, expert warns." CBC News. January 22, 2017. Accessed May 13, 2017. <http://www.cbc.ca/news/politics/flood-insurance-basement-disaster-compensation-goodale-feltmate-1.3941023>.

<sup>2</sup> The Canadian Press "More than half of Canadians have less than \$10,000 set aside for emergencies: BMO" The

The problem? Homeowners don't seem to have gotten the message. According to a survey completed for Public Safety Canada, 74% of Canadians have not protected their homes from flooding and 54% were not concerned about flooding in their area.<sup>1</sup> According to the Bank of Montreal, 56% of Canadians have \$10,000 or less available to put towards emergency costs.<sup>2</sup> Clearly, homeowners' priorities are not shifting in response to our changing climate.

### Kick-starting a Conversation

On April 3, 2017, CivicAction convened a multi-sector forum to get closer to understanding how homeowners can be better motivated to take action against basement flooding.

Moderated by CivicAction CEO Sevaun Palvetzian, with opening remarks from the Insurance Bureau of Canada, the event was held at the Centre for Social Innovation, a pioneering social entrepreneurship hub based in Toronto. The forum featured a roundtable discussion and presentations from representatives of key stakeholder groups<sup>3</sup>, including:

- **His Worship Rick Goldring**, Mayor of Burlington
- **Monika Federau**, Senior Vice President & Chief Strategy Officer, Intact Financial Corporation
- **Chris Tyrrell**, Executive Vice-President and Chief Customer Care and Conservation Officer, Toronto Hydro
- **Deborah Martin-Downs**, Chief Administration Officer, Credit Valley Conservation
- **Dr. Blair Feltmate**, Head, Intact Centre on Climate Adaptation

The Globe and Mail. September 1, 2015. Accessed May 13, 2017. <https://www.theglobeandmail.com/globe-investor/personal-finance/household-finances/more-than-half-of-canadians-have-less-than-10000-set-aside-for-emergencies-bmo/article26172527/>

<sup>3</sup> See a full list in the participant list.

*Blueprints for Action* identifies the barriers, opportunities, and actions that need to be addressed by both stakeholder organizations and homeowners to minimize the growing flood risk GTHA homes face.

## Surveying the Land

Nearly three quarters of Canadians have not done anything to protect their home from flooding. Coupled with this is the fact that the July 2013 Toronto region flood caused \$1 billion in insured property damage—one of the most costly natural disasters in Ontario history<sup>4</sup>. It's clear that the combination of these two factors could result in significant consequences for homeowners and various stakeholders including all three orders of government, the insurance sector and community organizations, among others. But what other factors need to be considered before we move forward?

### Extreme weather events in the GTHA

Our climate is changing more rapidly than anticipated. Storms and extreme weather that typically happen every 20, 40, 80 to 100 years are now happening much closer together—and they're happening very close to home. In 2013 and 2014, floods caused by powerful storms overwhelmed city infrastructure systems in both Toronto and Burlington. Furthermore, these kinds of weather events also carry a substantial price tag for homeowners. The average cost of repairing basements damaged by flooding in Alberta and Toronto in 2013 was more than \$40,000 for each affected homeowner.<sup>5</sup>

Toronto was witness to flooding in 2013 that left

# \$1 billion

in insured property damage and allocated loss adjustment expenses.

<sup>4</sup> Flavelle, Dana. "A year after the Toronto flood." Toronto Star. July 05, 2014.  
[https://www.thestar.com/business/personal\\_finance/investing/2014/07/05/a\\_year\\_after\\_the\\_toronto\\_flood.html](https://www.thestar.com/business/personal_finance/investing/2014/07/05/a_year_after_the_toronto_flood.html).

### Government action at all levels

The state of our infrastructure is a key concern at all three levels of government—federal, provincial and municipal—from the roads we drive on, to the state of our utility and sewer systems, to the homes we build. Recently, both the federal and provincial

According to Public Safety Canada

# 74%

of Canadians have not protected their homes from flooding.

budgets have announced significant investments in infrastructure. Climate adaptation measures have also accompanied these announcements, most notably with the federal government's outline of tangible measures to identify at-risk federal infrastructure, strengthen building codes, and invest significantly in mitigating climate risk across this country.

At the municipal level, action varies region to region, city to city. Cities severely impacted by flooding have realized the need to spearhead adaptive measures, supports, and programs for residents. For example, after significant flooding in the summer of 2014, the City of Burlington led the development of regional flood studies in Halton Region. The City of Toronto has also created an extreme weather portal that collects pertinent information from various city departments as a one-stop resource to help residents prepare for extreme weather.

Local organizations, such as conservation authorities, manage floodplains and work with local governments to develop specific community action plans to address climate change and to improve sustainability and resiliency. For example, Credit Valley Conservation, the City of Brampton and the Region of Peel, along with community members and

<sup>5</sup> Beeby, Dean. "Expecting Ottawa to pay during the next major flood disaster? Not so fast, expert warns." CBC News. January 22, 2017.  
<http://www.cbc.ca/news/politics/flood-insurance-basement-disaster-compensation-goodale-feltmate-1.3941023>.

businesses, have collaborated to develop a Sustainable Neighbourhood Action Plan for Brampton's Fletchers Creek neighbourhood.

### Insurance coverage

Property and casualty insurers offer a variety of products and coverages for homes, cars and businesses. New products are regularly being developed that respond to changing risks and threats, including overland flooding. Despite this, homeowners can be unaware of relevant new insurance products since many of these require the purchase of optional coverage.

### Homes and their owners

Because nearly three-quarters of Canadians have not taken steps to mitigate flood risk to their homes, it's not surprising that many often act too late, or don't act until floods impact friends, family or neighbours. Following the Burlington floods of 2014, the city saw a swell of immediate action that slowly and consistently diminished. Though it's difficult to fully understand why homeowners may be slow or unwilling to act, rising levels of Canadian household debt may be one deterrent for homeowners to pay additional costs to upgrade or retrofit their homes or to obtain optional insurance.

## Renovations and Repairs

During the forum, participants acknowledged outstanding barriers may act as obstacles to homeowner action. Though not an exhaustive list, these will need to be addressed in order to better motivate homeowners to protect themselves against flooding.

### Lack of knowledge among homeowners

Homeowners may simply lack the necessary knowledge on two different fronts to take action. Participants at the forum remarked that some

homeowners may not be aware of their property's flooding risk or if their home is located on a

There is a **great opportunity to make it easier for homeowners to reduce their flood risk by targeting key areas of risk at the neighbourhood scale and developing a team of specialists to work directly with residents providing technical support and financial incentives to help them take action.**

**Deborah Martin-Downs**  
Chief Administrative Officer  
Credit Valley Conservation Authority

floodplain. Homeowners may also be unfamiliar with different types of flooding that can happen, such as riverine or rainfall. Without knowing this potential risk, many would not feel motivated to act. Secondly, flooding insurance can sometimes be optional for homeowners, meaning that they must educate themselves on the risks they face and determine whether they need, or can afford, such a product.

### Erosion of trust from traditional information sources

Forum participants also commented that sources of information are changing. They pointed out that the media, government, and other experts have seen their trust profile decrease in recent years, suggesting that homeowners may be more likely to take advice from a friend or family member who are sharing recent relevant experiences online or in-person.

### Fleeting share-of-mind

Flooding risks can frequently take up a small plot of the homeowner's mind, especially if they lack relevant knowledge. Furthermore, forum participants pointed out that the benefits to protection will only been seen if flooding takes place. Homeowners also seem most motivated to protect their home when flooding hits their community or when they hear a related experience from a family member, friend or colleague. If the risk isn't top of mind or communicated fully, the homeowner is less likely to act.

Forum participants pointed out that **homeowners seem most motivated to protect their home after flooding hits.**

## Protection is voluntary

Although programs and policies exist to help protect homeowners from flooding risks, many are voluntary. For example, unless legislated by government, the new CSA Group basement flooding standard currently in development will also be voluntary. Without showing a degree of force, it's again left up to the homeowner to take matters into their own hands.

Many municipalities in the GTHA offer subsidies for flood protection devices like backwater valves and sump pumps. Making resiliency increasingly cost effective will encourage Canadians to adapt now.

**Monika Federeau**

Senior Vice President & Chief Strategy Officer  
Intact Financial Corporation

## Good Housekeeping

Forum participants pointed to a number of existing opportunities that stakeholders should continue to maintain and spearhead.

### 1. Collect and enhance available data to identify, prioritize and communicate risk

Data collection is routinely completed by a host of different stakeholders, from insurance companies to conservation authorities to governments. However, data collected can sometimes be inconsistent or incomplete, or not readily available across regions or sectors. Therefore, dependent of available funding, it's important for stakeholders to continue to collect, enhance, and share data so that it can be used for risk identification and communication purposes. Areas identified as the most vulnerable for flooding should be identified and labelled as "hot spots" across sectors.

### 2. Educate homeowners on the risks to individual properties, protection available and the limits of capped relief funding

Forum participants also called for the continued education effort directed at homeowners around overall risks and protection. However it was also

noted that homeowners should better understand the limits of government relief funding during a significant flooding event and the circumstances under which that funding would, or would not, be available. This would help establish a clearer role of insurance and its benefits for homeowners.

### 3. Use targeted messaging and various channels when communicating to homeowners

In such a fragmented communications and media environment, it's important that any messages regarding flooding prevention are able to cut through other issues or risks that resonate with homeowners. Forum participants felt that tailored messaging by audience and the use of real personal stories were two key methods capable of doing this. However, identifying and using a number of communication channels—including social media, advertisements, and meetings with stakeholder representatives—was key to making these tactics work successfully.

### 4. Continue current methods to motivate homeowners and simplify their fact-finding mission

Financial incentives, legislation, and the enforcement of standards are all current motivational levers that have proven to be successful in the past and should continue. Many cities, regions, and municipalities in Ontario have also developed one-stop online portals for residents to learn more about how to prepare against extreme weather events. Promoting the development of these portals by stakeholders and encouraging homeowners to develop personal action plans can help increase likelihood to act. Forum participants also discussed the creation of a "home-owner hand-holder" role among stakeholders—someone who can provide readily available and proactive information, direction or advice to homeowners.

### 5. Encourage innovative thinking and activity within sectors

New thinking and renewed effort by all stakeholder groups was widely encouraged by forum participants who felt that homeowners would need to hear recommendations and motivation from a variety of sources before they decide to act.



**Table 1: Examples for New Innovative Thinking and Activity by Sector**

<b>Banking</b>	<ul style="list-style-type: none"> <li>• <b>Recognize</b> the potential role the sector can play in reducing flooding risk. For example: Provide financial incentives for homeowners, such as reduced mortgage rates for those who invest proactively in flood protection.</li> </ul>
<b>Community Groups</b>	<ul style="list-style-type: none"> <li>• <b>Scale</b> current community-based networks to build interest, awareness and capacity among local residents.</li> <li>• <b>Equip</b> local representatives with the support and the network to connect homeowners to knowledgeable contractors and installers.</li> </ul>
<b>Construction</b>	<ul style="list-style-type: none"> <li>• <b>Ensure</b> new builds are covered by codes that mitigate flooding risk.</li> <li>• <b>Educate</b> contractors on opportunities to reduce flood risk when undertaking renovation work. For example, recommend installation of battery powered sump pump.</li> </ul>
<b>Government</b>	<ul style="list-style-type: none"> <li>• <b>Modify</b> existing economic instruments so that municipalities obtain funding for climate adaptation measures quickly, efficiently, and transparently. For example, carbon tax revenues are not available at present to fund climate adaptation measures.</li> <li>• <b>Develop</b> legislation to enforce standards that address flooding risks. For example, unless legislation is developed, the new CSA Group basement flooding standard in development will be voluntary.</li> </ul>
<b>Insurance</b>	<ul style="list-style-type: none"> <li>• <b>Encourage</b> homeowners to do more research to understand their personal flood risk.</li> <li>• <b>Educate</b> homeowners on the differences between government disaster aid and private insurance, and under which circumstances—and to which degree—each will respond.</li> <li>• <b>Offer</b> incentives for flood mitigation activities.</li> </ul>
<b>Real Estate</b>	<ul style="list-style-type: none"> <li>• <b>Develop</b> flood proofing rating for homes.</li> <li>• <b>Encourage</b> real estate boards to include a checkbox for backwater valves in home audits.</li> </ul>
<b>Utilities</b>	<ul style="list-style-type: none"> <li>• <b>Develop</b> or continue to play a role in educating homeowners on emergency preparedness and the factors to think about during an extreme weather event. For example, Toronto Hydro's Emergency Preparedness Guide.</li> </ul>



## Open Innovation

Since numerous stakeholders play a role in helping to educate, motivate and protect homeowners, activities can take place in silos that prohibit new collaboration and action. Currently, the homeowner support landscape lacks an open innovation vision. For this reason, forum attendees suggested a more collaborative approach among sectors needs to be encouraged.

Some example collaborations that could benefit multiple sectors include:

### Banks and Homebuilders

Ensure that new homes have proper protection from flooding, which could, for example, incentivize a banking benefit for a home purchaser.

### Real Estate Developers and Experts on Community Resilience

Make sure that real estate developments are designed with community resilience needs in mind.

### Insurers and Utilities

Address risks of extreme weather to power supply in homes, and to educate homeowners on how to mitigate their risk when power does fail, from installing a sump pump to ensuring battery backup is available.

### Government and Insurers

Develop a common view on the importance of protecting existing and to-be-built infrastructure assets from a growing number of extreme weather events. To gain ground on this figure, funding must be invested to maximize the social, environmental, and economic return on dollars spent.

With increased extreme weather events, we can expect to see incremental movement on this issue with sector-specific support for homeowners. It will take a **collaborative effort across all sectors** to see accelerated change.

**Chris Tyrrell**

Executive Vice-President and Chief Customer Care and Conservation Officer, Toronto Hydro

## Many Hands Make Quick Work

As we continue to deal with a changing climate, it will be increasingly necessary that homeowners and stakeholders work together to ensure our homes, businesses and infrastructure improve their resiliency in the face of extreme weather events.

The good news is that no one is starting at ground level. Essential work by many stakeholder groups has already created a strong foundation. It's also important to recognize the recent announcements by our three orders of government that coordinate federal, provincial, and municipal infrastructure funding and rewards projects with positive environmental and economic impacts.

However, a more pressing need does exist for increased collaboration to shift homeowners into a new gear of action. This includes developing a common and shared data set to inform decision making and priority action areas; coordinated messaging that feature a mix of motivational levers found across sectors; and the scaling of community-based networks, knowledge and leadership with support from private-, public-, and community-sector stakeholders. Moving forward, stakeholders will need to come together to determine what next steps look like and how to best engage homeowners.

By working together, this can be accomplished more easily. As the old adage goes, many hands make quick work.

# Forum Participants

On April 3, 2017, a broad cross-section of representatives from organizations across the GTHA, including insurance, utilities, not-for-profits, community organizations, industry, and municipalities were present at *Preparing for the Next Big Flood: Minimizing Homeowner Flood Risk in the Toronto Region*, including the following participants.

**His Worship Rick Goldring**

Mayor of Burlington

**Sevaun Palvetzian**

CEO, CivicAction

**Monika Federau**

Senior Vice President & Chief Strategy Officer, Intact Financial Corporation

**Chris Tyrrell**

Executive Vice-President and Chief Customer Care and Conservation Officer, Toronto Hydro

**Deborah Martin-Downs**

Chief Administration Officer, Credit Valley Conservation

**Dr. Blair Feltmate**

Head, Intact Centre on Climate Adaptation

**Emily Beveridge**

Policy Advisor,  
Environmental Commissioner of Ontario

**Rita Bijons**

Co-Founder, Community Resilience to Extreme Weather Events (CREW)

**Brian Buchan**

Director, Media, Communications and Municipal Stakeholder Relations, Toronto Hydro

**Stewart Dutfeld**

Project Lead Resilience, City of Toronto

**Grant Gordon**

President and Creative Director Key Gordon

**Sanjay Khanna**

Senior Consultant, Strategy Flood & NatCat Risk (Ontario), Insurance Bureau of Canada

**Kathleen O'Neill**

Director (Acting), Strategic Policy Branch (Environment and Climate Change), Ministry of the Environment and Climate Change

**Caitlin Rochon**

Program Coordinator - Climate Change, Regional Municipality of Durham

**Chandra Sharma**

Director, Watershed Strategies, Toronto and Region Conservation Authority

**Angela Taylor**

Senior Vice President, Operations & Asset Management, Plenary Group

**Leila Julia Zadeh**

Project Manager, Built Environment Standards, CSA Group

**Doug Webber**

Associate Vice President, WSP Parsons Brinckerhoff

CivicAction is a not-for-profit organization. We rely on the generosity of our partners and supporters. Please take a look at some of the great companies and organizations who made this work possible.



---

## INTACT CENTRE

ON CLIMATE ADAPTATION

---



---

[www.civicaction.ca](http://www.civicaction.ca)  
@CivicActionGTHA