

WATER ON THE RISE: PROTECTING CANADIAN HOMES FROM THE GROWING THREAT OF FLOODING

Why is basement flooding on the rise?

A combination of:

- Extreme rainfall events
- Aging municipal infrastructure
- Lack of flood protection measures at the household level
- More hard surfaces and less green space as urban areas develop



What is the average cost of a basement flood?

\$43,000

(Insurance Bureau of Canada, 2018)



What is the Home Flood Protection Program?

- Residential flood risk reduction education program
- Launched by the Intact Centre on Climate Adaptation at the University of Waterloo in 2016
- Completed over 500 Home Flood Protection Assessments in Ontario and Saskatoon from 2017- 2018

How is the program helping Canadians?

- Providing free online flood protection resources for residents and flood protection educators
- Providing training programs for flood protection educators
- Providing nationally applicable flood risk assessment tool to successful course graduates

What were the top flood risks identified at homes?



Inside the Home

- 85%** Had no backup sump pump or power source
- 71%** Had furniture and electronics at risk of water damage
- 53%** Never maintained their backwater valve
- 40%** Never maintained their sump pump



Outside the Home

- 82%** Had window wells <10-15cm above the ground
- 78%** Had downspouts that deposited water <2m from the foundation
- 69%** Had grading around their home that did not direct water away from the foundation
- 63%** Had cracks or gaps in basement windows and frames

*Data based on 285 Ontario Home Flood Protection Assessments

What percentage of participants took action to reduce their risk after having a Home Flood Protection Assessment?

3 Months After Participation

✓ **79%** of residents took at least **one new action**

6 Months After Participation

✓ **71%** of residents took at least **one additional action**

How complex and expensive was it to complete actions to reduce flood risk?

60% of actions ✓ <\$500, simple, mostly completed by residents
Tested sump pump, extended downspouts, installed window well covers

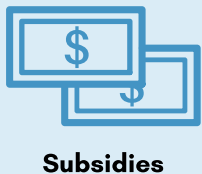
40% of actions ✓ >\$500, more complex, mostly contractor completed
Installed sump pump, backwater valve, replaced eaves troughs and basement windows

*Data based on 91 Ontario follow-up surveys

How can flood protection educators help residents reduce basement flood risk?



Share clear and consistent flood protection messaging with residents through many trusted agencies (E.g. municipalities, insurers, emergency services, not-for-profits)



Provide flood protection subsidies or incentives for residents, and a clear and simple application process



Promote flood risk reduction and subsidy information to the entire community using social and traditional media, and community newsletters



Promote flood risk reduction and subsidy information to areas at higher risk of flooding by engaging residents in direct problem-solving conversations using door-to-door campaigns, and community events