Keeping Basements Dry
It’s All in the Risk

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Incidents of basement flooding and claims paid out by insurers for damages due to basement flooding continue to rise sharply.

The same trend applies to persons and households without insurance coverage for basement flooding.

Real costs associated with basement flooding are difficult to estimate (i.e., insurance claims, homeowner/tenant uninsured losses, all associated costs due to loss of time at work, rental income, etc.).

Risks and history of basement flooding are not shared.

Knowledge and appropriate technology for the prevention of basement flooding has existed for several decades.

Why does this major disconnect continue?
People live in basements

- Today’s residential basements are expected to perform the same as the upper floors of houses in terms of thermal comfort and indoor air quality.

- Increasingly, Canadians store numerous valuable possessions in their basements.

- Climate change has caused more extreme weather events and basement flooding in Canada has doubled over the past decade.
Incidents of basement flooding can be expected to rise sharply due to climate change.

Basement flooding can occur due to general flooding caused by overflowing rivers and lakes, and heavy rainfalls and/or snow melting.

Water may enter the basement through connections to the sewer system.

Water may enter through the exterior of the building envelope.

Most cases are preventable.
Most solutions to basement flooding already exist, are affordable, accessible and proven.
Many common types of basement flooding are easily preventable

Backflow prevention devices can eliminate sewer surcharges causing basement flooding.

Basement window wells and window sealing can be vastly improved at low cost.

Grading of lots and streets in new subdivision design to reduce local flooding is largely achievable.
Not all basement flooding is preventable

Events in Calgary and Toronto this past summer are difficult to mitigate.

Losses could be minimized in future, but not completely eliminated.
Municipalities and insurers know areas prone to basement flooding.
Basement flooding causes mold growth having serious health implications.
Volenti non fit injuria.

Insurers and municipalities are potentially liable for damages suffered by inhabitants of basements that are not provided with *basement flooding risk and history information*.
Consumers have a right to basement flooding risk and history.
Where’s the R & D?

- In Canada, expenditures on R&D represents 1.6% of GDP.
- A progressive and innovative insurance industry would be annually investing a minimum $27.7-million on water damage related R&D.
- Leading industries spend an average of 8.3% of total revenues – some $143.7-million annually would be invested by Canada’s insurance industry to improve the protection of life and property.
- A comprehensive online research survey could not identify any publicized investments in R&D by Canada’s insurance industry.
- At minimum, Canada’s insurance industry could afford to develop and maintain an online basement flooding risk and history registry.
Risk and Consequences

- **A**: Risks that can be safely ignored
  - Minor Consequences
- **B**: Risks that can be mitigated through simple changes in behavior
  - Major Consequences
- **C**: Risks that can be mitigated through insurance
  - Low Likelihood
- **D**: Risks to actively identify, monitor, and mitigate
  - High Likelihood
Digging Ourselves Out of Basement Flooding

- Basement flooding is a health and safety issue that needs to be addressed in codes, standards and local bylaws.
- Designers, developers, builders and code officials need to be properly trained and educated in basement flooding prevention and mitigation.
- Consumers have a right to know about the risks and history of basement flooding, both as homebuyers and tenants.
- Insurance rate guidelines must reflect the level of risk and the degree of prevention and mitigation measures.
- Research and development and the management of data and statistics need to be improved if basement flooding is to be responsibly addressed by all stakeholders.
- Insurers, governments, municipalities, health organizations, design & construction professions, the real estate industry and academia must work together to better manage basement flooding.
Thank you.