

Home Adaptation Audit Program (HAAP)

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Climate adaptation in Halifax

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- Sackville River Floodplain Mapping
- Municipal Climate Change Action Plan
- ACAS – Atlantic Climate Adaptation Solutions
- Cost-benefit adaptation scenarios (NRCAN)
- Policy exchange
- Sponsored Rain Yards and Living Shorelines
- **Several reports and tools available to developers**
 - **But not homeowners**

Home Adaptation Audit Program



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- 40 point home inspection – inside and out
- Recommendations for reducing flood damage risk
- Recommendations are low or no cost
- Audit takes 1.5-2.5 hours, homeowner accompanies auditor
- Audit season: April – November





Pilot study: Results

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- 63% of audited home owners reported acting upon audit recommendations within 6-8 weeks of audit
- High frequency actions included:
 - 55% cleaned or repaired eaves troughs
 - 43% inspected their homes for water pooling during major storms
 - 35% redirected eaves/downspouts to permeable area
 - 35% moved storage and household items off basement floor
- Other actions:
 - Installation of sewer backflow prevention
 - Large-scale re-grading of property
 - Installing permeable features (rain gardens, permeable surface driveways)
- People love to talk about the audit program



Pilot study: ROI

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Parameters:

- Audit = \$110/house
- Average cost per flooded basement = \$20,537/house (IBC, 2014)

Cost of Auditing 1,000 Houses = 1,000 houses x \$110/house = **\$110,000**

If even 5 of 1000 audited homes avoid flooding, savings = **\$102,685**

Avoided Flood Losses/1,000 Houses (assume 10% of houses otherwise flooded over 10 years without audit): 100 x \$20,537/house = \$2,053,700 savings

Return Ratio (at 10% flood avoidance) = \$110,000 invested/\$2,053,700 return = **1:18.7**

For every \$1 invested in a home, the homeowner avoids almost \$20 damage



Proposed 2016 project

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- Audit 1800 homes in Nova Scotia
- Target high flood risk areas
- Show this works here
- Build base of informed and engaged residents
- Collaborate with municipality and the province
- Address gap in adaptation programs

Why Halifax?

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How Halifax will benefit:

- Real reduction of flood risk
- Contribute to overall resiliency
- Build reputation as climate prepared city

What EAC will contribute:

- History of smart projects
- Demonstrated ability to effect tangible change

What Waterloo will contribute:

- Developed the audit program
- Expertise, funding, and training

What Halifax can contribute:

- ID high risk focus areas
- Help with outreach
- Financial support

Questions?

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Robin Tress

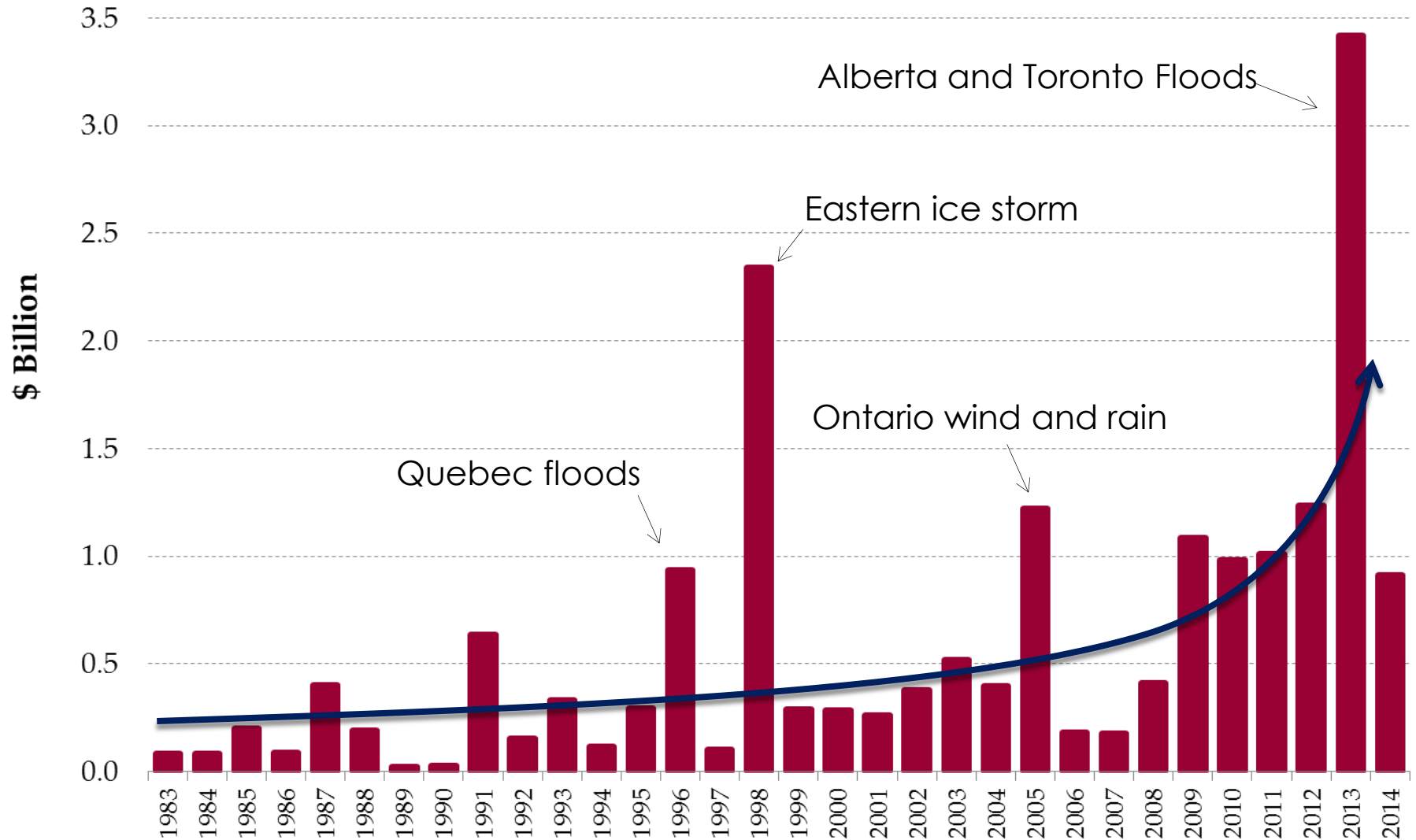
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Canada's Climate Change Challenge: Catastrophic Insurable Losses



Courtesy: Insurance Bureau of Canada