



C Foundation
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ABOUT US

Clean Foundation is a climate change, program delivery non-profit.

We are a Nova Scotia-based independent, non-governmental environmental charity that began in 1988.

We bring specialized teams together to work on complex problems, delivering clean projects and programming for communities.

We're here to make the biggest impact for a cleaner world.





CLIMATE CAPACITY

Municipalities and communities throughout Nova Scotia have been struggling to find **the resources, support and staff** to take action against the climate challenges that face them.

Community Climate Capacity Program can help.

COMMUNITY CLIMATE CAPACITY

funding provided by the NS Department of Environment and Climate Change



CLEAN FOUNDATION

provide **FREE**
staff resources and capacity



19 COMMUNITIES

Primary goal of CCC is to help communities:

- identify climate risks;
- assess opportunities; and,
- develop/implement climate adaptation and mitigation actions.

CLEAN'S CCC INITIATIVE

- **A Climate Lead will be assigned to successful CCC recipients** to enhance their adaptive capacity, community resilience and greenhouse gas emission reductions.
- Communities will **have three years of support** for climate change work at **no cost**.
- Our objectives are to action on:
 - funding applications;
 - ground implementation; and,
 - necessary policy development for **climate and sustainability considerations** in operational decision making.



The program is focused on building up **your capacity to implement climate action.**

LOCAL CLIMATE ACTION



Heat Waves



Extreme Storms



Forest Fires



Flooding



Coastal Erosion

The changing climate is **impacting our community** wellbeing and way of life.

Despite the enormous scale, complexity and severity of the climate change challenges, innovative solutions are taking root at the local level, where adaptation measures can protect our communities.



OVERLAND FLOODING

Overland flooding happens when water flows over land, seeping into windows, doors and cracks in a home.

This type of flooding is **not** covered by all insurance plans and the damage from it can pose significant **financial, health and safety risks** to homeowners.

UNDERSTANDING FLOOD RISK

“Less than 50% of Canadians understand what their insurance policy covers.”

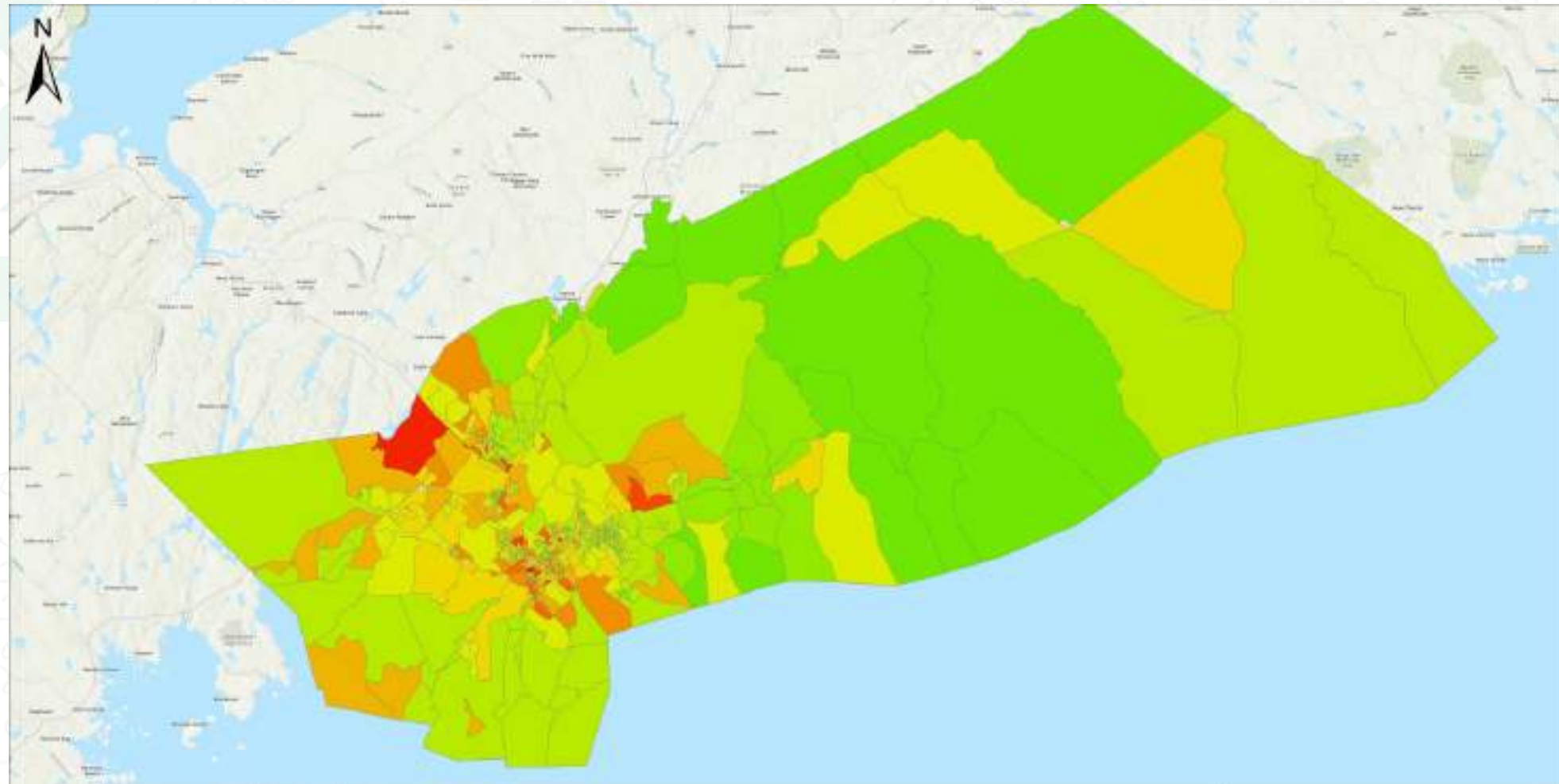
– Insurance Bureau of Canada, 2016, IBC Flood Analysis



The average cost of a flooded basement is **\$43,000.**

RESILIENCE RETROFIT INITIATIVES

- Identify community-level flooding to understand flood risks to individual homes
- Provide turn-key style retrofit upgrades to better protect homes from flooding
- Share information about flooding and how to prepare



Halifax Census Dissemination Area Scores

This map was created to select census dissemination areas (CDA) within HRM to conduct the pilot activity in two communities. Suitability scoring is based off a multicriteria evaluation that combined flood risk variables and socioeconomic variables. The scores range from 4-15, with a score of 15 indicating the most suitable CDAs. Low scores are shown in green, and high scores are shown in red. The locator map displays the scope of this analysis.



Env. N.S.A., M.T. (SRP) Province of Nova Scotia, David Smith, Inc., HRM, Clean, PAC, NSHA, USG, NSB on, Peter F. Smith, Province of Nova Scotia, Peter F. Smith, Inc., SRP, Clean, SRP, M.T. (SRP), NSHA, USG, HRM on, Peter F. Smith, Province of Nova Scotia, David Smith, Inc., USG, SRP, Clean.

2023

Coordinate System: NAD 1983 CSRS 2010 MTM 5 Nova Scotia

Halifax CD Suitability Scores

4	8	12
5	9	13
6	10	14
7	11	15

THE PROCESS



ASSESSMENTS

Schedule up to three home visits to conduct the Flood Risk Assessment and Home Energy Assessment.



HOME UPGRADES

Retrofits will be completed by community-based contractors – benefiting the local economy.



MAINTENANCE

Receive a customized maintenance guide. Schedule a post-retrofit evaluation to follow-up on your satisfaction with the work.

HOME LEVEL ANALYSIS

80-Point Flood Risk Assessment

- About the home (house type, foundation type, water sources, age)
- Past water damage and homeowner actions
- Outdoor and indoor



FLOOD RISK ASSESSMENT

GRADING AT FOUNDATION

<p>#15. Grading at foundation- After a heavy rain, does the grading within 1.8m (6') of your foundation walls direct water away or do you see water pooling? The grading within 1.8 m (6') of the foundation walls slopes a minimum of 5% to direct water away from the foundation. The foundation surface does not easily soak up water.</p>	<p>OW, GS</p>	<p>The grading within 1.8m (6') of the foundation slopes 1-2 % away from the foundation. The foundation surface moderately soaks up water.</p>	<p>Correct grading to achieve a slope of at least 5% away from the foundation. Consider replacing the surface with non-water absorbent material.</p>
<p>#16. Grading at foundation maintenance- Each season the homeowner checks for signs of water pooling or ice formation and corrects grading to achieve at least 5% slope away from the foundation.</p>	<p>OW, GS</p>	<p>Each season the homeowner checks for signs of water pooling or ice formation and corrects grading to achieve at least 5% slope away from the foundation.</p>	<p>Each season, check for signs of water pooling or ice formation at foundation. Correct grading to achieve at least 5% slope away from foundation.</p>

EAVES TROUGHS AND DOWNSPOUTS

<p>#17. Eaves troughs- Are eaves troughs adequately sized and in adequate condition to reduce flood risk? Eaves troughs wrap around the entire building, are in good repair and have downspouts placed a minimum of 9-12m (30-40'). Eaves trough of 13cm (5") are present for asphalt shingles or 15cm (6") for a metal roof.</p>	<p>GS</p>	<p>Eaves troughs do not wrap around the entire building, are in poor repair, OR Do not have downspouts placed at a minimum of every 9-12m (30-40'). Eaves troughs are undersized and/or do not have 13cm (5") eaves trough for asphalt shingles or 15cm (6") for a metal roof OR Needs further investigation.</p>	<p>Contact a qualified professional to install eaves troughs where missing, install 5" eaves troughs for asphalt shingles or 6" eaves troughs for metal roof. Install downspouts every 30-40'. Repair existing eaves troughs.</p>
<p>#18. Eaves trough maintenance- Each season during heavy rainfalls, the homeowner checks the eaves troughs for leaks, debris and blockage. Repairs and debris removal are completed as needed.</p>	<p>GS</p>	<p>Once per year during heavy rainfalls, the homeowner checks the eaves troughs for leaks, debris and blockage. Repairs and debris removal are completed as needed.</p>	<p>Each season during heavy rainfalls, check for leaks, debris and blockage. Repair, replace and clean out as needed.</p>

RETROFIT PLANNING

Criteria and considerations

- Socio-economic (Income, household age, priority community)
- Consequence: How much damage occurred from an event?
- Resiliency: How resilient is the home currently?
- Frequency: How likely will a future event infiltrate/cause further damage? Evidence?
- Scope
- Budget

TYPES OF RETROFITS

Foundation Crack Repairs



Sump Pumps



Backwater Valves



Rain Gardens

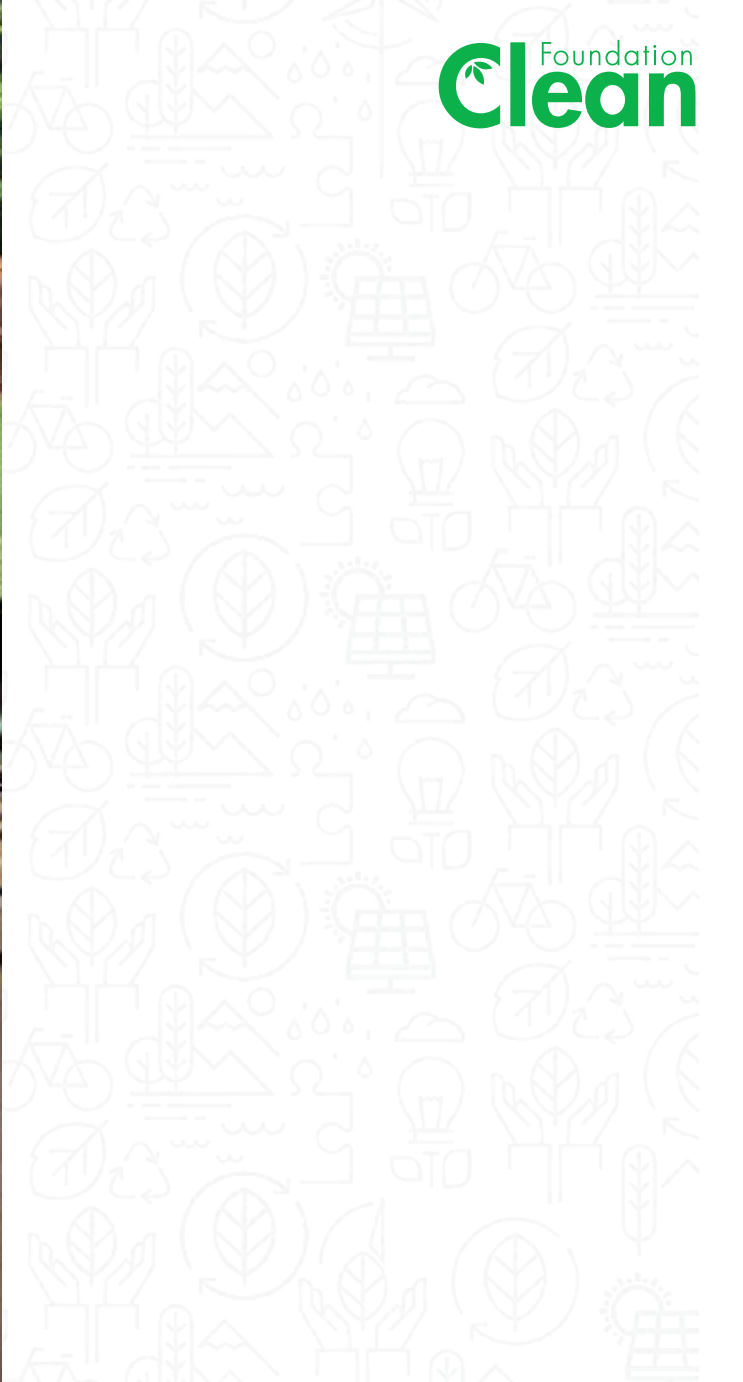


Lawn Grading



Gutter Alignments





RESOURCES

Website and Resource Library

- Find opportunities to reduce your risk.
 - Check out www.cleanfoundation/rhr
 - [Home Flood Protection Check-up](#)
 - Basement Flood Protection Checklist
 - Seasonal Flood Protection & Maintenance Checklist



OUR FUNDERS



OUR COLLABORATORS

INTACT CENTRE
ON CLIMATE ADAPTATION



UNIVERSITY OF
WATERLOO



QUESTIONS

For general inquiries about:

Community Climate Capacity Initiative: ccc@cleanfoundation.ca

Resilient Home Retrofits: [**RHR@cleanfoundation.ca**](mailto:RHR@cleanfoundation.ca) or

Visit us online at: [**cleanfoundation.ca**](http://cleanfoundation.ca)