



# SELF-HELP MATERIALS FOR REDUCING FLOOD RISK INSIDE AND OUTSIDE YOUR HOME

#### **Introduction to the Home Flood Protection Program**

The Home Flood Protection Program is an educational service designed to help homeowners reduce their risk of basement flooding and minimize damage if flooding occurs. The program is developed by the Intact Centre on Climate Adaptation (ICCA) at the University of Waterloo.

#### Introduction to the Homeowner Flood Risk Reduction Resource List

This Resource List has been created to provide a starting point for homeowners to learn about basement flood protection and to support the uptake of practical action to reduce flood risk.

The list has been compiled by staff at the Intact Centre on Climate Adaptation (ICCA) to provide online water damage risk reduction resources that meet the following criteria:

- 1. Resources are written at a level of detail and technical language appropriate for the average homeowner to find easy to use.
- 2. Resources have been developed by reputable government, non-profit, and commercial sources.
- 3. All videos and factsheets have been selected for their educational value and do not directly promote any one product or service.

### **Help Us Improve the Resource List**

We welcome your input! If there is a resource that meets our criteria that you would like to see added, please share it with us. All requests can be directed to Janet Szydlowski, Home Flood Protection Program Assistant at <a href="mailto:floodprotect.info@uwaterloo.ca">floodprotect.info@uwaterloo.ca</a>.

**Please Note**: The Intact Centre on Climate Adaptation is providing this list of online resources for the convenience of interested homeowners. The Intact Centre on Climate Adaptation is in no way providing advice of any kind and does not endorse or recommend any of the services or products identified below.





#### **Table of Contents**

# Flood Risk Reduction Resources for Outside your Home

- 1. Storm Drains and Proper Drainage
- 2. Lot Grading and Overland Drainage
- 3. Trees
- 4. Landscaping and Overland Drainage Around your Home Gardens and Lawn
- 5. Permeable Paving
- 6. Eaves Troughs and Downspouts
- 7. Rain Barrels
- 8. Foundation Drain and Sewer Lateral Maintenance
- 9. Foundations and Grading at Foundations
- 10. Repairing Cracks in your Foundation
- 11. Exterior Water Sources
- 12. Basement Windows and Window Wells

## Flood Risk Reduction Resources for Inside your Home

- 1. Drain Maintenance in your Home
- 2. Sewer Lateral and Floor Drain
- 3. Backwater Valve
- 4. Sump Pumps and Pits Maintenance
- 5. Indoor Plumbing and Fixtures Maintenance
- 6. Finished Walls and Floors
- 7. Storage and Limiting Indoor Humidity

OUTSIDE YOUR HOME	
Storm Drains and Proper Drainage	
Storm Water Drainage in the City of Burlington (Factsheet)	City of Burlington
Home Drainage and Causes of Basement Flooding (Factsheet)	City of Toronto
Storm Drain Survival Kit (Factsheet)	City of Lethbridge, Alberta
Storm Drain Clean Up (Video)	City of Lethbridge, Alberta
Adopt a Storm Drain (Factsheet)	City of Lethbridge, Alberta





Lot Grading and Overland Drainage	
Bylaws Enforcement Grading & Drainage/Site Alteration (Factsheet)	City of Burlington
Lot Grading and Drainage (Factsheet)	City of Hamilton
Lot Grading (Video)	City of Hamilton
Lot Drainage Issues (Video)	Institute for Catastrophic Loss Reduction
Trees	
Trees Near the House? Foundations Beware! (Factsheet)	Quebec CAA
Landscaping and Overland Drainage Around Your	Home – Gardens and Lawn
How to Build a Rain Garden (Factsheet)	This Old House
Creating a Rain Garden (Factsheet)	Credit Valley Conservation Authority
Maintaining Your Rain Garden (Factsheet)	Rutger's
Rain Gardens: Design and Maintenance (Factsheet)	Canada Mortgage and Housing Corporation
Native Plants for Your Rain Garden (Factsheet)	Toronto Region and Conservation
Rain Garden Case Study: St John's Parish, Kitchener Ontario (Video)	REEP Green Solutions
Soak It Up! How to Install a Soak-away Pit and Increase Permeability of Hard Surfaces (Factsheet & Video)	REEP Green Solutions
Outdoor Water Management – Permeable Paving and Soakaway Pits (Video)	REEP Green Solutions
Infiltration Galleries (Video)	REEP Green Solutions
The Benefits of Bioswales, Permeable Pavement, Rain Gardens, Downspout Disconnection and Green Infrastructure (Factsheet)	Green Infrastructure Ontario Coalition





Permeable Paving	
Permeable Pavement (Factsheet)	City of Edmonton
The Benefits of Bioswales, Permeable Pavement, Rain Gardens, Downspout Disconnection and Green Infrastructure (Factsheet)	Green Infrastructure Ontario Coalition
Soak It Up! How to Install a Soakaway Pit and Increase Permeability of Hard Surfaces (Factsheet & Video)	REEP Green Solutions
Outdoor Water Management – Permeable Paving and Soakaway Pits (Video)	REEP Green Solutions
Eaves Troughs and Downspo	outs
Halton Region Downspout Disconnection Program (Factsheet)	Halton Region
Downspout Disconnection Subsidy (Factsheet)	Halton Region
Disconnecting Downspout DIY (Factsheet)	City of Toronto
Are Your Gutters and Downspouts Doing Their Job? (Factsheet)	Quebec CAA
Cleaning Gutters and Downspouts: An Essential Task! (Factsheet)	Quebec CAA
How to Install a Rain Gutter (Video)	This Old House
How to Drain Downspout Water Flow Away From a House (Video)	This Old House
Proper Water Drainage (Factsheet)	Mike Holmes, Make it Right
How to Clean Gutters and Downspouts (Factsheet)	Do it Yourself.com
Rain Barrels	
Rain Barrel Assembly, Installation and Maintenance (Video & Factsheet)	Rainbarrel.ca
Rain Barrels (Video)	REEP Green Solutions





How to Make a Rain Barrel (Video)	Today's Homeowner
Foundation Drain and Sewer Lateral	Maintenance
Sanitary Lateral Lining and Repair Subsidy (Factsheet)	Halton Region
Foundation Drains: Problems and Solutions (Factsheet)	CAA Quebec
Getting to Know Your Foundation Drain System - Life Expectancy and Maintenance (Factsheet)	Square One Insurance
Sewer Backups and Basement Flooding (Factsheet)	Halton Region
Sewer and Sewer Laterals: How Can I Prevent Backups in My Sewer Lateral? (Factsheet)	Municipality of Cornwall Ontario
Sewer Lateral Blockages: What Should You Do When Your Sewer Lateral Backs Up (Factsheet)	City of Brantford Ontario
Sewer Lateral Blockages FAQ (Website)	City of Brantford Ontario
<u>Understanding Your Sanitary Sewer Lateral (Factsheet)</u>	Sanitary District 1, Kentucky, USA
Foundations and Grading at Foundations	
Bylaws Enforcement Grading & Drainage/Site Alteration (Factsheet)	City of Burlington
How to Repair a Crack in a Concrete Foundation(Video)	This Old House
Infrared Thermograph: High Tech Inspection to Detect Water Infiltration in Foundation or Roof (Factsheet)	Quebec CAA
How to Grade Around a Foundation (Video)	This Old House
How to Waterproof a Basement (Video)	This Old House
Efflorescence (Factsheet)	<b>Basement Questions</b>
Efflorescence: How to Recognize It and Take Action – If Need Be (Factsheet)	Quebec CAA





Repairing Cracks in Your Foundation	
How to Repair a Crack in a Concrete Foundation (Video)	This Old House
How to Recognize a Problematic Foundation Crack and What to Do About It (Article)	National Post
Infrared Thermograph: High Tech Inspection to Detect Water Infiltration in Foundation or Roof (Factsheet)	Quebec CAA
Exterior Water Sources	
Winterizing Your Hose Bibs (Video)	The Neighborhoods of EYA
Basement Windows and Window Wells	
How to Seal Basement Windows (Factsheet)	Do It Yourself
Exterior Sealants to Guard Against Damaging Infiltrations (Factsheet)	Quebec CAA
Weather Stripping Basement Windows (Factsheet)	Natural Resources Canada
Getting to Know Your Window Wells (Factsheet)	Square One Insurance
Install a Window-Well Cover	Lowe's

INSIDE YOUR HOME	
Drain Maintenance in Your Home	
Green Methods for Indoor Drain Maintenance (Factsheet)	David Suzuki Website
How to Clear Any Clogged Drain (Factsheet)	This Old House
Grease Management for Your Home	City of Barry
Blocked Drain (Factsheet)	Quebec CAA
Sewer Lateral and Floor Drain	





Sanitary Lateral Lining and Repair Subsidy (Factsheet)	Halton Region
Switch Sweet (1 wester)	
Blocked Drain (Factsheet)	Quebec CAA
Drains and Foundation: Prevention or Repair? (Factsheet)	Quebec CAA
Backwater Valve	
Installation of Backwater Valve Subsidy (Factsheet)	Halton Region
Backwater Valves: How They Work and General Maintenance Practices (Video)	Cranberry Township
Avoid Sewage Backflow With a Backwater Valve (Video)	Insurance is Evolving
The Backwater Valve: A One-Way Trip for Wastewater (Factsheet)	Quebec CAA
Backwater Valves (Video)	Institute for Catastrophic Loss Reduction
Backwater Valve Maintenance (Video)	Institute for Catastrophic Loss Reduction
Focus on Backwater Valves (Factsheet)	Institute for Catastrophic Loss Reduction
Backwater Valve (Factsheet)	Insurance Bureau of Canada
Sump Pumps and Pits Maintenance	
Weeping Tile Disconnection and Installation of Sump Pump Subsidy (Factsheet)	Halton Region
Focus on Sump Pump Systems (Factsheet)	Institute of Catastrophic Loss Reduction
How to Keep Your Basement Dry With a Sump Pump (Video)	Insurance is Evolving
Simple Sump Pump Maintenance (Video)	Central Insurance
How to Install a Battery Operated Backup Sump Pump (Video)	This Old House





Indoor Plumbing and Fixtures Maintenance	
Preventing Water Damage: Appliance Maintenance and Water Shut-Off Valve (Video)	Insurance is Evolving
How to Unclog a Toilet and Keep the Problem From Recurring (Factsheet)	Quebec CAA
Plumbing Defects and How to Prevent Them (Factsheet)	Quebec CAA
Flushing Your Water Heater (Factsheet)	Quebec CAA
How to Repair a Crack in a Concrete Foundation (Video)	This Old House
Finished Walls and Floors	
The Right Flooring for Your Basement (Factsheet)	Money Sense
Basement Floor Finishes: Your Options (Factsheet)	Quebec CAA
Floor Covering Options (Factsheet)	Quebec CAA
Checklist: Moisture Problems in the Basement (Factsheet)	Canada Mortgage and Housing Corporation
Basement Waterproofing Options (Factsheet)	HGTV
Storage and Limiting Indoor Humidity	
Moisture Problems in the Basement (Factsheet)	Canada Mortgage and Housing Corporation
A Guide for Understanding and Fixing Interior Moisture Problems in Housing (Factsheet)	Canada Mortgage and Housing Corporation
Mold: Get Rid of It for Good (Factsheet)	Quebec CAA