



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. Please direct all requests to Intact.Centre@uwaterloo.ca.

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 |
| 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 | |





| | T |
|--|---|
| 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 |
| 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 (Article) | 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 and Sewer Laterals: How Can I Prevent Backups in My Sewer Lateral? (Factsheet) | Municipality of Cornwall Ontario |
| Sanitary Sewer Lateral Replacement (Factsheet) | City of Brantford Ontario |
| Understanding Your Sanitary Sewer Lateral (Factsheet) | Sanitary District 1, Kentucky, USA |
| Foundations and Grading at Foundations | ndations |
| 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) | Basement Questions |
| 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 |
| 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 |
| Protect Your Home from Sewer Backup: Procedures for Proper Installation of Backwater Valves | 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 | |
| How to Unclog a Toilet (Factsheet) | WikiHow |
| Plumbing Defects and How to Prevent Them (Factsheet) | Quebec CAA |
| How to Unclog a Toilet (Factsheet) | WikiHow |





| 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 |
| Mould (Factsheet) | Quebec CAA |