

PARTNERS FOR ACTION



About Us

Partners for Action (P4A) is an applied research network advancing flood resiliency in Canada in the face of a changing climate and extreme weather. P4A's collaborative approach brings together diverse stakeholders to create and share knowledge, address information needs, and drive action. P4A is based out of the Faculty of Environment, University of Waterloo, with founding support provided by The Co-operators Group Ltd. and Farm Mutual Re.

P4A's mandate is to facilitate increased risk awareness and improved decision making to help Canadian communities become more resilient to flooding. We fulfill our mandate through:

Facilitating collaboration

between researchers, governments, businesses, and non-governmental organizations;

Conducting innovative, practical research

and fostering relationships to fund such research;

Sharing results and best practices,

including measurable activities to reduce risk of flooding; and,

Informing Canadians

about their flood risk, actions they can take to reduce their risk, and opportunities for risk transfer, such as insurance.

Pressed
for time?



For highlights and a summary of this report, please visit us at:
uwaterloo.ca/partners-for-action





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High Water Impact



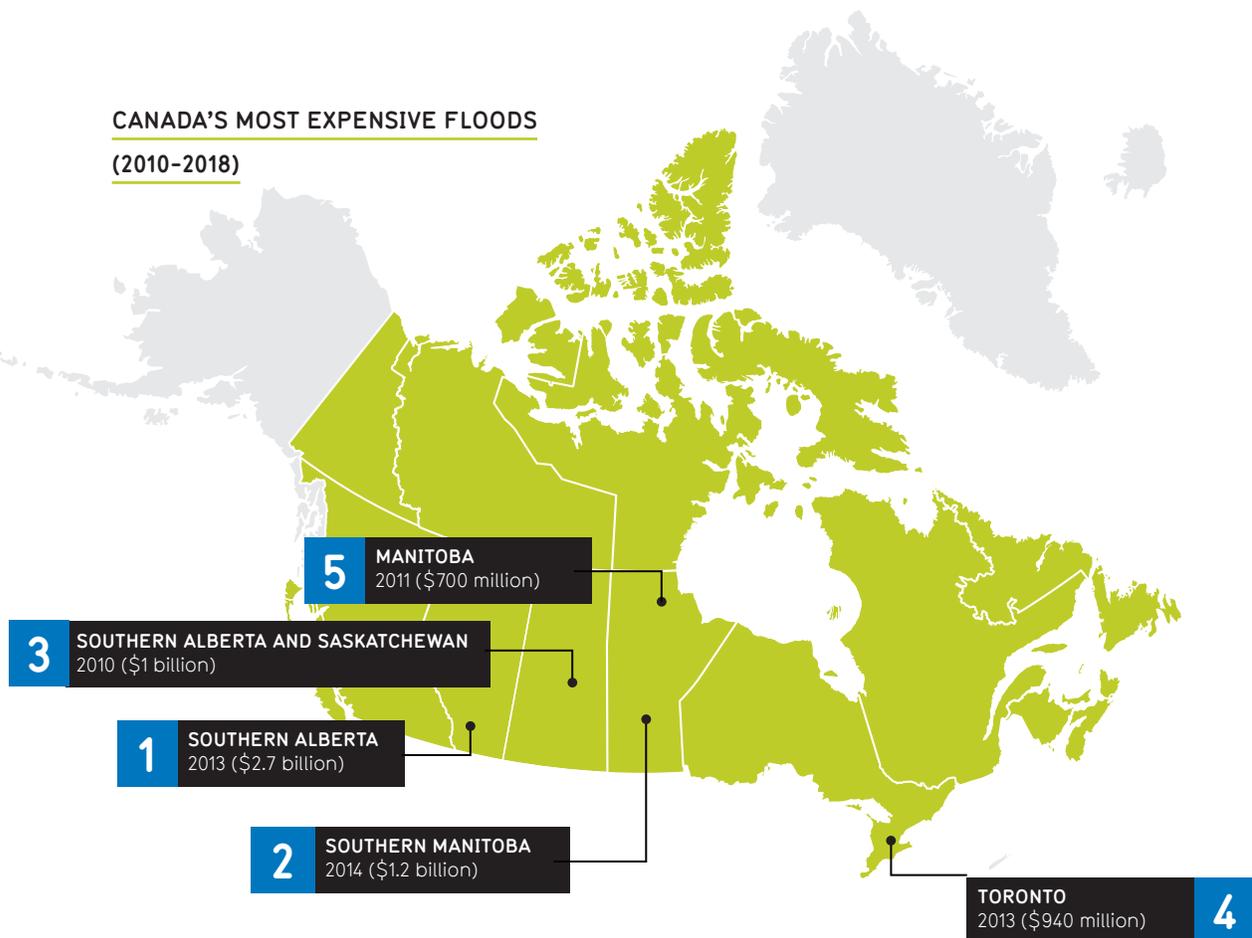
Flooding in Canada is increasing in frequency and severity, but many residents are unaware and unprepared for this risk. We need to act now to help Canadians protect themselves, their families, and their communities.

Flooding is Canada's most common and costly natural hazard, with water-related damage as the leading cause of disaster and recovery costs. In the last two years, the provinces of Ontario, British Columbia, Quebec and New Brunswick have seen many rainfall records broken with flooding in downtown cores and rivers and lakes reaching water levels not seen in decades. Canada's most expensive floods have resulted in over \$6 billion in damages in this decade alone, with many other smaller events disrupting families and communities throughout the country. As our climate continues to change, we anticipate heavier and more frequent rainfall events across the country. In fact, over the next five years Canadians can expect to pay over \$12 billion in flood damages through insurance, personal savings, and government relief spending.

Despite repeated national exposure to flood stories, Canadians are typically not aware of the risk that flooding poses to their health, homes, and livelihoods. Canadians cannot rely solely on insurance and government disaster assistance to protect themselves from the impacts of flooding. More actions need to be taken at the personal and community level to prepare before, during and after a flood.

Information about flood risk and tangible actions to reduce risk is needed to help Canadians prepare. Partners for Action (P4A) is addressing these challenges by cultivating informed decision-making through sound research and effective partnerships. Our goal is simple: to protect the health and prosperity of Canadians by building community resilience to flooding.

CANADA'S MOST EXPENSIVE FLOODS (2010-2018)



Source: Canadian Disaster Database

TURNING THE TIDE

DIRECTOR'S MESSAGE



P4A is working with Canadians towards informed decision-making on flood risk reduction.

Partners for Action remains focused on understanding what drives Canadians to protect what matters most from the ravages of flooding. As we enter our fourth year as a national network, we are working with our partners to provide tailored, action-oriented information on flood risk, and tangible ways to reduce that risk. We are shaping national direction on communication around flooding, with tools and methods to help residents protect themselves and support decision-making towards more effective flood risk management.

As our climate continues to change, we are seeing more floods, more often, even in areas that have not flooded in recent memory. No community, home or family is completely safe from this risk – we need to prepare for more water, more often, and empower Canadians to drive change. Property owners deserve to know what a flood could mean for their families and homes, and take action.

P4A continues to foster a national stakeholder group and lead conversations on flood resilience at the individual and community level. We continue to work with our national partners on FloodSmart Canada, a communication program driven to provide consistent, accurate, actionable flood-related information to all Canadians. We are leading the consumer engagement component of the national working group on the financial risk of flood, making recommendations to the Federal Minister of Public Safety and Emergency Preparedness on how to engage Canadians on flood risk. We will continue to work with our partners to generate applied knowledge, forge resolve, and spur collective action on an issue that affects us all.

P4A also continues to work towards our vision of a risk-aware Canada, where homeowners take responsibility for protecting themselves and recovering from floods, and decision-makers consider risk in planning and preparing our communities.

In the report that follows, we outline our current work, as well as our plans for the future. We hope you are as excited about our progress and optimistic about our future as we are. While we can't stop the next big flood from occurring, we can, with your partnership, help our communities grow stronger, more connected, and more resilient.

SHAWNA PEDDLE

DIRECTOR, PARTNERS FOR ACTION
UNIVERSITY OF WATERLOO

LEADING THE WAY

CHAIR'S MESSAGE



P4A is building partnerships that will help Canadians weather the storm.

More often, we are seeing dramatic results of a changing climate on our homes and communities, and we anticipate these impacts will only worsen over time. We have the tools we need to reduce our risk from flooding, but must work together to raise awareness, garner support, and drive collective action to make our communities resilient and better prepared for the next extreme weather event.

Flood risk management in Canada is at a critical juncture, as decision makers from industry, academia, government, and the non-governmental sector are coming together to address these risks and make change. P4A is in the thick of these conversations, identifying the needs of Canadians, and working with partners to provide relevant information towards effective flood risk management at the individual and community level.

P4A has succeeded in creating effective cross-sector collaboration to address one of Canada's biggest climate challenges. At the University of Waterloo, we have nation-leading research strength in climate change adaptation, a proven track record of collaboration, and a dynamic culture of innovation and entrepreneurship. We could not be prouder to leverage these capabilities as part of P4A, and we are incredibly grateful for the continued support of our partners.

We look forward to advancing our goal of a flood risk-aware Canada through understanding the needs of our residents, fostering relationships with our partners, conducting cutting-edge research, clearly communicating our findings with Canadians, and training the next generation of leaders and change makers.

The Faculty of Environment is committed to continuing our journey over the coming year as together we build a climate-resilient Canada.

A handwritten signature in black ink that reads "Jean Andrey". The signature is fluid and cursive.

JEAN ANDREY

DEAN, FACULTY OF ENVIRONMENT
CHAIR, PARTNERS FOR ACTION ADVISORY COMMITTEE

Advisory Committee Members

Jean Andrey

Chair | Waterloo, ON
Dean, Faculty of Environment,
University of Waterloo

Barbara Turley-McIntyre

Guelph, ON
Vice-President, Sustainability and Citizenship,
The Co-operators Group Ltd.

Steve Smith

Cambridge, ON
President and CEO, Farm Mutual Re

Beth Crosbie

St. John's, NL
Past President and current Atlantic Regional Director,
Canadian Real Estate Association

International Director,
Board of the US National Association of REALTORS

Dave Murray

Victoria, BC
Past President,
Canadian Water Resources Association (CWRA)

David Diabo

Ottawa, ON
Senior Special Advisor, Emergency Management,
Assembly of First Nations

Matthew Godsoe

Ottawa, ON
Director, Emergency Management
Strategy Office, Public Safety Canada

Trevor Smith Diggins

Guelph, ON
Communication Strategist

Andrew Wilson

Edmonton, AB
Director, Resilience Strategy,
Alberta Environment and Parks

Cindy Toth

Oakville, ON
Director of Environmental Policy,
Town of Oakville

Wolf Keller

Calgary, AB
Chair, Expert Panel on River Flood Mitigation,
and Former Director of Water Resources,
City of Calgary

Shawna Peddle

Waterloo, ON
Director, Partners for Action,
University of Waterloo

Education and Awareness

See page eight for more

25+
Web and Print
ARTICLES

Reached
7,000
Users on
floodsmartcanada.ca

Participated in
10
CONFERENCES



670
Twitter Followers
twitter.com/PARTNERS4ACTION

175
MEMBER
organizations

>**250K** **VEWS** of P4A's flood-related video series created by The Co-operators

175 **NATIONAL ORGANIZATIONS** in P4A's Stakeholder Group, with over **550 individual members**

Research

See page eleven for more

RELEASED REPORTS

“Engaging Community Members in the Floodplain Mapping Process” and “The Role of Flood Maps in Raising Flood Risk Awareness in Communities” in partnership with Natural Resources Canada (NRCan)

Created flood and climate change resources for

FIRST NATION COMMUNITIES

Interviewed
FLOOD AND RISK COMMUNICATION
experts across the country

RELEASED P4A'S
Effective Guide to Flood Risk Communication – *Promoting Personal Preparedness*

Conducted surveys and focus groups with flood survivors in the
CITY OF WINDSOR + DUFFERIN COUNTY



Partnership and Programming

See page thirteen for more

Partnered with
THE CANADIAN RED CROSS
to assess community flood risk perception and preparedness

14
COLLABORATED WITH CROSS-SECTOR PARTNERS
to develop flood messaging and the FloodSmart Toolkit

Participated in
EMERGENCY PREPAREDNESS
events in Guelph, Windsor, Oakville, and Dufferin County, Ontario

Initiated partnership with Canadian Real Estate Association on flood-related
MATERIALS FOR REALTORS AND HOMEBUYERS



LEADING THE WORKING GROUP ON CONSUMER ENGAGEMENT,
which will result in recommendations to the federal Minister of Public Safety and Emergency Preparedness on how to effectively communicate flood risk and action to Canadians.



Working with Canadians

P4A is advancing flood resiliency with nationwide communication and education.

In our 2016 study, we found that only six per cent of surveyed homeowners knew that they were living in a designated flood risk area. The study also showed that only 21 per cent of homeowners believed that the risk of flooding would increase over the next 25 years. The results of our study highlighted the pressing need to communicate with Canadians about the risks of flooding.

We released our website, floodsmartcanada.ca, in late 2016 to provide relevant, timely, bilingual information to Canadians on what they can do before, during, and after a flood. Since its launch FloodSmart Canada has received over 7,000 users from across the country. We saw a spike in users during the May 2017 floods, as the site was referenced in all media interviews done by P4A representatives. The website curates information from sources across the country, and provides Canadians with the tools and resources to prepare for flooding events.

During the 2017 flood season, P4A led the flood discussion in the Canadian media, with over 150 print and online articles, interviews with CBC, CTV, the Weather Network, and various local radio and television outlets.

P4A participated in a number of conferences and workshops in late 2017 and 2018, including the following:

- › Ontario Mutual Insurance Association (OMIA) Group D Meeting (Invited Speaker)
- › UNFIP Shaping the Sustainable Insurance Agenda in North America (Participant)
- › Heartland Mutual Insurance Board Meeting (Invited Speaker)
- › CatIQ C4 Conference 2017 (Steering Committee Member, Session Facilitator and Speaker)



- › Fleming College EcoHealth Conference (Conference Facilitator)
- › Dufferin County Emergency Management Exercise Torrent (Invited Speaker)
- › Canadian Meteorological and Oceanographic Society Symposium (Invited Speaker)
- › Coastal Resilience Community of Practice Workshop (Facilitator and Steering Committee Member)
- › Saugeen Valley Conservation Authority Agricultural Advisory Committee (Invited Speaker)
- › Ontario Flood Risk Management Workshop 2018 (Invited Speaker)
- › Utility Management Forum 2018 (Invited Speaker)
- › Canadian Risk and Hazards Network (CRHNet) Symposium 2018 (Speaker)
- › Eight National Roundtable on Disaster Risk Reduction (Attendee and Roundtable General Member)

We were pleased to serve as expert advisors for the following initiatives:

- › Federal Multi-Stakeholder Planning Group for Emergency Preparedness Week
- › Federal Public-Private Working Group on the Financial Risk of Flood
- › Federal Sub-working Group on Consumer Engagement and Flood (Lead)

- › Federal Expanded Flood Mapping Committee
- › Geneva Association Flood Risk Management Project Expert Panel
- › CatIQ's Canadian Catastrophe Conference (C42018) and CATIQ Connect (2019)
- › REEP Cambridge Green Stormwater Infrastructure Project
- › REEP RAIN Ready Neighbourhoods Steering Committee and Expert Panel
- › Ontario Urban Flood Collective (Leadership Committee and Flood Risk Awareness and Preparedness Sub-committee)
- › Coastal Resilience Community of Practice Steering Committee
- › FloodSmart Canada Steering Committee
- › Adaptation Changemakers Project Expert Panel
- › SHAD Waterloo Expert Panel

Today, P4A continues to create and disseminate information that educates Canadians about flood risk, and the practical, low-cost steps to reduce or eliminate the risk. We are currently working with partners to develop and implement a national flood risk awareness program.

P4A also hosts a University of Waterloo-based website (uwaterloo.ca/partners-for-action), a Twitter page (@Partners4Action), and a LinkedIn page, to exchange information, share events and results, and facilitate collaboration with our diverse stakeholders.



Programs and Research

Collaboration and information towards a flood-resilient Canada.

P4A's vision is a flood risk-aware Canada, where homeowners take responsibility for protecting themselves and recovering from floods, and decision-makers consider flood risk in planning and preparing our communities. Our role is to develop research, programming, and partnerships to create and mobilize relevant, national-level information. We also strive to facilitate a residential flood insurance market in Canada by creating and sharing information that meets the three 'winning conditions' identified by the Co-operators and Partners for Action in 2014:

1 Canadians must understand the risk that flooding presents to their homes, businesses, and communities.

2 Canadian decision-makers must use their understanding of flood risk to make sound adaptation decisions.

3 Canadians must have access to means to transfer the risk associated with flood damage that remains after they have engaged adaptation.

Networking and Sharing Ideas

We have an active Stakeholder Group with approximately 550 members, representing over 175 organizations nationally. We also provide information on a regular basis to over 1,200 individuals on our mailing list.

NETWORKING HIGHLIGHTS

- › P4A participated in emergency preparedness week events in Guelph, Windsor, and Oakville educating young Canadians about floods and how to get prepared.
- › P4A continues to:
 - recruit and collaboratively engage our stakeholder group on project ideas, partnerships, and opportunities to participate in P4A activities.
 - provide relevant information to our broader mailing list.
 - host webinars and workshops to consult our stakeholders and provide project updates.
 - speak and participate at relevant national conferences.

We invite anyone with an interest in improving the flood resilience of our Canadian communities to join our stakeholder group.

Creating and Mobilizing Knowledge

P4A has been conducting innovative research related to flood resiliency in Canada. Our work has yielded many new and helpful insights into the challenges and issues confronting our country. Translating this research into accessible knowledge for Canadians and key decision-makers is a top priority to drive change.

RESEARCH HIGHLIGHTS:

- › P4A produced two reports, *Engaging Community Members in the Floodplain Mapping Process* and *The Role of Flood Maps in Raising Flood Risk Awareness in Communities*, for Natural Resources Canada (NRCan) that looked at the role of

flood maps in community engagement and raising risk awareness at the community level. Recommendations from these reports have been incorporated in NRCan's Federal Floodplain Mapping Guidelines Series, used by federal, provincial and municipal flood mapping practitioners.

- › P4A developed the *Effective Guide to Flood Risk Communication – Promoting Personal Preparedness*, which provides an overview of the best practices for, and most effective approaches to, flood risk communication. It is founded on research that supports the use of bottom-up strategies to address community needs and capacity.
- › P4A interviewed 12 flood and risk communication experts across the country to gain a better understanding of what experts want individuals and residents to know about flood risk and how to prepare. These interviews focused on current flood preparedness messaging and communication channels. The findings from the interviews will support P4A's on-going communication efforts.

Programming and Partnerships towards Action

P4A continues to leverage our partnerships with University of Waterloo researchers, the business community, governments, and non-governmental organizations to further our reach and improve our ability to meet our goal of a risk-aware Canada.

PARTNERSHIP AND PROGRAMMING HIGHLIGHTS:

- › In early 2018 P4A partnered with the Canadian Red Cross on sponsored research in the area of flood risk perception, as well as personal and community preparedness to flooding. Researchers have conducted focus groups and surveyed residents in two Ontario communities, Windsor and Dufferin County, to understand how people perceive and act on flood risk. This information will drive communication initiatives by P4A, the Red Cross, the City of Windsor, and Dufferin County, to make our communities more resilient to flooding.

- › P4A is also working with the Canadian Red Cross to develop materials, presentations and video modules that support Canadian Red Cross volunteers acting as flood leaders within their communities, communicating risk to action against local flooding.
- › P4A recently collaborated with Public Safety Canada, the Insurance Bureau of Canada, and 12 other cross-sector partners on a national flood risk communication strategy, which included developing flood messaging and the FloodSmart Toolkit. The Toolkit is a collection of graphics, outreach materials, and media content to help communicate flood safety and preparedness across Canada. It provides users with communication materials and resources to help reach target audiences and networks with flood information.
- › P4A has initiated a partnership with the Canadian Real Estate Association to develop a brochure to be used by realtors to inform potential homebuyers and sellers about flood risks and actions to reduce risk.
- › P4A is working with partners on a road map for consumer engagement that will direct federal-level flood risk awareness to action programming over the next three to five years.
- › P4A has recently been awarded funding through Public Safety Canada's National Disaster Mitigation Program (NDMP) to develop messages and methods around communicating flood risk and how residents can reduce their risk through their own actions, and partnerships with local municipal governments. Under this contract, P4A will also work with the Royal Canadian Geographic Society to create materials and curriculum linkages for school children that will be distributed to over 21,000 educators nationally.





RESEARCH SPOTLIGHT

Community Lessons for a Flood Prepared Canada

Working with and learning from communities
to better prepare Canadians for future flooding.

Our research shows that Canadians are unaware of their flood risk and unprepared for the next flooding event. We also know that barriers exist in preventing Canadians from taking preparedness actions, making it difficult to create flood prepared residents and communities.

P4A is currently working with the Canadian Red Cross on a collaborative project looking at flood risk perception as well as personal and community preparedness to flooding.

Researchers have conducted focus groups and surveyed residents in two Ontario communities – Windsor and Dufferin County – to gain insight into how people perceive and act on flood risk. These two communities were selected based on their high level of experience with flooding, and their interest in innovation in flood risk communication to their residents. From the collected data P4A is identifying many of the existing flood preparedness behaviours and perceptions and the barriers to action in each community. Both communities were also asked to share their opinions and feedback on existing flood communication materials. P4A is gaining an understanding of effective communication messages and approaches in order to make recommendations for future communication efforts.

Information gathered in this project will drive communication initiatives by P4A, the Canadian Red Cross, Dufferin County, and the City of Windsor getting us closer to the larger goal of making our communities more resilient to flooding.

“Farm Mutual Re continues to be a proud sponsor and partner of P4A along with the University of Waterloo and the Co-operators. As part of the mutual community with a long history of prudential stewardship and strong community connections, P4A helps us demonstrate our values and provide an important opportunity to reinvest in those communities and the environment. As Canada continues to experience more and more severe weather, P4A is building resiliency through an objective, research-based approach and collaboration with a multitude of key stakeholders across the country.”

STEVE SMITH

President and CEO, Farm Mutual Re



P4A's National Reach







Forecasting the Year Ahead

We are making flood risk communication a top priority.

Our 2018-2019 projects and programs focus on furthering our goals, including:

- › Developing a brochure on flood risk and action for realtors, homebuyers and sellers with the Canadian Real Estate Association
- › Producing educational materials with the Royal Canadian Geographic Society to increase flood risk awareness among school children.
- › Leading the federal sub-working group on consumer engagement and flood.
- › Hosting a national workshop on Flood Risk Communication to discuss best practices and next steps for a national flood risk awareness campaign.
- › Creating additional content for floodsmartcanada.ca on how municipalities can work with their residents to address flood risk at the local level.
- › Conducting a national survey on flood preparedness, similar to our 2016 survey, to measure changes in flood risk awareness and action.
- › Hosting a workshop on Community-level Flood preparedness with the Canadian Red Cross and Dufferin County

Get Involved

To create a flood risk-aware Canada, we must cultivate collaboration between municipal, provincial, federal, and indigenous governments, non-governmental organizations, financial institutions, business and industry, and our citizens. We need a diversity of perspectives, a culture of cooperation and mutual understanding, and a lively and creative exchange of ideas.

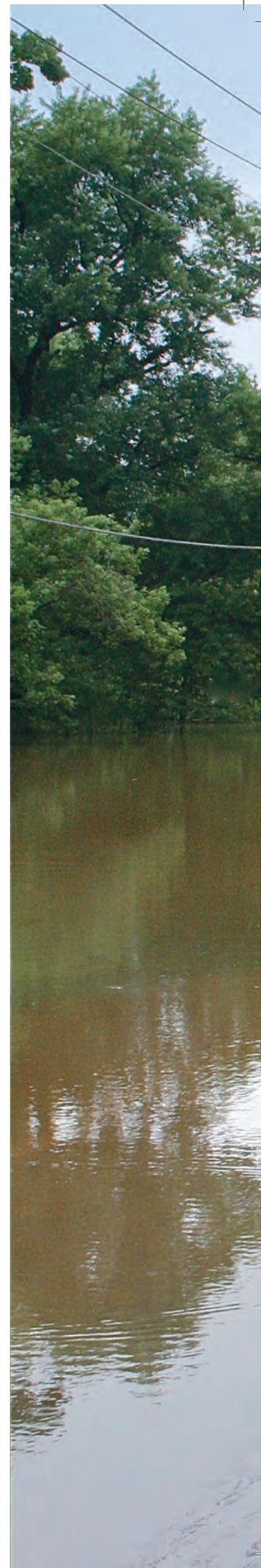
Over the coming years, we look forward to meeting with Canadians to talk about flood risk, and the barriers faced when trying to understand and reduce this risk. We look to our stakeholders to help shape these conversations, and get the best information out to homeowners. We also plan to evaluate the success of our efforts, always with an eye towards the continuous improvement of our approach.

We continue to expand our network of partners and stakeholders. **Please join us and share our message with individuals and organizations interested in promoting climate resiliency. Together, we can build a better future.**

“As our climate continues to change, flooding is one of the most significant financial risks facing Canadians today. Mitigating this risk is highly complex, requiring co-operation between many sectors, all levels of government, civil society and home-owners. This is why P4A exists and why The Co-operators is proud to be a founding partner and an ardent supporter. P4A has demonstrated tangible progress towards building flood resiliency in Canada by helping people understand the risks of flooding and how to take action to protect themselves and their communities.”

ROB WESSELING

President and Chief Executive Officer, The Co-operators Group Limited





Connect with us



@Partners4Action

uwaterloo.ca/partners-for-action

www.floodsmartcanada.ca



UNIVERSITY OF WATERLOO
FACULTY OF ENVIRONMENT

This stewardship report was prepared by the
Faculty of Environment, Office of Advancement.

For further information regarding this report,
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