Retreating from Risk
Decision-supports for the equitable implementation of retreat to build climate resilience

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RESEARCH BULLETIN

Implementing managed retreat in flood-prone communities:

Lessons from the Grand Forks property buyout program in British Columbia, Canada

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Above: *Looking south from the 2nd St. bridge from downtown Grand Forks into North Ruckle following the 2018 flood (Canadian Red Cross, 2018)*

KEY MESSAGES

- Major disasters can create windows of opportunity that enable communities and governments to pursue transformative risk reduction measures such as managed retreat.
- Successful buyout programs depend on multi-level resource mobilization, including federal and provincial funding combined with strong municipal leadership.
- Local leadership, community trust, and locally embedded recovery teams are essential for building public support for managed retreat.
- Strengthening policy guidance, funding mechanisms, risk information systems, and municipal capacity is critical for enabling future managed retreat initiatives in Canada.
- Implementation is often constrained by community trauma, communication challenges, limited risk data, and complex governance arrangements.

THE ISSUE

Flooding is one of the most frequent and costly natural hazards in Canada. Climate change is expected to intensify flood risks through increasing precipitation, changing hydrological patterns, and more frequent extreme weather events. Many Canadian communities, particularly smaller municipalities located in river valleys and floodplains, face growing pressure to address long-term flood risk. Traditionally, disaster recovery policies have focused on rebuilding damaged homes and infrastructure. However, repeated rebuilding in high-risk areas can perpetuate cycles of loss and escalating costs for governments and communities. As a result, policymakers are increasingly considering managed retreat, a strategy that relocates people and infrastructure away from hazard-prone areas. While managed retreat can significantly reduce long-term disaster risk, implementing property buyout programs is politically, socially, and institutionally complex. These initiatives often require difficult decisions about land use change, relocation, and compensation, while also navigating community expectations and intergovernmental coordination.

The experience of Grand Forks, British Columbia, following the devastating 2018 flood provides important insights into both the opportunities and challenges of implementing managed retreat in Canada. After the disaster, the City implemented a property buyout program to relocate residents from high-risk flood zones and restore floodable areas along the river. This research bulletin draws on insights from key stakeholders involved in the program, including municipal officials, provincial and federal actors, consultants, and community representatives to identify the key enabling factors and barriers that shaped the Grand Forks property buyout program implementation.

RESEARCH APPROACH

This research bulletin is based on a qualitative case study of the managed retreat program implemented by the City of Grand Forks, British Columbia. The study used a single case-study design, which enabled an in-depth analysis of a specific phenomenon within a bounded context. The Grand Forks case was selected because the municipality was in the process of implementing one of the few, and one of the largest, managed retreat programs following a natural hazard event in Canada, and the first in British Columbia. The program was initiated after the historic 2018 flood that caused extensive damage across the community. Property buyouts formed a significant component of the city's broader Flood Mitigation Program by providing the land base for structural mitigation, floodplain naturalization, removal of residential land uses, and relocation of some homes from high-risk areas.

Data was collected through 27 semi-structured interviews with key informants who were directly involved in, or closely familiar with, the development and implementation of the program. Participants included representatives from municipal, provincial, and federal governments, as well as consultants, academics, non-governmental organizations, and insurance professionals. These individuals possessed expertise in areas such as land use planning, engineering, risk management, climate change adaptation, and flood mitigation.



Above: *BC Parliamentary Secretary for Emergency Preparedness, Jennifer Rice, announces funding with members of the Boundary Flooding Recovery Team beside the Kettle River in Grand Forks (Alan, 2019)*

WHAT DID WE FIND

A) KEY ENABLERS TO PROGRAM IMPLEMENTATION

Windows of opportunity following disaster:
The 2018 flood disaster in Grand Forks created a critical policy window that enabled policymakers and residents to consider options that would have been politically difficult before the disaster. Large-scale relocation and property buyouts require strong political support and community acceptance. Key participants involved in the recovery process emphasized that the flood generated the political will necessary to pursue long-term risk reduction measures. The disaster also temporarily reduced resistance to relocation among property owners, as the immediate impacts of flooding made the risks of remaining in place more tangible.

Resource mobilization across levels of government:
The Grand Forks property buyout program was made possible through the mobilization of financial and institutional resources from multiple levels of government. The federal government provided almost $20M support through the Disaster Mitigation and Adaptation Fund (DMAF), while the provincial government contributed additional financial resources across recovery and mitigation phases (~$44M). Municipal government provided ~$9M as well as dedicating staff time and administrative capacity to coordinate the program, manage community engagement, and oversee implementation. Participants involved in the project frequently emphasized the importance of collaboration across levels of government.

Local leadership and community-based recovery:
Strong local leadership and community engagement were central to the development and implementation of the property buyout program. Several participants credited the success of the initiative to local advocates who encouraged the idea of managed retreat and worked to mobilize political and community support. These individuals comprised municipal leaders, regional representatives, and community organizations who were deeply committed to the long-term resilience of the town. A key institutional innovation in Grand Forks was the creation of the Boundary Flood Recovery Team, a locally led group responsible for exploring recovery options and coordinating long-term planning efforts. The program also included the use of case managers who worked directly with affected residents.

B) KEY BARRIERS TO IMPLEMENTATION

Community trauma:
Emotional and psychological impact of the disaster was one of the most significant challenges in implementing the buyout program. Residents affected by flooding were often dealing with trauma, financial stress, and uncertainty about the future. In this context, making decisions about long-term relocation was extremely difficult. At the same time, municipal officials and decision-makers – many of whom were also members of the affected community – were tasked with managing emotionally charged public consultations and coordinating the acquisition process with external consultants.

Knowledge gaps and communication challenges:
Limited risk information and communication challenges also hindered the development of the buyout program. Prior to the flood, floodplain maps and risk data in Grand Forks were outdated. As a result, residents and decisionmakers did not fully understand the scale of flood risk facing the community. After the disaster, new mapping and risk assessments had to be developed before long-term planning decisions could be made. Communication with residents was also difficult. Municipal officials attempted to engage the community through public meetings, mail-outs, social media, and individual consultations. Moreso, limited municipal capacity across local elections and staff turnover as well as uncertain funding eligibility and policy support meant that communication efforts were sometimes inconsistent.

Governance complexity and institutional constraints:
The implementation of the property buyout program involved coordination among many actors including federal agencies, provincial ministries, municipal governments, consultants, and community organizations. While this collaboration enabled the mobilization of resources, it also created governance challenges. Participants reported that the consultation and coordination processes were complex and time-consuming, with different government ministries operating under narrow mandates that limited their ability to support integrated risk reduction strategies. Municipal governments also faced competing priorities.

POLICY RECOMMENDATIONS

To support managed retreat and long-term flood risk reduction in Canada, policymakers should:

- Develop national and provincial frameworks for managed retreat to guide relocation strategies and clarify institutional responsibilities
- Improve flood risk data and mapping to support proactive planning and public awareness
- Strengthen communication resources for municipalities during disaster recovery
- Simplify and expand funding mechanisms to support property buyouts and long-term flood mitigation
- Build municipal capacity through staffing, training, and technical assistance
- Support community-based recovery structures, including locally embedded recovery teams and case managers

CONCLUSION

The Grand Forks property buyout program demonstrates that managed retreat is possible when disasters create opportunities for change, resources are mobilized across levels of government, and local leadership builds community trust. The case also highlights the structural barriers communities face, including governance complexity, limited data, and constrained municipal capacity.



Above: *North Ruckle neighbourhood and downtown following the 2018 flood. All but two of the 66 homes were damaged in the flood (Natural Assets Initiative, 2024)*

LEARN MORE

Retreating from Risk (RFR): Decision-Supports for the Equitable Implementation of Retreat to Build Climate Resilience is a multi-year international research project jointly funded by the Government of Canada's New Frontiers Research Fund–International and the U.S. National Science Foundation. The project aims to explore how managed retreat–the strategic relocation of housing and infrastructure from high-risk areas–can be used as a proactive strategy to reduce flood risks while enhancing community well-being.

VISIT OUR WEBSITE:
https://uwaterloo.ca/retreating-from-risk/

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FOR A DEEPER DIVE INTO MELISSA'S RESEARCH

Le Geyt, M. (2022). Expanding the adaptation toolbox: Exploring managed retreat in Grand Forks, BC [Master's thesis, University of Waterloo]. *UWSpace.*

- **Read the thesis**

Le Geyt, M., & Doberstein, B. (2026). Using managed retreat to advance the targets of SDG11: The case of post-flood property buyouts in Grand Forks, BC. *Plan Canada 66*(1).

- **Read the article**

FOR MORE ON FLOOD MITIGATION EFFORTS IN GRAND FORKS

City of Grand Forks. *Flood Mitigation Program*.

- **Visit the website: https://www.grandforks.ca/fmp/**

SUGGESTED CITATION

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