



RESEARCH BRIEF SERIES

MITIGATION MATTERS

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FEMA defines mitigation as the effort to reduce loss of life and property by lessening the impact of disasters. Effective mitigation requires that we all understand local risks and invest in long-term planning to reduce risks and enhance community well-being.

DRIVERS OF HOUSEHOLD FLOOD MITIGATION DECISIONS AFTER SUCCESSIVE FLOOD EVENTS IN WATERBURY, VERMONT

SUMMARY

Flooding has a profound global impact on human life, and the intensification of extreme weather events due to climate change will require significant action, such as implementing measures to mitigate flood impacts or vacating flood zones altogether. Although decision-making strategies for flood mitigation have been studied, little attention has been given to how these decisions are made when multiple extreme events occur over a short time period.

To address this gap, we interviewed 13 flood-impacted residents of Waterbury, Vermont—a community that has experienced four extreme weather events within 13 years. We found that increasing frequency of flood events in this area has accelerated individuals' perceived vulnerability and their intent to mitigate flood damage. We gained insights on the factors that motivate flood-vulnerable residents or business owners to take flood mitigation actions and examined the protective actions which people consider most effective.

This study provides a valuable examination of decision-making for household flood mitigation in a context where residents have experienced multiple extreme flooding events in quick succession. This study also contributes practitioner recommendations for state and local policymakers to increase the adoption of household flood mitigation measures.



*July 2023 flooding in Waterbury, Vermont.
Photo credit: Vermont Open Geospatial Imagery*

KEY FINDINGS

- All interviewees agreed that flood likelihood was accelerating, and many perceive themselves as extremely vulnerable to future flood events. Generally, individuals expressed an increased likelihood to implement more drastic individual mitigation actions over time, like raising the home or installing floodgates.
- Interviewees discussed how their belief in government (federal, state, or municipal) to engage in larger scale mitigation has waned as proposed mitigation projects have gone unrealized. Interviewees discussing limits in their individual autonomy to enact change, particularly among renters and those living in higher density neighborhoods.

- Interviewees had positive and negative experiences from past floods which impacted trust in a variety of actors. People trusted those who were perceived to have helped during past crises and linked those relationships to implementing mitigation actions. Accordingly, respondents did not trust those who were perceived to have done an inadequate or poor job and felt discouraged from working with these individuals or groups on mitigation action, and sometimes even on flood response.
- The majority of interviewees expressed that they viewed climate change as a cause of increased flood risk. Others discussed increased acknowledgment in recent years that the climate is changing (and that extreme weather is increasing) among friends and neighbors. These same interviewees also discussed community members reacting to widespread acceptance of climate change by attempting to mitigate damage or relocate altogether.
- In general, we found that individuals in our study were likely to have implemented at least one mitigation action and were willing to consider most actions that we asked them about, such as maintaining proper water runoff and drainage, installing a sump pump, and sealing foundation and basement walls, among others.
- Motivation to mitigate was not an issue in this context. Rather, the drivers of mitigation behavior were resource availability, autonomy, and belief that a specific action was effective.



July 2023 flash flood damage to a home on the Winooski River, in nearby Cabot, Vermont. Photo credit: Mike Hardiman / Shutterstock.com

POLICY IMPLICATIONS

- State and local policymakers could improve the odds of residents adopting flood mitigation actions by establishing better communications policies, including clearer points of contact for people navigating flood recovery, and developing resources that explain situationally specific mitigation ideas.
- Interviewees perceived mitigation actions at the individual level to be hampered by the lack of large-scale mitigative action on the part of the state or municipality. One strategy for increasing mitigation among flood-vulnerable populations in this community would be to make progress towards meaningful large-scale projects for flood risk reduction.
- State and local officials should also establish more transparency in decision-making processes around community-wide flood response projects, like floodplain restoration or buyouts. Hosting meetings, field days, or other media opportunities designed to clarify decision-making processes around state and federal projects has the potential to build trust.

AUDIENCE

Stakeholders who may find this work interesting include Federal Emergency Management Agency staff, state emergency response crews, community-based organizations, and town planners engaged in flood risk reduction work. This research can inform interventions to increase the adoption of household and community-level flood mitigation.

Full Report: Briccetti, L. H., Coleman, K. J., & Taylor, L. (2026). *Drivers of Household Flood Mitigation Decisions After Successive Flood Events in Waterbury, VT.* (Natural Hazards Center Mitigation Matters Research Report Series, Report 26). Natural Hazards Center, University of Colorado Boulder. hazards.colorado.edu/mitigation-matters-report/drivers-of-household-flood-mitigation-decisions-after-successive-flood-events-in-waterbury-vt



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