




# Neighbourhood climate resilience: lessons from the Lighthouse Project

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## Abstract

**Objective** The Lighthouse Project (2017–2018) explored the role that faith-based organizations (FBOs) might play as resilience hubs for climate-related stresses and extreme weather emergencies in disadvantaged urban environments of three cities. This paper discusses the role that public health played in these initiatives and makes an appeal for more participatory, community-engaged public health in light of the persistent gaps in its approach to equitable climate change preparedness.

**Methods** Pilots were initiated in the Greater Toronto and Hamilton Area (GTHA): Brampton’s Emergency Managers offered pre-selected FBO volunteers specialized training to be part of the city’s emergency response in establishing FBO sites as emergency muster stations. An environmental organization in Hamilton explored how its existing networks could rally around a local social resilience challenge, and a community organizer in Toronto undertook network building to support mostly newcomer populations in one inner-city neighbourhood. All pilots used a mix of cold calling, workshops, municipal presentations, and participation in local programming and public events. Two convened local working groups.

**Results** By the end of the pilot, Brampton’s Emergency Management Office had made one contractual relationship with an FBO and its volunteers. In Hamilton, a multi-stakeholder network emerged to support the climate preparedness of agencies serving local vulnerable populations. In Toronto, a residents’ working group was established to address neighbour well-being and emergency response in one apartment tower. Work in all three communities is ongoing.

**Conclusion** Multi-stakeholder support for community organizations and local volunteers can enable partnerships in neighbourhood-level climate resilience—before, during and after extreme weather events. Public Health, while not typically top-of-mind as a key ally in this work, is well positioned to make a contribution. Consistent with place-based approaches, an emergent community development design enabled community animators to catalyze collaborations to suit the on-the-ground realities of each site.

## Résumé

**Objectif** Le projet Lighthouse (2017-2018) a exploré le rôle de « carrefours de résilience » que peuvent jouer les organisations confessionnelles (OC) face aux perturbations climatiques et aux situations d’urgence météorologique extrême dans les milieux urbains défavorisés de trois villes. Notre article porte sur le rôle que la santé publique a joué dans le cadre de ces initiatives et exhorte la santé publique à être plus participative et plus engagée localement, vu les lacunes qui persistent dans sa démarche de préparation équitable aux changements climatiques.

**Méthode** Des projets pilotes ont été amorcés dans la région du Grand Toronto et de Hamilton (RGTH) : les gestionnaires des mesures d’urgence de Brampton ont offert une formation spécialisée à des bénévoles d’organisations confessionnelles

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présélectionnées pour qu'ils fassent partie des interventions d'urgence de la ville en faisant de leurs OC des postes de rassemblement d'urgence. Un organisme de Hamilton voué à la protection de l'environnement a exploré les moyens pour ses réseaux existants de se rassembler pour résoudre des problèmes locaux de résilience sociale, et un organisateur de quartier de Toronto a constitué un réseau pour aider principalement les populations de nouveaux arrivants d'un quartier déshérité du centre-ville. Tous les projets pilotes ont procédé selon un mélange de démarchage téléphonique, d'ateliers, de présentations aux élus municipaux et de participation aux animations publiques et aux programmes locaux. Deux ont constitué des groupes de travail locaux.

**Résultats** À la fin du projet pilote, le bureau de la gestion des situations d'urgence de Brampton avait établi une relation contractuelle avec une OC et ses bénévoles. À Hamilton, un réseau multilatéral est né pour aider les organismes locaux de services aux populations vulnérables à se préparer aux changements climatiques. À Toronto, on a établi un groupe de travail composé de résidents d'une tour d'habitation pour s'occuper du bien-être entre voisins et des interventions d'urgence. Le travail se poursuit dans les trois villes.

**Conclusion** L'appui d'un large éventail d'acteurs aux organismes associatifs et aux bénévoles locaux peut rendre possibles des partenariats pour la résilience climatique au niveau des quartiers—avant, pendant et après des événements météorologiques extrêmes. La santé publique, bien qu'elle ne vienne pas immédiatement à l'esprit comme étant un allié essentiel dans ce genre de travail, est bien placée pour apporter une contribution. Conformément aux approches fondées sur le lieu, un plan de développement de proximité émergent a permis à des animateurs socioculturels de chaque ville de faire naître des collaborations adaptées à la réalité sur le terrain.

**Keywords** Community resilience · Faith-based organizations · Climate change · Extreme weather · Community development · Public health

**Mots-clés** Résilience communautaire · organisations confessionnelles · changement climatique · conditions météorologiques exceptionnelles · développement de proximité · santé publique

## Introduction

As the climate warms, extreme weather events will continue to be increasingly frequent and severe over the coming decades. Many urban dwellers believe that should weather events impact them directly, government agents or 911 emergency responders will help. However, government emergency managers ask all residents to prepare their own kits and plans for the first 72 h of an emergency (City of Toronto 2020).

People managing low incomes may be less likely to have emergency plans or supplies and be unable to remove themselves from a hazardous situation due to lack of resources, social networks, limited mobility, mental or physical health challenges, and other constraints (Taylor-Butts 2015). Resilience is the capacity of individuals, organizations and “social-ecological systems to adapt or transform in response to unfamiliar, unexpected and extreme shocks” (Carpenter et al. 2012). It is about the capacity to “bounce back” from adversity, but also to embrace change and “bounce forward” into new ways of thinking and doing (Urban Resilience Project 2015).

Increasingly, civil society is recognized as having an important role to play, alongside government and the private sector, in building local resilience (Adger 2003). Indeed, social networks and social capital are widely recognized as key to the creation of community resilience (Ebi and Semenza

2008). Equity must be a key consideration in all resilience-building activity (Plough et al. 2013).

While public health agencies are uniquely placed to build community climate resilience (Keim 2008; Hess et al. 2011; Poland et al. 2020), there are few published examples of such work beyond that of Los Angeles (Bromley et al. 2017; Plough et al. 2013), although the resilience of public health itself (including capacity to undertake the community engagement deemed necessary for successful crisis response) has received some attention (Bromley et al. 2017; Khan et al. 2018; Marinucci et al. 2014). It is also clear that public health cannot build community resilience alone. There is increasing recognition of (a) the importance of community engagement, (b) the need for “participatory governance”, and (c) the significant contributions that local citizen organizations and community groups make to urban resilience (Bromley et al. 2017; Khan et al. 2018). Of course, calls for public health to engage more fulsomely in community development (Poland et al. 2000) and to work with “unusual allies” outside the health sector to address issues of climate adaptation and the ecological determinants of health (CPHA 2015; Poland et al. 2011, 2020) are not new.

Case studies of the role of civil society organizations active in post-disaster recovery following Hurricane Katrina in New Orleans (Morello-Frosch et al. 2011) and Hurricane Sandy in New Jersey, USA (Schmeltz et al. 2013), illustrate the pivotal

role of community groups in disaster resilience (see also LaLone 2012). This empirical work suggests that more centrally coordinated processes for emergency response typically undervalue the considerable prior on-the-ground work of community groups and their capacity to lead or co-lead disaster resilience and community resilience-building processes. With few exceptions (e.g., Rivera and Nickels 2014), very little has been written about the actual or potential role of faith-based organizations (FBOs) in this process. While there is much discussion about the role of FBOs in climate change education and advocacy, very little has been written about public health collaboration with FBOs on any issue (Zahner and Corrado 2004), and the literature on citizen engagement for local resilience and climate adaptation rarely includes more than passing mention of FBOs.

## Setting

Faith & the Common Good (FCG), a national interfaith network, received an Ontario Trillium Foundation Seed Grant to explore how local initiatives to build urban extreme weather resilience could be created in marginalized neighbourhoods of one large and two mid-size southern Ontario cities: Toronto, Brampton and Hamilton. FCG asked Community Resilience to Extreme Weather (CREW)—a grassroots volunteer-driven organization that promotes multi-stakeholder networking to increase awareness of local climate change impacts and enhance local resilience—to manage the Lighthouse Project, a pilot that ran from the winter of 2017 to November 2018. Funding paid for one experienced part-time animator in each city. Animators in Hamilton and Toronto used an asset-based community development approach (Baker 2014) that recognizes and builds upon existing local assets and strengths. Responsible for forging relationships and catalyzing change, animators developed their own customized approaches in each setting.

The Lighthouse pilots in Hamilton and Toronto sought to engage a wide variety of allies, including FBOs. A key goal was to discover how the community would rally around this issue, and what strategies might be employed to raise awareness of, and prepare for, extreme weather and related safety and health impacts. Also of interest was how FBOs could be a catalyst for community engagement, or whether mistrust of religious organizations would present a barrier.

Peel Public Health was not recruited to participate in Brampton's Lighthouse pilot which continues to be led by the city's Emergency Management Office. This paper therefore refers only to the two pilot sites where public health was involved. Emergency Management participated in both Hamilton and Toronto pilots but its focus on emergency preparation strategies meant that its interest in contributing to the community development that builds enduring resilience was

limited. In this regard, PH proved to be a stronger ally. The Lighthouse project illustrates how, even though public health is encouraged to work with “unusual allies” to address the social and ecological determinants of health (CPHA 2015), they are not always top-of-mind as a potential ally among those other agencies or groups when the focus is not explicitly on “health”.

## Intervention

Members of FCG's nationwide network have a history of engagement with environmental sustainability initiatives and are concerned about climate change. As they struggle with aging congregations and growing maintenance costs, many are reorienting to become more relevant in their neighbourhood. Their innate impulse to gather and to help in times of need make them natural community allies in resilience. FCG wanted to learn how community might form around FBOs as resilience hubs, and whether mistrust of religious organizations would be a barrier to community engagement.

Working with public health was not an explicit Lighthouse goal. Emergency Management, however, had always been considered a natural municipal ally. The Lighthouse pilot builds on findings of an earlier Toronto pilot, Neighbourhood Extreme Weather Resilience ([https://www.faithcommongood.org/extreme\\_weather\\_resilience](https://www.faithcommongood.org/extreme_weather_resilience)), whose goal was to learn how FBOs could provide refuge in direct response to emergency and to understand how local partners, such as food retailers, could support those efforts.

“Community animators” deployed by Lighthouse in Hamilton and Toronto used an emergent, community development approach that has been identified as central to building community resilience in ways that reflect local needs, capacities and interests (Zautra et al. 2008). Both animators began with an assessment of the community's and local faith groups' level of preparedness for extreme weather emergencies. Prior awareness of projected climate impacts and level of emergency planning—individual or community—turned out to be minimal.

The only activity that all three animators were required to deliver was either or both of a pair of interactive “Resilientville Canada” exercises designed by San Francisco's Neighbourhood Empowerment Network and customized by CREW to simulate community problem-solving during extreme weather and other shock scenarios (<http://www.crewtoronto.ca/resilientville/>). The exercises advance multi-stakeholder and local resident participant awareness of the short- and long-term benefits of planning ahead for local emergencies by strengthening existing social relationships, creating new ones and establishing close links to municipal support—all crucial to resilience.

## Toronto

Toronto's animator had extensive grassroots environmental community development experience, especially with newcomers, and had established local relationships through CREW's earlier work in St. James Town. One of the most dense and diverse neighbourhoods in North America, most of St. James Town's residents live in 19 high-rise apartment towers. There are relatively few service providers on site. Despite its generally low-income demographic, it has never been designated a Neighbourhood Improvement Area that would have flowed needed resources and partnerships to address pressing community issues.

CREW was first invited to work in St. James Town alongside a long-established community group. This proved to be an obstacle to engagement with other local stakeholders. Understanding the degree of collaboration among local organizations and stakeholders before undertaking this work is a key learning. It should also be noted that initial partnership with any other local ally might have surfaced similar barriers.

Staff turnover at Toronto's Office of Emergency Management (OEM) early in the project meant that the animator was left for a period with no municipal support. A Toronto Public Health Officer previously known to CREW brokered a meeting with the neighbourhood's largest service provider in order to expand local stakeholder engagement, but it did not produce results. This person also agreed to join an "advisory council" for the project, but without broad representation from local stakeholders, this became irrelevant.

In response to these unanticipated barriers to interagency collaboration, the animator focused on the residents who had attended early planning meetings. Together, they formed a Lighthouse steering committee, participated in workshops, and received training on hazards, risks and preparedness from OEM along with guidance from CREW on building social networks. As volunteers, they conducted extreme weather awareness outreach at community events and distributed emergency preparedness materials, some of which were customized for use in adult English language classes and children's homework clubs.

The social justice committee of the local Anglican church fully committed to the project and wished to contract with OEM as a formal resilience hub partner. The local Catholic church also hosted meetings and observed with interest.

## Hamilton

Beasley is a gentrifying downtown neighbourhood. Around 57% of residents live below the poverty line, and nearly 40% identify as a visible minority (<https://www.hamilton.ca/city-initiatives/strategies-actions/beasley-neighbourhood-action-plan>).

The animator's full-time employer was Environment Hamilton, a well-regarded NGO. The animator convened a

Lighthouse working group whose founding members were critical to the success of the project. Hamilton Public Health (HPH) played a close and supportive role from the outset. The focus on building capacity in climate adaptation and extreme weather response—particularly for those from more vulnerable communities—directly aligned with HPH objectives. They understood that the working group and an advisory network would expand the climate conversation to new audiences. Other members of the working group brought wide experience to the planning. These included St. John's Lutheran church, which hosted regular meetings, community workshops and a large public event; the Beasley Neighbourhood Association; local service agencies; and a public health nurse. Multiple faith groups were represented and graduate students provided support.

Working group members met with leading service providers in Beasley. Following several site visits, they redefined their initial concept of a "resilience hub". They understood that sites such as a local men's shelter would be go-to places for people in urgent need during an emergency. What staff at these sites lacked was knowledge of projected climate impacts that would affect their clients, neighbours and internal operations. Most did not have emergency supplies or generators. The working group considered how a network of service providers, community organizations, FBOs and others could be organized to support each other and to leverage city and other supports in the provision of resources including expertise, training and materials as well as participation in emergency communications channels.

## Outcomes

### Toronto

By pilot end, a strong working group of 14 members, comprised of mostly St. James Town residents with strong representation from the Anglican church, was well established. In September 2019, CREW received funding to maintain the animator's lead role for an additional 17 months.

Nearing pilot completion, a fire in the basement electrical room of one of the neighbourhood's apartment towers led to the evacuation of over 1500 people. Subsequent flood events in several other towers caused lengthy water and power losses exposing current levels of preparedness and resilience. CREW's preparedness materials were subsequently modified to include information on responding to building infrastructure failure.

The working group focused its attention on one high-rise building that was home to three of its members. Following extensive outreach, they are implementing a buddy system for neighbour-to-neighbour wellness checks. The Anglican church is preparing to partner in the training of high-rise

residents—especially its own congregants—to be emergency responders ready to open their building, prepare hot drinks and manage communications between residents and the church. The working group is also seeking to train volunteer “community responders” who could collaborate with OEM in the event of a neighbourhood emergency and be included in OEM communications channels.

Residents valued the project and volunteered their time to various pilot initiatives. In the absence of support from municipal stakeholders and other influential actors, the work continues to rely on the ongoing commitment of the steering committee and other local volunteers. The local faith group was an enthusiastic and important ally. It did not appear to be a barrier to engagement, although further study would need to confirm this.

## Hamilton

The working group continued with regular meetings after the pilot ended and collaborated on a purpose statement for funding in order to meet the critical need for a paid, part-time coordinator, as well as further project work. Underscoring the relevance of community climate adaptation work to public health, it contributed guidance to a research project on vulnerable seniors and heat—a partnership between McMaster University’s Department of Sociology, Hamilton Public Health’s Healthy Environments Division, CREW and Environment Hamilton. This partnership produced a survey intended to be self-administered by seniors and other vulnerable populations. In the fall of 2019, HPH established a partnership with CityLab (<https://www.citylabhamilton.com/>), an innovation hub that convenes students, faculty and civic leaders to work with city-supported projects to produce digital resources and other materials for the working group.

Individuals who gathered around the project generally had a professional interest in the project outcomes. Beasley service agencies and other stakeholders had strong relationships with HPH and readily engaged with the pilot’s emergent community development approach. The local faith group was an important collaborator from the outset and did not appear to be an obstacle to community and stakeholder engagement.

## Implications

Lighthouse Project pilots sought to intentionally enhance community resilience through local initiatives, and what contribution faith groups might make. The extreme weather resilience focus attracted immediate interest in each of the pilot sites and FBOs were enthusiastic allies. None of the initiatives can be considered “completed”. Work will evolve and respond to community climate concerns as varied as food security and pressures of environmental migration. The literature, and our experience in the Lighthouse project, suggests that where municipal governments

get involved, they should champion initiatives that seek to enhance local social infrastructure as part of disaster preparedness and building community resilience, including “unusual allies” such as faith-based organizations and social agencies that already have a footprint in the neighbourhood and a mandate that includes community. The path subsequently taken by the Toronto Resilience Office in the development of the Toronto Resilience Strategy is exemplary in this regard, including as it did a “connected community” approach championed by the Centre for Connected Communities, who was a key collaborator in the community engagement component of that work.

Emergency management in Toronto and Hamilton had only tentative relationships with the Lighthouse initiatives. Community preparedness planning may be perceived as a possible hindrance rather than an advantage in an emergency event, a barrier that is noted in the wider literature (LaLone 2012; Schmeltz et al. 2013). Emergency Management is a hierarchical structure whose actions must focus on a moment in time and too often excludes the individuals and grassroots organizers who are typically their own community’s first responders. Public Health’s concern with enduring health and well-being suggests that it would be a more productive partner in local organizing around extreme weather and climate adaptation. It could also act as a bridge between emergency management and local organizers.

Resilientville workshops illustrated the importance of building local social networks that include a place of temporary refuge, often an FBO, and creating a community plan—before an emergency happens. Public Health was rarely considered a potential ally by community participants in these exercises, which suggests a public misunderstanding of their role that may now be shifting as a result of COVID-19, which has thrust public health into broader visibility. HPH’s direct engagement with the Beasley working group demonstrates that the expansion of climate awareness to larger audiences and support for the climate preparedness of agencies serving local marginalized populations could potentially expedite City and Public Health objectives.

Public health staff in Toronto were individually supportive but played no formal role. A lack of engagement from public health departments in Brampton and Toronto likely reflects the reality that where public health is not in the lead, their involvement is invited when other stakeholders see the relevance and opportunity (which, as we have noted, is not always the case), and also that public health cannot realistically be everywhere and in everything that could be seen as relevant. In some cases, it may also reflect residual ambivalence on the part of authorities regarding the role of citizens in emergency response (Edwards 2008), jurisdictional quandaries that often leave public health out of the conversation, and/or the unevenness with which climate change is championed by public health departments as a key public health issue in a resource-constrained environment (Buse 2017). Whereas most of the published

literature on public health collaboration with civic organizations (including FBOs) is written from the perspective of public health and profiles examples where public health is in the lead (e.g., Bromley et al. 2017; Khan et al. 2018), this paper complements other work (Stajura et al. 2012) that explores such collaborations from the experience of FBOs and non-health sector leadership.

The Lighthouse initiative, however, shows the potentially important role of public health that sometimes goes unrealized, despite its (admittedly varied) experience in emergency preparation (including SARS and now COVID-19), and Ministry directives that encourage collaboration with other sectors and community groups.

Municipal and regional Public Health Departments and Emergency Management should champion initiatives that seek to enhance local social infrastructure as part of disaster preparedness and building community resilience, including “unusual allies” such as faith-based organizations and social agencies that already have a footprint in the neighbourhood and a mandate that includes community service and social inclusion. Interestingly, in Toronto, it is the city’s Resilience Strategy (funded initially by the Rockefeller Foundation) that has brought together Emergency Management, Public Health, FBOs and others to enhanced community resilience in the face of extreme weather events, and this occurred after the initial Lighthouse pilot project period.

The Lighthouse pilots demonstrated the need for flexible community and civic partnerships that encourage community-led innovation, as well as the inclusion of marginalized groups and frontline service providers. Adequate funding, shared expertise and equitable partnerships with emergency management and public health could meet both government and community objectives for the proactive building of community resilience. Those initiating this work outside this sector may need to be reminded of the potential contribution that public health can play. More consistent support within public health for frontline staff to engage on an ongoing basis in place-based collaborative community development would also go a long way to cultivating the social ecology of relationships that would be fertile ground for such collaborations (Poland et al. 2000). The latter requires a flexible, emergent approach that is responsive to community-defined needs and priorities, rather than a one-size-fits-all approach to community development.

Building the social networks and social capital that are critical to community development takes time, patience, flexibility and ingenuity. Many FBOs are enthusiastic allies in building local resilience to climate change impacts. With support from community volunteers, along with expertise and financial assistance from their municipality, FBOs could become valuable resilience hubs. We offer our experience with the Lighthouse Project, and this paper, as an appeal for more participatory, community-engaged public health in light of the persistent gaps in its approach to climate change preparedness.

## Compliance with ethical standards

**Conflict of interest** The authors declare that they have no conflict of interest.

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