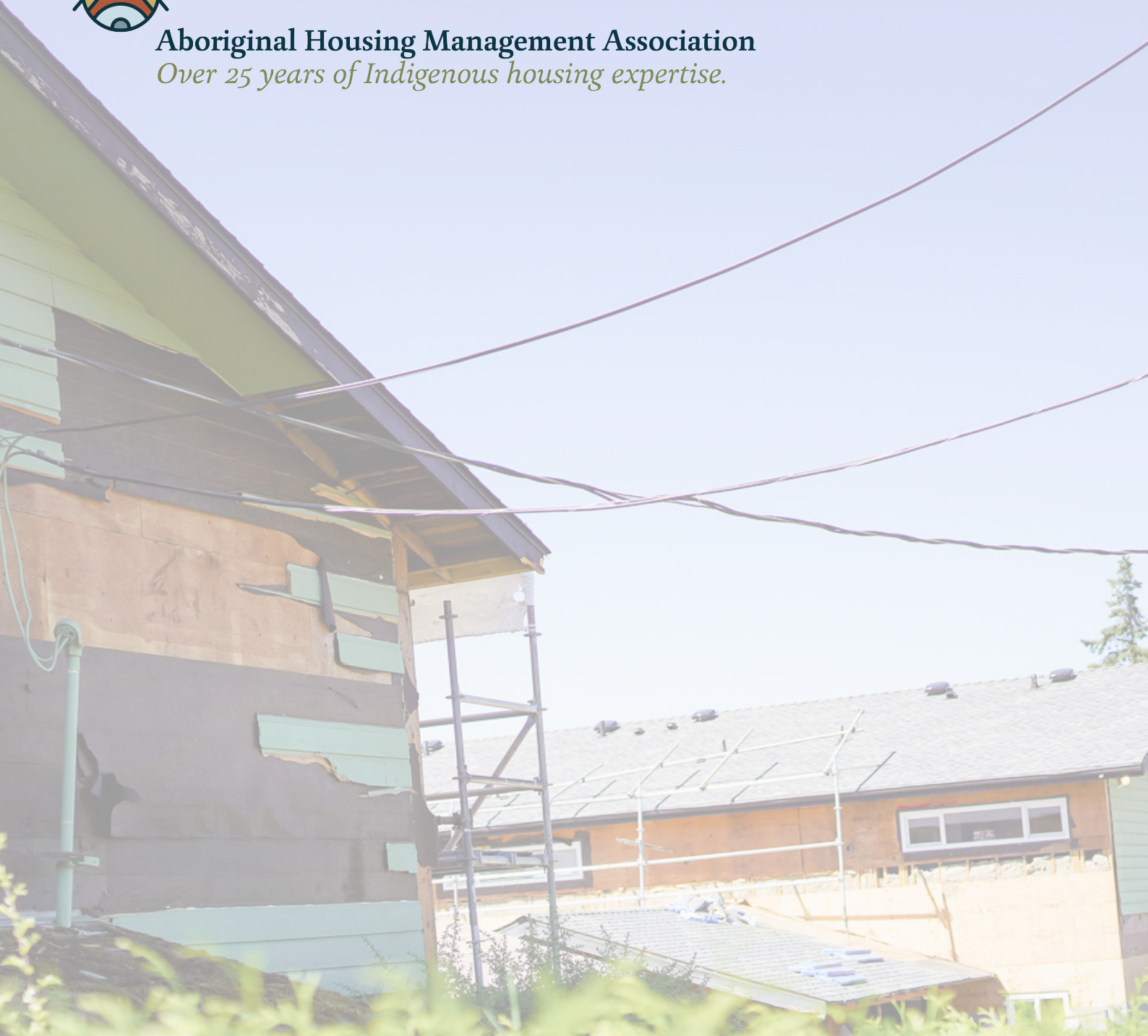




Aboriginal Housing Management Association
Over 25 years of Indigenous housing expertise.



Lived experience & stories of extreme heat among Indigenous households in British Columbia:

Assessing the response from Indigenous housing providers and the Aboriginal Housing Management Association

November 2023

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Acknowledgements

The author would like to respectfully acknowledge that the writing of this work took place on the traditional territory of the Mississaugas of the Credit, the Anishinaabe, the Chippewa, the Haudenosaunee, and the Wendat peoples, known today as Toronto. As part of the Dish with One Spoon Territory, the author walks alongside subsequent Indigenous Nations and peoples, Europeans, and all newcomers to share and protect this land.

This work would not have been possible without the generous participation of the Indigenous non-profit housing providers across BC and their team members who generously offered their time, experiences, and expertise to contribute to this research project.



Executive Summary

Anthropogenic climate change is causing more intense and longer heat waves and other climate-related emergencies in British Columbia (BC). While the climate is changing all around the world, Canada is warming on average twice as quickly as the rest of the world (Government of Canada, 2019). During the COVID-19 pandemic, BC experienced an acute extreme heat event in the summer of 2021, with some locations reaching a daily maximum temperature of above 45 Celsius (Gomez, 2021).

Indigenous, low-income, vulnerable, and equity-deserving populations are at a higher risk of experiencing life-altering and devastating circumstances due to extreme heat events. Maintaining a community's well-being during an extreme heat event is closely intertwined with high-quality housing, adequate ventilation, reliable air conditioning, and collective capacity to keep different groups safe from the heat. We know that the risk to Indigenous populations is extremely high due to the legacy of colonialism that has led to poor-quality housing, chronic health conditions, lack of resources, and many other systemic barriers (Tam, 2013). Many Indigenous residents in urban areas are already living with a high energy burden and the cost of additional cooling equipment to escape the extreme heat may be inaccessible to them (Rezaei & Dowlatabadi, 2016).

To address some of the barriers and knowledge gaps in responding to the inevitable impacts of climate change, such as extreme heat, the Aboriginal Housing Management Association (AHMA) embarked on this research project to meaningfully engage Indigenous non-profit housing providers (housing providers) and bear witness to their lived experiences, challenges, and priorities.

This report is the result of the engagement with 16 team members of these housing providers who have intimate knowledge and insight into the lived experiences of their tenants dealing with extreme heat in BC. AHMA commissioned this research project thanks to the financial support of Vancity Credit Union.



Key Messages

The following key messages reflect a common thread between the many voices and stories shared by housing providers:

1. Limited capacity, funding, and resources are major challenges among housing providers.
2. While free air conditioners were a much-needed relief from extreme heat for many Urban Indigenous tenants, those living on fixed or low incomes were concerned about higher energy costs associated with these new units during summer months.
3. Rural and urban communities experience extreme heat events differently. Communications and solution development to respond to extreme heat events should be targeted and responsive to local conditions.
4. The priority of housing providers was to help their tenants stay cooled and safe in their own homes.
5. Extreme heat events, poor housing conditions, and other challenges faced by Indigenous peoples are interconnected. Effective strategies and plans should be holistic and address systemic barriers.
6. For Indigenous peoples by Indigenous peoples (FIBI): Indigenous housing providers have long-lasting deep relationships with their tenants. They have a robust understanding of their tenants' needs and what should be done to better serve their communities.
7. Trauma-informed approaches to extreme heat response planning were essential to protect the most vulnerable within communities by addressing barriers such as social stigma, mobility challenges, and isolation.
8. All housing providers were committed to improving energy efficiency within their portfolio and building more efficient housing in the future.
9. Housing providers advocated for building intentional alliances across different agencies, organizations, and governmental institutions to collaborate on extreme heat planning, rather than working in silos.

Recommendations

Nurture existing social networks, support systems & partnerships

- Existing community-wide social networks can be used to improve outreach to vulnerable tenants. Using existing community support systems such as meal delivery to distribute information and cooling kits.
- Partnerships with local organizations and agencies serving vulnerable populations can be a powerful tool to reach more folks in need of emergency cooling kits and cooling equipment.

Think beyond centralized cooling systems

- Collaborating with the local government and other local organizations to have access to a mobile cooling center would be highly beneficial. Much like providing a shared cooled space for tenants, bringing a mobile cooling center to the vulnerable groups may be more effective than trying to organize and arrange for the transportation of a large group to a centralized cooling center.
- Setting up misting tents (with drinks, snacks, charging stations, etc.) that is inclusive and welcoming so that the insecurely housed population can also feel safe during extreme heat events.
- Access to safe and inclusive green spaces can be very beneficial for vulnerable populations to stay cool.

Embrace community strength & resiliency

- It is important to be aware of warning signs of heat-related illnesses and how extreme heat could exacerbate pre-existing health conditions such as cardiovascular and respiratory issues.
- Rural and urban communities experience extreme heat events differently. These differences and unique experiences warrant a targeted approach to extreme heat response planning.
- Current extreme heat response plans require more innovative protective solutions specific to the realities of each community and their vulnerable members.

Transform financial support systems

- With the impacts of climate change intensifying extreme heat events and other climate emergencies, housing providers rightfully expressed the need for more funding sources to increase their capacity to better strategize and respond to these emergencies.
- One size does NOT fit all: While initiatives like BC Hydro's air conditioner program have been very popular among tenants living in apartment buildings, single family dwellings either do not qualify to participate in these programs or the air conditioner unit provided is not sufficient to cool down their homes properly.
- Provide alternative solutions or financial support for older assets that cannot benefit from conventional funding streams.

Recommendations

Effective communications & information management

- Prior to an extreme heat event or other climate emergencies, housing providers and their staff should identify vulnerable tenants (including Elders) and consider pre-existing health conditions, the living conditions of tenants, and develop strategies to help these tenants understand and mitigate the risks of extreme heat in their own homes.
- A comprehensive but condensed, accessible, and relevant info package on preparing and responding to extreme heat events either designed by AHMA or another external entity would be helpful for housing providers. Each community has unique priorities and needs and any external entity distributing info packages should design them based on the specific regional circumstances and needs of each housing provider.
- Most housing providers did not have detailed information regarding tenants that had purchased their own cooling units. Making an inventory of both cooling and heating units will be beneficial for future asset planning and extreme heat preparations.
- Communications regarding climate emergencies and extreme heat events should occur early, directly, and in coordinated fashion with local and provincial authorities.

Develop transformative & equitable policies, programs & emergency response plans

- A long-term strategy for AHMA and housing providers is to define heat-related risks, vulnerable tenants, and determine high-level targeted strategies that will address gaps and barriers within the infrastructure, internally within the housing organization, and externally with AHMA and other entities to ensure resilient healthier homes for their tenants.
- Extreme heat response plans should take multiple crises into account: extreme heat is usually not experienced in isolation with many community members reporting dealing with the heat dome in parallel with wildfires or other challenges. An effective heat response strategy must be holistic, resilient to uncertainty, and contain a contingency plan. It is important to shift away from siloed emergency planning and recognize the complexities tied to impact of climate change.
- Coordinated heat preparedness and response planning led by AHMA: guide members to develop strategies and processes to better respond to future extreme heat events and climate emergencies. Ideally, this process should involve regional health authorities, local governments and other local entities.
- Governments, utilities, AHMA, and housing providers need to collaborate on developing assistance programs and initiatives that provide financial support for Urban Indigenous households living with a high energy burden.
- AHMA should advocate for stronger rights for Indigenous tenants to use air conditioners or other means of cooling within their units and the creation of minimum cooling standards for Indigenous rental housing.
- AHMA can play a more active role advocating for political and regulatory reform on behalf of housing providers.
- Center and uplift Indigenous rights, culture, knowledge, and ways of life in climate change and extreme heat planning: time and effort should be invested in strengthening and nurturing existing Indigenous institutions and programs.
- Streamline the participation process for future cooling initiatives so that more tenants can access these services.

A Note on Language & Positionality

Different communities and entities may define heat-vulnerable and equity-deserving populations differently. While we acknowledge and respect this diversity, for the sake of this work, the research team and AHMA have adopted the following definitions for priority populations:

- Differently abled people
- Socially isolated and economically marginalized groups
- Seniors and Elders
- Unhoused or insecurely housed people
- Groups experiencing mental or physical health challenges
- People struggling with substance use

These populations, among other vulnerable groups, are at a higher risk from extreme heat events due to ongoing historical, procedural, and systemic injustices and barriers placed upon them. By using the term “equity-deserving”, we explicitly draw attention to the truth that certain groups are structurally and systemically marginalized and denied their equitable share of societal, political, and economic benefits and are often left with a disproportionate share of the burdens of climate change and environmental injustices.

As an immigrant and guest on this land, the researcher recognizes that her perspective and language are limited to her position as a witness and observer of the lived experiences and stories of Indigenous community members involved in this study. The research team intentionally reflected upon their privilege and position throughout the interviews, analysis, and writing of this report.

Nomenclature

The following terms are often used in this report and the descriptions are directly borrowed from the report “British Columbia Urban, Rural, and Northern Indigenous Housing Strategy” prepared for the Aboriginal Housing Management Association (AHMA) in 2021.

“Indigenous peoples” is a generalized term used to refer to the original peoples and their descendants of Turtle Island. In this report, the term refers to First Nations, Métis, Inuit, and those that self-identify as Indigenous but do not have an Indian status.

“Off reserve” and “Urban Indigenous peoples” are used in this report to refer to Indigenous peoples who live and housing located outside of First Nation reserve land. This includes Indigenous populations living within municipalities of urban and rural areas. However, jurisdictional lines are blurring as First Nations are beginning to utilize and own land outside of reserve boundaries.

According to the CMHC a household is in “core housing need” if “its housing does not meet one or more of the adequacy, suitability, or affordability standards and it would have to spend 30% or more of its before-tax income to access local housing that meets all 3 standards” (CMHC, 2016a, p.8).

Introduction

The extreme heat event in British Columbia (BC) in the summer of 2021, during the COVID-19 pandemic, was declared the deadliest weather event in Canada to date, with 570 heat-related deaths reported from June 25 to July 1st, 2021 (Gomez, 2021). Specific locations reached maximum temperatures above 45 Celsius and approximately 106 daily maximum temperatures of 40-45 Celsius were recorded (Government of Canada, 2021).

The 2021 heat dome was incredible. I have never, in my whole life, have experienced anything like that before. I think we got to about 48 Celsius here in Chilliwack, which is just unbelievable. (anonymous member, Stó:lō Service Agency (SSA))

Equity-deserving populations including the elderly, chronically ill, isolated individuals, and the youth are at a much higher risk of heat-related illnesses and at times death (WHO, 2009). Years of scientific exploration have shown us that climate change increases the number, intensity, and duration of extreme weather events including heat waves (IPCC, 2022). Colonialism and systemic injustices have led to Indigenous peoples bearing the burden of climate change and its impacts including extreme weather events, climate disasters, and emergencies (Government of Canada, 2019). Living conditions and housing standards are central factors in dealing with extreme heat events. In their 2023 research, Yumagulova and co-authors reported that “according to the 2021 federal census, 1 in 6 Indigenous people lived in a home in need of major repairs (three times higher than for a non-Indigenous person), and more than 17% of Indigenous people lived in overcrowded homes (Statistics Canada, 2021)” (Yumagulova et al., 2023). Indigenous peoples are also at a higher risk of developing chronic conditions including mental health conditions, high blood pressure, asthma, and chronic lung conditions (Hahmann and Kumar, 2022). Evidence shows that certain medical conditions such as lung conditions, hypertension (high blood pressure), and diabetes compromise the body’s thermoregulation and can increase a person’s susceptibility to extreme heat (BCCS, 2022).

The research team was intentional about amplifying the voices of housing providers in this research project to center the lived experiences of heat-vulnerable and equity-deserving populations. This engagement approach directly shares the stories told by these communities, and showcases the impacts of extreme heat, and the barriers, priorities, and opportunities for improvement within these communities. This meaningful engagement process unveiled the degree to which housing providers are committed to supporting their tenants, the strength and care observed within the community, and the strong relationships between housing providers and their tenants.

This report reflects the direct inputs, comments, expertise, and experiences shared by housing providers and presents recommendations, key messages, and potential pathways for improvement within these societies and for AHMA. The information was gathered through virtual interviews with housing providers across BC. The conversations were focused on experiences during the 2021 heat dome in BC, the barriers and challenges the housing providers faced meeting their tenants’ needs, successful examples of responding to the extreme heat event, and what improvements the housing providers would like to see in future response plans to extreme heat. The stories and feedback from housing providers are organized into the following themes:

1. Heat impacts & intersectional barriers
2. Communications & education
3. Infrastructure & housing conditions
4. Community support & partnerships

Each housing provider interviewed will receive this report and a customized information package reflecting upon their unique experience and stories providing personalized recommendations for potential pathways for improvement. The goal of this work is to inform forthcoming policies, strategies, and response plans developed by housing providers, AHMA, governmental institutions, organizations, and other service providers in BC.

About the Aboriginal Housing Management Association

Founded in 1996, the Aboriginal Housing Management Association (AHMA) is an umbrella organization of 55 Indigenous housing and service providers. AHMA's members oversee 95% of Indigenous housing units across the province for those not living on reserve. Our portfolio includes over 5,500 units that provide homes to an estimated 10,000 Indigenous individuals and families living in urban, rural, and northern regions of BC, with over 2,000 additional units currently under development.

In addition to providing Indigenous peoples, their families, and communities with affordable housing, AHMA's members offer many support services. These include homelessness prevention, parenting skills, mental health programs, addiction recovery support, and more. AHMA members provide a culturally safe space for Indigenous peoples to make their home—wherever they settle, by facilitating connections to community and cultural resources. In BC, 78% of Indigenous peoples live off-reserve; our members provide essential support for these people living away from their communities and traditional homelands.

AHMA is a leading voice that supports, advocates, and responds to the needs of Indigenous housing providers in BC and the Indigenous Communities they serve.



Where We Stand Today

The land and waters now known as British Columbia (BC) are home to approximately 290,210 Indigenous people and 200 distinct First Nations (Yumagulova et al., 2023). 78% of First Nations, Metis, and Inuit peoples now live, work, and play in urban and off-reserve areas (Province of British Columbia, 2023). To gain a better understanding of the lived experiences of Indigenous peoples during extreme climate events, it is crucial to recognize and understand the historical colonial context and its legacies which many of these communities have endured and continue to live through.

Dispossession of land, water and ways of being

Building communities and houses that were in harmony with the natural environment, honoring the deeply complex relationships between the land, water, humans, and our non-human kin were a pillar of traditional Indigenous practices. Homes and shelters were designed for the local climate, using local materials, and according to the regional functionality of the infrastructure by the community (e.g., whether women, hunters, trappers, traders, or fishermen were going to use the shelter) (Olsen, 2016).

Through colonial processes and systems such as the Indian Residential School system, The Sixties Scoop, and the Indian Act, Indigenous peoples were forcibly removed from the lands and waters that they had called home and protected since time immemorial. This violent dispossession and imposed disconnection from the land and their traditional ways of life resulted in significant disruptions in knowledge systems, languages, cultural practices, oral traditions, governance systems, and legal structures of many Indigenous Nations. The colonial legacy of these structures and practices is felt to this day by many Indigenous peoples living on this land. The disruption, violence, and dispossession have led to the decline of the physical and mental well-being of many Indigenous communities.

Urbanization and othering

Through policies such as the Indian Act (1876), the Canadian state forcibly displaced Indigenous peoples to remote and small plots of land referred to as "reserves", simultaneously building towns and urban centers on Indigenous traditional territories.

Many Indigenous peoples continued to live in these new cities, but they were systemically restricted and marginalized through policies such as the "Pass System". The federal government officially took over jurisdiction for on-reserve housing, allowing many settlers to take control of water systems and the land, robbing most reserves of their self-sufficiency (Harris 2002). Meanwhile, the displacement of many Indigenous peoples onto reserves isolated them from growing towns, and discriminatory policies implemented within urban areas led to their systemic exclusion. The legacies of these injustices are deeply embedded in past and present social, economic, and political structures impacting Indigenous peoples living in urban areas (Peters et al., 2013). Many Urban Indigenous peoples share that due to persistent colonial relationships in urban settings, they feel 'Othered', invisible in the city, and like 'outsiders' (Nejad et al., 2019 & Weasel Head, 2011).

The impact of these systemic injustices is felt in housing strategies for Urban Indigenous peoples. Most government-led initiatives aimed at providing sustainable housing to different populations neglect to address urgent housing needs for Urban Indigenous populations and these communities tend to fall through jurisdictional gaps, preventing community members and their housing providers from accessing adequate funding (Cappe, 2021).

This leaves many Indigenous housing providers to their own devices to repair housing units, build new housing, and meet their tenants' needs. Indigenous peoples living in urban and rural areas in BC face unique challenges:

- According to AHMA's most recent housing strategy, more than 20% of Indigenous households in urban and rural regions are in core housing need. This means that Indigenous households are 1.5 times more likely to be in acute housing need than non-Indigenous households (AHMA, 2022). The CMHC reports that Indigenous households are also less likely to be able to lift themselves out of housing need than the general population (CMHC, 2022).
- The overall Indigenous population is growing 2.5 times faster than the non-Indigenous population across Canada (AHMA, 2022). This population growth rate is even higher for Urban Indigenous communities where the Indigenous population in urban areas has grown by 19.8% from 2016 to 2021 (CMHC, 2022).
- A complex interconnected set of factors prevent Urban Indigenous peoples from accessing safe, adequate, affordable, and high-quality housing (CMHC, 2022 & Lindstrom, Lucas, & Milaney, 2021 & Native Women's Association of Canada [NWAC], 2018):
 - Lower-than-average income
 - Higher rates of unemployment
 - Intergenerational trauma resulting in chronic mental and physical health concerns
 - Inaccessible low-income support systems
 - Living in homes in need of major repair and absence of financial resources for retrofitting and renovations
 - Overcrowding in homes leading to lower quality of life and health issues

While living in lower-quality housing may be portrayed as a marker of poverty by many, unjust colonial housing strategies and practices established under historical and ongoing policies such as the Indian Act have and continue to perpetuate a cycle of poverty and lower quality of life among Indigenous peoples (Olsen 2016). As many Indigenous community members and housing providers would attest to, housing plays a critical role in helping communities improve their resiliency against extreme heat events and maintain their collective well-being (Samuelson et al., 2020).

Despite historical and present oppression and injustices, Indigenous peoples have prevailed, showcasing incredible resiliency, resistance, and strength. Reclaiming their sovereignty and self-determination, Indigenous peoples are revitalizing their languages, ways of being on the land and water, and unlearning the cultural and social severance imposed by colonial structures (Kirmayer et al, 2011).

Our Approach

The findings of this report are informed by comments, input, and feedback shared by staff members from 16 Indigenous housing providers across BC. The following map showcases the approximate location of participating housing providers. The researcher reached out to all 43 AHMA members outlining the purpose and final outcome of the research project and requesting a 60–90-minute interview with a member of their executive team or other knowledgeable staff member(s). Phone and virtual interviews occurred during the months of August, September, and October of 2023.

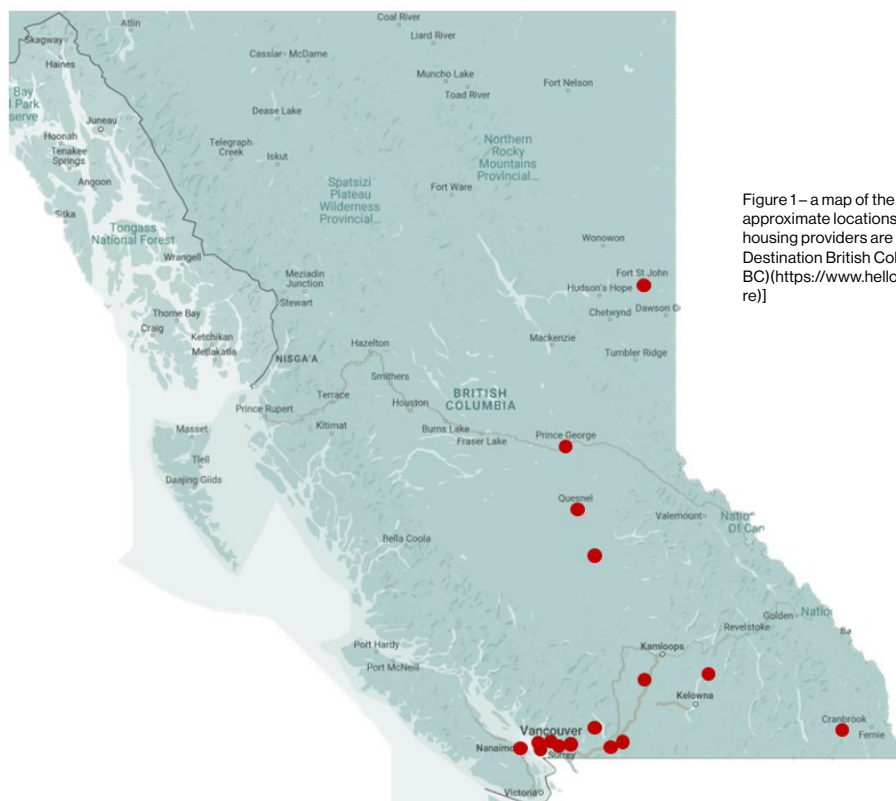


Figure 1 – a map of the province of British Columbia. The approximate locations of the 16 participating Indigenous housing providers are marked on the map. [courtesy of Destination British Columbia (Destinations BC)](<https://www.hellobc.com/interactive-map/?tab=more>)

To better capture participants' stories, a series of questions were designed in collaboration with AHMA's team members and were shared with participants prior to and during the virtual interviews. These questions were designed to reflect the four major themes presented in this report.

In addition to bearing witness to the lived experiences and expertise of Indigenous housing providers and their tenants, the research team also reviewed and analyzed more than 20 academic and grey literature resources on Indigenous housing, funding sources, energy programs, impacts of climate change on Indigenous peoples, and other topics to bridge the realm of theory with lived realities of Indigenous peoples.

What We Heard

This section reflects the compelling stories, comments, and feedback shared by housing providers during interviews. These stories have been organized into 4 focus areas:

1. Heat impacts & intersectional barriers
2. Communications & education
3. Infrastructure & housing conditions
4. Community support & partnerships

Each focus area sheds light on a different aspect of lived experiences, challenges, success stories, and suggestions for improvement shared by Indigenous housing providers. These focus areas were designed so that the reader can better engage with these stories and find space to bear witness to the voices and experiences of those who are on the frontlines of climate emergencies and may face greater barriers to responding to extreme heat events.

Heat impacts & intersectional barriers

A complex interconnected set of barriers faced by Indigenous peoples increases their vulnerability to extreme heat. Housing providers reported having to deal with the compounding effects of the extreme heat, wildfires, smoke, and deteriorating health conditions among their tenants.

Health impacts from heat

All Indigenous housing providers who participated in this study indicated that the vulnerable tenants residing in their buildings experienced negative health impacts during the heat dome of 2021. Three of these housing providers also highlighted that some more vulnerable tenants such as Elders who had mobility issues or found it difficult to leave their units experienced significant mental health impacts during the extreme heat event.

Pre-existing health conditions perpetuated heat-related health issues and housing providers observed many tenants with pre-existing health conditions struggling with the extreme heat. A few housing providers reported tenant hospitalizations during the heat dome that they suspected were due to pre-existing chronic illnesses. While housing providers were mostly aware of the risks of extreme heat to their tenants, they could not confirm whether these hospitalizations were directly related to the heat dome. It is important for tenants, housing providers, and the housing staff to know the warning signs of heat-related illness and how pre-existing conditions tend to exacerbate heat-related health impacts.

It is important to note that while direct health impacts can have dire consequences for community members, temperature increases, and extreme heat events also have significant negative impacts on the land, water, and ecosystems. The harsh conditions during extreme climate events can make natural ecosystems uninhabitable for animals and plant life and can jeopardize food security, cultural practices, sacred spaces, and access to traditional medicine (Yumagulova et al., 2023).

Who is most vulnerable?

Housing providers reported having long-lasting deep relationships with their tenants. While they all indicated that they knew which tenants were more vulnerable to extreme heat, some participants were not able to clearly articulate which groups were being prioritized and why. One housing provider suggested that deciding who should receive air conditioner units or emergency kits was extremely difficult since they had limited supplies and were hoping to help all community members.

It was challenging to decide who gets to receive the emergency heat kits and the industrial fans that we had bought. Because while we wanted everybody to get what they needed, we only had so many units to distribute.
(anonymous member, Wilma's Transition Society)

Most housing providers prioritized the Elders and families with young children. Some participants indicated that tenants with pre-existing health conditions were also a high priority for receiving air conditioner units and emergency kits.

While each community is different with members that have unique needs and priorities, identifying vulnerable populations in advance and having a clear understanding of why targeted strategies are required to keep equity-deserving groups safe, can significantly improve future response plans to extreme heat events and climate emergencies.

Cascading crisis

Many Indigenous housing providers reported dealing with the heat dome in parallel with wildfires, poor air quality, or smoke during summer months. These cascading challenges can be extremely detrimental to their mental and physical health. Many Indigenous communities had to prepare for evacuation, lost their homes, or had loved ones deeply impacted by the wildfires.

Our neighbors down the canyon lost their entire town. Lytton First Nations and the town of Lytton were completely annihilated because of the wildfire.
(anonymous member, Stó:lō Service Agency (SSA))

What We Heard

One housing provider located in the Fraser Valley indicated that communities not only needed air conditioners during the heat dome, but they also were in dire need of HEPA filters in homes to make indoor environments safe for households.

Capacity & resources

Most housing providers reported feeling overwhelmed during the extreme heat event. Since societies already deal with limited capacity, responding to the heat dome was a strain on their staff and resources. Many shared the need for dedicated new team members who have the expertise and capacity to strategize and plan for climate emergencies. It is a well-known fact that hiring and retaining qualified staff remains a major challenge for Indigenous housing providers. Since most tenants that Indigenous housing providers serve are among equity-deserving populations, they have specialized needs and priorities. Therefore, traditional social housing programs cannot adequately accommodate them, and housing managers must seek staff members who have the right training, values, capacity, and experience to attend to the complex needs of these tenants (Cappe, 2021). Housing providers also shared frustration with limited funding available for the recruitment and hiring of new staff members to increase their capacity. With the impacts of climate change intensifying extreme heat events and other climate emergencies, housing providers rightfully expressed the need for more funding sources to increase their capacity to better strategize and respond to these emergencies.

10 out of the 16 housing providers interviewed for this study were able to participate in the BC Hydro funded AHMA-led program that provided free air conditioners to non-profit housing providers. They all indicated that offering a similar program to Indigenous households in the future would be highly beneficial. It should be noted that this unique program was first delivered in 2023 and is different from the provincially funded program, known as the Energy Conservation Assistance Program (ECAP), delivered by BC Hydro and contractors. The frustrations with the application and approval process shared by many participants were likely directed at the ECAP program that requires the direct participation of tenants and is considered high barrier in comparison to the much simpler and accessible 2023 BC Hydro funded program. Since the ECAP program is ongoing, a few housing providers suggested that potentially AHMA could fill in the role of applying for and receiving the air conditioner units on behalf of housing organizations and distributing them to the societies. The staff at AHMA indicated that they were closely involved in the BC Hydro funded program and worked as intermediary between the utility and the housing providers. But they did not have the financial resources to purchase the large set of air conditioners upfront.

An innovative housing provider decided to use existing meal delivery routes and staff to distribute fans to vulnerable groups. This reduced the resources and time required to distribute the fans.

While this research highlights the limited capacity within Indigenous housing societies, it is crucial to recognize, uplift, and honor the passionate and tireless individuals operating and managing housing societies across BC. From the maintenance staff to directors, housing providers dedicate an immense amount of energy and time to establishing a sense of community for their tenants, maintaining, and building not just infrastructure and services but also a place for their tenants to call home.

Who is most vulnerable?

Effective communication is key prior to and during an extreme heat event to empower communities to build capacity and better prepare to respond to the emergency. Successful communication campaigns should include the following:

- Provide accessible and clear messaging on heat-related risks and raise awareness
- Guide communities towards finding warning systems that alert the public regarding extreme heat events or act as the warning system
- Provide tools to communities and tenants to establish and improve social networks to reduce social isolation and develop community support plans
- Develop and distribute targeted information packages containing heat-related health risks to vulnerable tenants based on their unique needs
- Establish and maintain a trusted and safe communication channel for tenants to share their concerns and needs

The participants interviewed for this study mainly used word of mouth, mass emailing, leaflets, posters, in-person check-ins, and social media to communicate with their tenants regarding the heat dome. Most housing providers also have an outreach office or a tenant relations officer that directly communicates with community members and tenants. Some suggested that the communication process from external sources such as AHMA, the municipality, health authorities, and the province needs to be streamlined so that the same information is not shared multiple times by different entities. It was also made clear that a comprehensive but condensed, accessible, and relevant information package on preparing for and responding to extreme heat events either designed by AHMA or another external entity would be helpful for housing providers. Each community has unique priorities and needs and any external entity distributing information packages should design them based on the specific regional circumstances and needs of the housing provider. The interviewees also reiterated that multiple forms of communication are required to reach different demographics: Elders are more comfortable with face-to-face interactions while the youth are more likely to find information on social media or via email.

A housing provider in Metro Vancouver indicated that partnerships with local organizations and agencies serving vulnerable populations were crucial for their outreach efforts. They were able to reach more Elders, young families, and individuals dealing with chronic illnesses who were in immediate need of cooling equipment.

What We Heard

We should create a regional taskforce so that we are working together rather than each community dealing with the problem separately. (anonymous member, Wilma's Transition Society)

All housing providers interviewed have a trusting and close relationship with their tenants. Housing providers reported having transparent and safe communications with their tenants where they could easily share their needs during the extreme heat event and the housing organization responded by either meeting their needs or directing them to the appropriate resources.

The forms and paperwork to participate in and benefit from the ECAP program were cumbersome and inaccessible for many tenants. Housing providers reported that while their tenants are very resourceful and knew about the program in advance, it was often difficult for them to fill out the program form, they had to ask for approval from multiple levels of the housing organization, and after submission, prepare for a visit from the BC Hydro's inspectors. Housing providers shared concerns regarding this amount of bureaucracy and suggested that the program coordinators streamline the process so that tenants can easily participate in the future. Previous studies have confirmed that due to social stigma, distrust, historical trauma, or apprehension, many vulnerable populations may be reluctant or uncomfortable to provide sensitive or personal information to service providers (Yumagulova et al., 2022).

Tenants feel overwhelmed by some of this paperwork and shy away from doing it. And we don't have the capacity to sit down with them and fill out the application. (anonymous member, Mamele'awt Qweesome Housing Society)

Considering these challenges, adopting a trauma-informed approach to extreme heat planning becomes crucial to ensure that Elders and tenants struggling with mobility issues, substance use, mental health concerns, or chronic health issues have the right resources to stay safe and cooled in their own homes.

Infrastructure & housing conditions

Building more-energy efficient homes that have better insulation and protect households against extreme heat and climate emergencies is a priority for all housing providers. They all indicated that while they are committed to upgrading their portfolio to more energy-efficient systems and improving housing conditions, they face many challenges on the way.

Increased pressure on the grid and power lines to provide electricity to the ever-growing number of heat pumps and other low-emission heating and cooling systems is a major challenge that needs to be addressed.

I, myself, don't have central air so I have portable air conditioners. The power to my house was being zapped, probably because of use of air conditioners. We also had 2 or 3 community-wide power outages; they were during the evening but what if they had happened during the day. (anonymous member, Stó:lō Service Agency (SSA))

Housing quality & access

Perpetual systemic underfunding of Indigenous housing has led to poorly built, low-quality, and inefficient homes that are not built for the local climate and are usually thermally uncomfortable for households. A housing provider in Northern BC indicated that with many Indigenous houses aging rapidly, poor insulation, mold, and high heating, and cooling costs are becoming urgent issues for many households.

Energy efficiency of our buildings is a concern. Some older buildings have asbestos (blown-in cellulose insulation), it settles over time, creates condensation that causes it to settle even more. So, the top 2-3 feet of most exterior walls do not have any insulation in them at all, which leads to mold issues. It is an ongoing concern. (anonymous member, Prince George Native Friendship Centre)

What We Heard

One housing provider located in the Fraser Valley Region indicated that the electrical capacity of older buildings is a major barrier to building upgrade plans. While conventional funding streams may cover the planned retrofits, the addition of upgrading the electrical infrastructure of the older assets can double or triple the cost of the project. The participant shared that funders may be reluctant to provide this type of investment for older assets and this can prevent housing providers from pursuing upgrade projects for older buildings.

Our newer buildings already have the structure built in but for the older buildings, we would have to upgrade the whole electrical infrastructure and that could double or triple the cost of the upgrade.
(anonymous member, Mamele'awt Qweesome Housing Society)

Housing providers expressed concern for community members who were insecurely housed or without homes. They reported that while they may not have been directly responsible for supporting the unhoused or insecurely housed community members, they still supported them by allowing them to use cooled facilities and distributing water, cooling kits, and information packages to those forced to sleep outside.

Servicing homeless people was a challenge, folks living in parks and on the streets. They desperately needed a place that they would feel welcomed to stay cool.
(anonymous member, Vancouver Aboriginal Friendship Centre Society)

Almost all housing providers indicated that more funds are required to improve and maintain the condition of units and buildings. A few housing providers also highlighted that existing contracts and relationships with third parties (such as BC Housing) strip them of their agency to move capital projects forward.

Retrofits and upgrades [to improve building conditions] have been on our list for years. We did some retrofit projects but then it stopped abruptly. We keep getting told that there is no funding. (anonymous member, Dakelh & Quesnel Community Housing Society)

[AHMA] should get more political leverage and increase awareness, engaging with authorities. (anonymous member, Prince George Native Friendship Centre)

Upfront costs of deep retrofits and upgraded cooling and heating systems were not the only concern for housing providers. One of our participants from inland BC indicated that hiring and securing contractors to install and maintain upgraded cooling and heating systems such as heat pumps can be challenging and expensive for their region. This can be a significant barrier for housing providers located far from major metropolitan areas to commit to upgraded and cleaner energy systems.

There is much debate around the sustainability and reliability of heat pumps in colder climates which is beyond the scope of this research study. However, the stories shared by some housing providers regarding the unreliability of heat pump systems below certain temperatures point to the need for holistic and flexible programs and policies advocating for low-emission energy systems. While the transition to cleaner cooling and heating systems is crucial to reduce GHG emissions, housing providers need to ensure their tenants have access to reliable, affordable, and accessible heating and cooling systems.

Our two heat pumps failed at -20 Celsius so we needed a backup system. AHMA needs to look at these challenges and pass on this information to BC housing. (anonymous member, Vernon Native Housing Society, Okanagan Valley)

What We Heard

Community supports & Partnerships Access to cooling

Housing providers reported that traditionally, natural green spaces such as the forest canopy and bodies of water such as lakes offered an escape from climate emergencies such as extreme heat. But with many Urban Indigenous housing infrastructures located at a distance from such ecosystems, current extreme heat response plans require more innovative protective solutions specific to the realities of each community and their vulnerable members. It was heartwarming to hear that most housing providers had close relationships with their tenants and provided enhanced wellness checks for their Elders and vulnerable members.

The housing providers that knew about BC Hydro's air conditioner offer for non-profit housing were able to provide their tenants with these units during the hotter months of summer. They reported that this was perceived as a blessing by many tenants since many housing units were unbearably hot during the extreme heat event and the air conditioners provided much-needed relief. However, a few of the housing providers heard concerns about the higher costs associated with running air conditioners during the summer months. Many tenants living on fixed or low incomes grapple with a higher energy burden and while the summer months can be a brief relief from high energy expenses, the addition of the cost of operating an air conditioner is not an accessible or affordable option for many. One housing provider located in the Central Interior of BC indicated that there are no programs in their region supporting households grappling with a high energy burden.

We tell tenants that they need to prepare for higher electrical bills during the summer. That can be a strain especially for our tenants that are on a [fixed income] and can afford only so much. (anonymous member, Dakelh & Quesnel Community Housing Society)

AHMA could lobby BC Hydro and various municipalities to think about barriers, how we can accommodate folks and what the impending costs are for air conditioner units. (anonymous member, Vancouver Aboriginal Friendship Centre Society)

Almost all housing providers confirmed that their buildings have cooled common areas that tenants can easily access and use during heat events. But a counternarrative was also offered by some housing providers regarding cooled spaces: different tenants have different needs and thermal comfort levels. One housing provider in the lower mainland indicated that only 5 out of the 15 Elders residing in their elder's lodge used their personal air conditioners in their units. Other tenants in apartment buildings reported that they were comfortable enough with hallway cooling and did not use their personal air conditioners that often during the summer months. However, our interview participant highlighted the importance of providing the option of having access to cooling to their tenants.

**They had the ability to cool, so they had the option.
(anonymous member, Stó:lō Service Agency (SSA))**

One housing provider located in the Fraser Valley Region indicated that while receiving the air conditioner units from BC Hydro was very helpful for tenants, those households living in single-family dwellings were not able to cool down all rooms with just one unit installed in one room. The participant also highlighted that while they were able to provide their apartment tenants with air conditioners, households in single-family dwellings are usually responsible for their own cooling systems. This points to a gap in the program being too focused on providing air conditioner units for apartment units while leaving households living in single-family dwellings to their own devices.

Our single-family homes are basically on their own. A couple of the tenants have contacted us to ask for air conditioners, but those units are only meant for one bedroom. So, you would have one cooled spot, it is not going to cool the whole house down. (anonymous member, Mamele'awt Qweesome Housing Society)

There are financial incentive programs available for central and mini-split heat pumps, but they typically do not cover a significant portion of the upfront costs. An upcoming Fortis BC hybrid gas furnace/electric heat pump incentive program may be more accessible to single-family dwellings heated with natural gas. While currently there are limited incentive programs available for a variety of heat pumps, AHMA shares information on these funding programs in newsletters and the annual funding guide distributed to members.

What We Heard

One interview participant from the Fraser Valley Region also highlighted the concerns with installing air conditioner units in townhouses. Many of these households must choose window air conditioners and the installation of these units can result in legal challenges for the tenants. One housing provider in Metro Vancouver also indicated that some existing housing agencies do not allow the installation of window air conditioners for their residents, so they were not able to provide enough air conditioner units to people in need.

A few housing providers had innovative solutions to support their tenants. They reported preparing cooling kits that included drinking water bottles, cooling packs, sunblock, thermometers, electrolytes, and spray bottles for their tenants as soon as the news of the heat dome reached their region. They took the initiative to distribute these kits to their tenants and vulnerable populations within the community. One housing provider located in Metro Vancouver suggested that they were not able to receive any financial support for these cooling kits since available funding streams were only allocated to seniors and they were determined to serve all community members.

Transportation & mobility

Inadequate and unreliable transportation can increase heat exposure for vulnerable populations without cooling in their homes (Yin et al., 2021). Being extra vigilant about this challenge, one housing provider reported preparing vehicles for Elders and people with mobility issues to transport them to a cooled safer location if necessary. As one of the housing providers in the Lower Mainland attested to, relying on public transportation to a local cooling centre is not always an option since public transportation workers were on strike during the summer. So, while being informed of local cooling centres is important for housing providers, collaborating with the local government and other local organizations to have access to a mobile cooling centre would be highly beneficial (Yumagulova et al., 2022). Much like providing a shared cooled space for tenants, bringing a mobile cooling centre (an RV or a bus could be used as a mobile cooling centre) to the vulnerable groups may be more effective than trying to organize and arrange for the transportation of a large group to a centralized cooling centre. However, the majority of housing providers were not too concerned about transportation since their priority was to help their tenants stay cooled and safe in their own homes. In general, cooling centres were not identified as the first nor best option for housing providers to support their tenants. Almost all participants reported that they do not have detailed information on their tenants' use of cooling centres during the heat dome.

**For our community, it is not about having cooling centres but rather how to get to them!
(anonymous member, Wilma's Transition House)**



A path forward

In this research study, we bear witness to the lived experiences and expertise of Indigenous housing providers across BC during extreme heat events and climate emergencies. We heard many stories of community strength and care, resilience, and dedication from housing providers working tirelessly to meet their tenants' needs to ensure they were safe and comfortable during the heat dome of 2021. Interview participants shared different and similar challenges that they faced prior to and during the extreme heat event and made suggestions for internal and external improvements to build better heat response plans for each society.

Our research study limitations include time constraints to reach all 43 Indigenous housing providers, scope constraints to hear directly from tenants, and budget constraints to conduct in-person interviews. More research is invited to directly engage with tenants and potentially open space for their active participation in designing future heat response plans.

Embracing community

Each community has a unique experience with the impacts of climate change. Rural and urban communities experience extreme heat events differently: rural communities that may be located far from larger cities may struggle with access to cooling centres, emergency services, or medical facilities. Meanwhile, urban communities, while more equipped with cooled facilities and easier transportation, may suffer from overwhelming demand for services and heat islands (EPA, 2023). These differences and unique experiences warrant a targeted regional approach to extreme heat response planning.

While individual socioeconomic and health conditions can make a population vulnerable to extreme heat, our research study offers a different narrative: the values and essence upon which Indigenous housing has been built play a key role in shaping the lived experiences of Indigenous tenants. We heard that the safety, health, and dignity of the Elders, the youth, the chronically ill, the differently abled, and those struggling with mental health issues were a priority and consequently, the housing providers and community members came together to ensure they were protected. This kinship and care-based system unlocked the collective strength and resilience within these communities to face the extreme heat together and prevail.

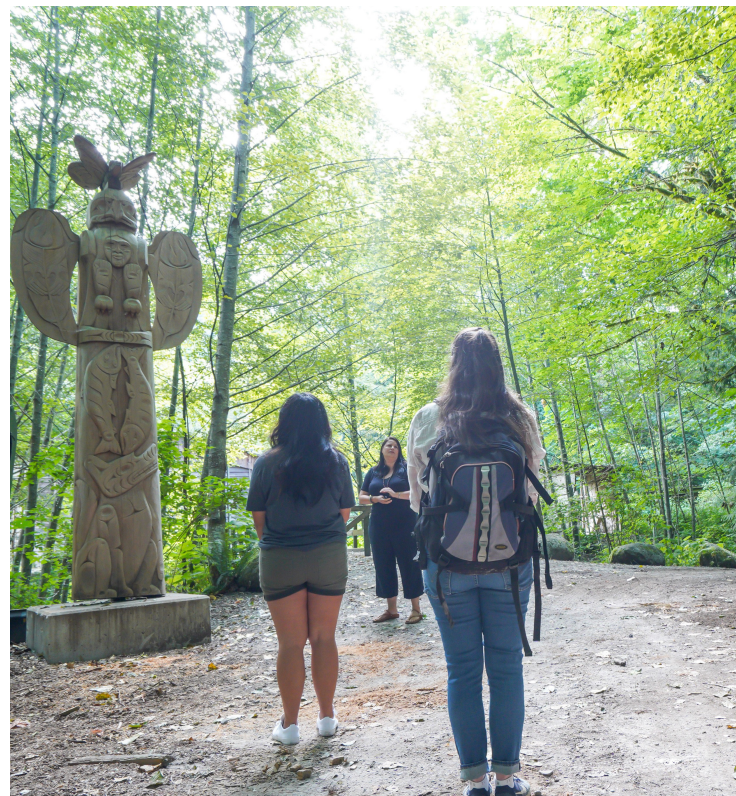
The lands, waters, and ecosystems

Climate change and extreme heat events drastically change the lands, water systems, and ecosystems that communities and our non-human kin rely on. These changes can result in devastating disruptions in the traditional food systems, cultural practices, and quality of life that can have dire consequences for Indigenous communities. Nurturing existing ecosystems and restoring cultures of living in harmony with the natural world are vital to Indigenous communities' well-being.

Centering Indigenous rights, knowledge systems & ways of being

Extreme heat response plans should take multiple crises into account: extreme heat is usually not experienced in isolation with many community members reporting dealing with the heat dome in parallel with wildfires or other challenges. An effective heat response strategy must be holistic, resilient to uncertainty, and contain a contingency plan. It is important to shift away from siloed emergency planning and recognize the complexities tied to the impacts of climate change.

Time and effort should be invested in strengthening and nurturing existing Indigenous institutions and programs. It is paramount for decision-makers to center and uplift Indigenous rights, culture, knowledge, and ways of life in climate change and extreme heat planning.



A path forward

Beyond the community

Policies and public emergency response planning tend to focus on past events. Housing providers indicated that while initiatives such as BC Hydro's non-profit air conditioner program were very helpful, decision-makers including utilities, municipalities, and other governmental institutions should initiate emergency planning efforts ahead of time and in close collaboration with housing providers.

Urban Indigenous populations face complex interconnected challenges rooted in historical and systemic colonial processes that lie far beyond the territories and boundaries in which these communities live and play. While Indigenous communities and housing providers have shown an immense amount of strength and innovation in creating community-level solutions, local, provincial, and federal governments should take more meaningful steps to address the long-term compounding impacts of these complex challenges.

In addition to many housing providers welcoming the creation of regional task forces focused on extreme heat planning, the following suggestions also emerged from the conversations:

- Targeted and specific funding streams for Urban Indigenous housing organizations to recruit and hire dedicated staff members for climate emergency and extreme heat planning.
- One size does NOT fit all: policies, programs, and emergency planning efforts should not be done in silos ignoring the distinct strengths, vulnerabilities, and needs of Indigenous communities. Decision-makers should adopt a place-based and targeted approach to program design and policy-making that recognizes the specific needs and priorities of each community.
- Create funding streams, programs, and policies that directly support Indigenous-led climate mitigation and adaptation strategies.
- More space for housing providers to build climate-resilient homes: while transitioning to clean energy systems and passive design were a priority for housing providers, having alternative (usually fossil fuel-based) options for heating and cooling is crucial to ensure tenants are safe and comfortable during different seasons.

Housing providers had different suggestions for AHMA to better support them in future climate emergency and extreme heat planning:

- AHMA should advocate for streamlining of different funding incentives and programs such as BC Hydro's air conditioners for non-profit housing to reduce the time and resource strain on housing providers.
- AHMA plays a key role in supporting housing providers to increase their capacity to plan for and implement retrofit projects.
- Like retrofit projects, AHMA can support housing providers by identifying, sharing, and applying for financial incentives for extreme heat planning and climate emergency preparedness.
- Many housing providers indicated that a comprehensive but condensed, accessible, and relevant information package on preparing and responding to extreme heat events either designed by AHMA or another external entity would be very helpful. Each community has unique priorities and needs, and AHMA can lead the design of information packages that are based on specific regional circumstances and needs of the housing provider.
- AHMA can facilitate conversations and meetings among different societies to build stronger relationships and open space for housing providers to partner with each other and develop stronger response plans to extreme heat.
- AHMA should collaborate with regional and provincial institutions such as the First Nations Health Authority and the First Nation's Emergency Services Society of British Columbia (FNESS) to streamline and simplify communications regarding climate emergencies and extreme heat planning.
- AHMA can play a more active role in advocating for political and regulatory reform on behalf of housing providers.

This research project provides a glimpse into the stories and lived experiences of Indigenous households across BC. We heard from housing providers that climate emergencies and extreme heat events are here to stay, and we need to better prepare and learn to adapt. The challenges and barriers faced by Indigenous households are interconnected and complex and require a holistic and systemic perspective on housing, ecosystems, personal vulnerabilities and strengths, and community-level structures. To better respond to future extreme heat events, we need to embrace both short-term and long-term solutions. While providing air conditioners to vulnerable Indigenous households is encouraged, we need to think about not burdening these households with higher operational costs. As we praise community-level response to extreme heat events, we need to advocate for affordable housing retrofits to build healthier climate-resilient homes for Indigenous households. Above all, we must center Indigenous rights and sovereignty in our quest to build resilient healthy communities.

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