

The background features a stylized map of Quesnel, British Columbia, Canada. The map is rendered in dark teal and white, with a prominent teal river winding through it. Overlaid on the map are several large, semi-transparent circles in shades of orange and dark teal. The title 'HEAT ALERT RESPONSE PLAN' is centered in the upper half of the image in a bold, dark teal, serif font.

HEAT ALERT RESPONSE PLAN

Prepared by

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Prepared for the City of

Quesnel

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Executive Summary

Context & Purpose

A rapidly changing climate is resulting in more frequent and intense heat events in BC and the Cariboo region. These intense heat events are projected to increase significantly, increasing the risk of heat-related illness and death. The Cariboo region, including Quesnel, has already experienced extreme heat events in 2021, with significant economic and social costs.

In reaction to the unprecedented heat events in 2021, this Heat Response Plan has been developed to provide guidance to the community during extreme heat events. The plan considers the unique rural challenges and vulnerabilities faced by Quesnel and incorporates best practices for heat response. It was collaboratively developed with input from various stakeholders and draws insights from neighboring communities' heat response plans.

The Plan aims to guide the community to address risk to residents by minimizing the negative impacts of extreme heat, providing clear guidance to stakeholders, and fostering transparency and trust. Although the Plan is primarily meant to guide municipal government, it is also intended to be accessible to residents who want to learn more about heat response in Quesnel.

The objectives of the Heat Response Plan for Quesnel include:

- Providing tools for educating the community on heat risks and mitigation strategies
- Identifying and supporting heat-vulnerable populations and developing a strategy for providing targeted support
- Providing a step-by-step guide for responding to extreme heat events
- Establishing criteria and triggers for heat events
- Implementing an evaluation and improvement strategy

Extreme Heat Response

To effectively respond to extreme heat events, response strategies must consider the vulnerability of specific groups to heat and any associated health impacts. Heat-vulnerable groups, such as older adults, infants, pregnant women, those with underlying health conditions, low-income individuals, and those with poor housing, are generally at higher risk of heat-related illness and death. Targeted interventions and support systems are essential to prevent heat-related deaths among these populations. Exposure to extreme heat directly leads to heat-related illnesses, cardiovascular and respiratory risks, and adverse effects on maternal, fetal, and child health. Indirect impacts include sleep loss, accidents, violence, mental health issues, and increased healthcare resource utilization. Factors like duration of hot days, seasonal timing, community adaptation, and response capacity affect heat impacts.

To mitigate heat-related harms, the plan focuses on the following:

- Reducing exposure to heat stress
- Building community capacity
- Increasing the availability of cooling centres
- Developing and enhancing engagement and communications channels
- Addressing the needs of heat-vulnerable populations
- Integrating heat response planning with existing emergency response planning.

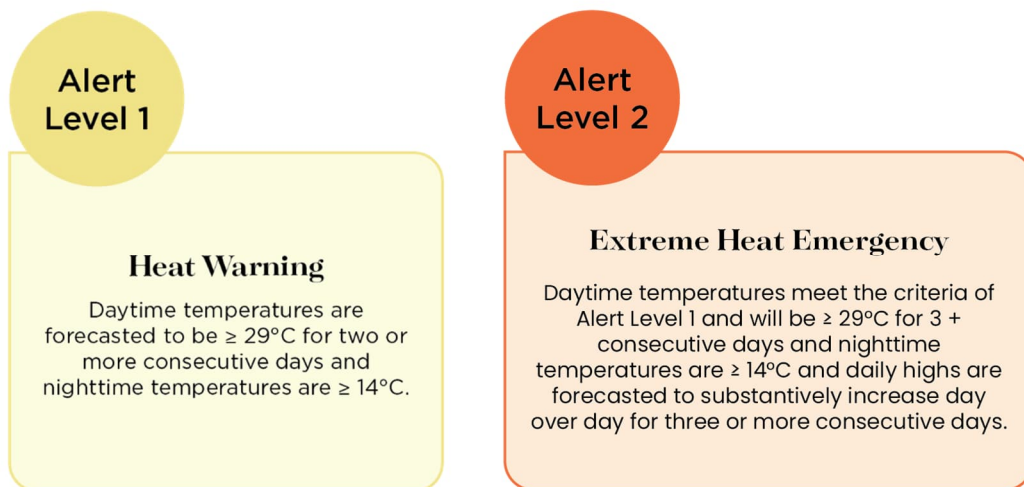
Ongoing collaboration between the City of Quesnel and community stakeholders through the establishment of an Extreme Heat Response Committee is central to the effectiveness of this heat response plan. Through these collaborations, the City and stakeholders can effectively share resources and connect with heat-vulnerable groups. For a full list of recommended community partners, see [Stakeholder & Community Engagement](#).

All stakeholders involved in heat planning and implementation will fulfill specific roles (see [Stakeholder Roles](#)) and responsibilities. Specific stakeholder responsibilities will need to be further defined during the pre-season preparedness activities using the Stakeholder Responsibility Form (see [Stakeholder Responsibilities](#)).

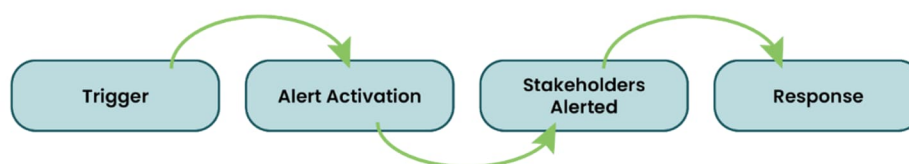
As a part of pre-season preparedness, the Extreme Heat Response Committee will be convened annually in the spring to prepare for the upcoming heat season. During this time, the committee will discuss responsibilities, communications, and community response strategies.

Within this Plan, a comprehensive communications plan ensures residents are aware of heat risks and provides them with information and resources. Key communications messages are tailored based on the severity of the heat event, with pre-season education, heat advisory reminders, and urgent messaging during heat warnings and emergencies. The full communications package can be found in the [Communications Plan](#).

The warns residents of dangerous heat conditions and mobilizes stakeholders to implement the plan. This System follows the BC Heat Alert Response System framework while taking a made for Quesnel approach, and involves, Heat Warning Alerts (Alert 1), and Extreme Heat Emergency Alerts (Alert 2) (see [Alert Types](#)). Extreme heat alert types in Quesnel have been established based on the Environment and Climate Change Canada (ECCC) criteria for the Cariboo Region. There are two alert levels: Alert Level 1 signifies a Heat Warning, and Alert Level 2 indicates the community is entering an Extreme Heat Emergency. Both alerts come with specific criteria that trigger the alert.



When temperatures meet the alert level 1 or 2 criteria, an alert will be activated by ECCC and relayed to the City of Quesnel's Protective Services and on to communications personnel. The City's communications personnel will then alert stakeholders on the City of Quesnel's heat alert mailing list and all residents of the Warning or Emergency according to the alert protocol. Once alerts have gone out, there will be specific activities and actions for the City and community stakeholders/partners to implement. For a detailed description of activities and actions associated with the extreme heat alerts, see [Response Activities by Alert Type](#).



Long-Term Strategies

This Plan includes responses that have been developed in reaction to rising occurrences of extreme heat and the expectation that these extreme heat events will continue. However, this Plan also highlights some important long-term strategies related to adapting to a hotter Quesnel. Recommended long-term strategies include:



Developing climate change adaptation strategies for Quesnel.



Updating municipal emergency protocols to address the challenges posed by extreme heat events.



Installing public water fountains, misting stations, and spray parks.



Planting trees and increasing canopy coverage.



Initiating changes to the built environment to reduce heat (e.g., urban greening, reflective surfaces).



Ongoing monitoring and mapping of populations at high risk of heat impacts.



Setting up systems for people to self-register to receive updates on response measures and heat alerts.



Cultivating social connectedness across the community.

About the Plan

As a rural community in British Columbia's Cariboo Regional District, Quesnel faces unique challenges and vulnerabilities when temperatures rise. This comprehensive heat response plan aims to mitigate the health risks associated with extreme heat and provide guidance on how to effectively respond and support one another during these challenging times.

The development of this Plan and heat response planning in general is a direct response to the extreme heat events that occurred during the 2021 BC heat domes. These unprecedented heatwaves brought record-breaking temperatures and had severe impacts on public health, infrastructure, and the environment. 619 people in BC died directly from heat during this time¹, 23 of these deaths occurred within the Northern Health Region². In light of these events, this Heat Alert Response Plan has been developed to address the urgent need for an organized and comprehensive approach to mitigate the health risks associated with extreme heat in British Columbia.³

Purpose

The primary purpose of this Heat Response Plan is to:

- Present a tailor-made approach to protecting Quesnel residents in the face of extreme heat,
- To minimize the negative effects of high temperatures and heat events during warmer months,
- Provide stakeholders⁴ with clear direction on how to implement both targeted and dispersed heat response strategies that support community well-being during heat events, in particular those groups which are more susceptible to heat,
- Foster transparency and build trust with Quesnel residents by sharing information about the heat response approach, and to
- Empower individuals to take appropriate actions to protect themselves and their communities.

Objectives

The objectives presented below collectively aim to safeguard the community's well-being, reduce heat-related health risks, and enhance the community of Quesnel's resilience in the face of high temperatures and heat events.

- Education on health risks and mitigation strategies. Educate community members about the health risks associated with extreme heat and provide information on preventive measures.
- Identify heat-vulnerable populations and mitigation opportunities. Identify the groups within Quesnel who are most susceptible to heat-related harms and provide targeted strategies and resources to address their specific needs and vulnerabilities.
- Provide a step-by-step guide for responding to extreme heat events. Present a comprehensive heat alert response plan that outlines specific actions and responsibilities related to planning, implementation, and communication for various stakeholders before, during, and after heat events.
- Identify heat event criteria. Defining the criteria and thresholds that determine when a heat event is occurring in the community and the level of risk and response associated with each threshold.
- Establish a strategy for evaluation and improvement. Present mechanisms for ongoing evaluation of the heat response plan's effectiveness, including monitoring the implementation of the plan, tracking health outcomes during heat events, gathering feedback from stakeholders, and identifying areas for improvement.

1 The case for adapting to extreme heat: Costs of the 2021 B.C heat wave (climateinstitute.ca)

2 Extreme Heat Death Review Panel Report (gov.bc.ca)

3 Ibid.

4 Stakeholders refer to all those involved in Quesnel heat response planning, including local and regional government, community partners, and health authorities.

How the Plan was Developed

This Plan was developed using contemporary best practices for heat response but is designed to be flexible to future iterations which may include updated information such as changing community dynamics, continuously evolving heat-related research, climate projections, and health data.

This Plan was also developed collaboratively, involving the expertise and input of various stakeholders to ensure its effectiveness and relevance to the specific needs of Quesnel. Created in tandem with the 100 Mile House and Williams Lake Heat Response Plans, this Plan, while tailor made for Quesnel, takes learnings from these other two Cariboo communities as well.

The process followed to inform the Heat Response Plan included three phases:

Phase 1: Stakeholder Engagement and Background Review

This phase involved convening local stakeholders, gathering data, and research on best practices to build an understanding of the current risks, vulnerabilities, and approaches to heat response planning.

Phase 2: Community Engagement

Phase 2 involved engaging with the Quesnel community to identify key stakeholders, to assess the community's vulnerability to extreme heat, and to build an understanding of the local risks and assets to consider when planning for extreme heat events. Engagement activities conducted to inform this plan involved:

- Seeking community feedback regarding experiences during the 2021-2022 extreme heat events,
- Gathering input to understand the state of current assets, vulnerabilities, and risks to support planning for future extreme heat events,
- Identifying the best communication approaches and tactics in each community for the various populations, and
- Identifying priorities and next steps to prepare for extreme heat events in region.

Phase 3: Development of the Heat Response Plan

This phase involved reviewing all community engagement results, best practices, and reference documents, and drafting and finalizing the Heat Alert Response Plan with support from community stakeholders.

Best Practices

This Plan relies heavily on local context and community input and considers the unique characteristics and challenges faced by Quesnel. However, to ensure this plan is comprehensive, community input has been complemented with best practices and expert guidance, reflecting both the local context and broader knowledge sources. Sources of best practice used to inform this plan include:

- Guidance, resources, and best practices for emergency management and heat response planning from government agencies including the Ministry of Health, Emergency Management BC (EMBC), Northern Health, Interior Health, Health Canada, First Nations Health Authority (FNHA), Environment and Climate Change Canada (ECCC), and the BC Centre for Disease Control (BCCDC)
- Consultation with experts in the fields of public health, emergency management, and climate adaptation

Several key resources were used to inform this plan, including:

- *The BC Provincial Heat Alert and Response System (BC HARS)*, prepared by BC Ministry of Health, ECCC, and the BCCDC,
- *Heat Alert & Response Planning for Interior BC Communities: A Toolkit*, prepared by the Interior Health Authority,
- *Heat Alert and Response Systems to Protect Health: Best Practices Guidebook*, prepared by Health Canada,
- *BC Municipal Heat Response Planning in British Columbia, Canada*, prepared by the BCCDC, and the
- *Extreme heat webpage*, prepared and presented by Northern Health.

How to Use the Plan

This Plan has been developed for all Quesnel residents. While this Plan primarily acts as a guide for municipal government and their community partners with a role in implementing the Plan, it is also meant to be accessible to residents who wish to know more about Quesnel Heat Response.

This Plan provides basic educational information on health risks (see [What are the Health Impacts?](#)) and mitigation strategies (see [How can Impacts be Mitigated?](#)) and guides the reader to further sources for those seeking more in-depth knowledge (see [Links and contacts of additional resources](#) and [Additional Resources](#)). This Plan also recommends response strategies for extreme heat events and outlines [Stakeholder Roles](#) as well as key communications messages to relay to the community (see [Communications Plan](#)).

The defines what a heat event is, what thresholds need to be met to trigger certain alert types. This section also provides direction to community partners with a role in implementing the Response Plan, emphasizing what activities should be done, when they should be done, and who should do them.

This Plan will be used differently depending on who is using it. Local governments, health care providers, emergency services, and community service providers may all play a crucial role in coordinating and implementing the Heat Response Plan and will need to be highly familiar with all aspects of this Plan. These groups will need to collaborate on ensuring the Plan is up to date, activating the Plan, communicating heat alerts to the community, coordinating resources, and providing support to other stakeholders as needed.

This Heat Response Plan may also to be made available to residents as it is recommended that residents become familiar with the Plan and understand the recommended actions to take during heat events.

About Extreme Heat

The health impacts of extreme heat are an immediate concern as climate change currently contributes to more frequent and intense heat events in BC and in the Cariboo. By the 2050s, average annual temperatures are expected to increase between 2.1°C and 4.1°C from the 1961 to 1990 baseline.⁵ The frequency, duration, and severity of extreme heat events in BC are projected to increase as average annual temperatures continue to rise.⁶

Extreme heat events are predicted to occur every 3-10 years by 2050. Heat-related mortality will likely be higher than cold-related mortality.⁷ Projections to 2080 are even more extreme. [Table 1](#) below shows projections of changes to indicators of the heat-related impacts of climate change, based on high carbon scenarios forecast by the Pacific Climate Impacts Consortium.⁸

Table 1. Quesnel Temperature Change Projections, 1976 - 2080.

	Recent Past: (1976-2005)	Immediate Future (2021-2050)	Near Future (2051-2080)
Average (Mean) Summer Temperature (°C)	15.4	17.4	19.6
Number of very hot days >30°C	7.5	17.2	32.5
Number of Heat Waves	1.1	2.5	4.2
Average Length of Heat Waves (# days)	3.0	4.9	6.6
Hot Season: The number of days from the first day of the year with temperature max ≥ 30 °C to the last day with temperature max ≥ 30 °C.	34.7	62.4	86.5

**Projections are based on "High Carbon Scenarios" utilizing the RCP8.5 emissions scenario.⁹*

The Cariboo region is no exception. During the summers of 2021 and 2022, the community experienced a record-breaking extreme heat emergency that lasted for five days with temperatures reaching as high as 41.4°C (see [Figure 1](#)). According to a 2023 report developed by the Canadian Climate Institute, the 2021 heat wave is purported to be among the costliest disasters in the history of BC when accounting for both the economic and social costs.¹⁰

5 Data Sources and Methods | Climate Atlas of Canada; Climate data viewer (canada.ca)

6 Heat Alert & Response Planning for Southern Interior B.C. Communities: A Toolkit, June 2020 (interiorhealth.ca)

7 Ibid.

8 Pacific Climate Impacts Consortium Plan2Adapt (pacificclimate.org)

9 Ibid.

10 The case for adapting to extreme heat: Costs of the 2021 B.C. heat wave (climateinstitute.ca)

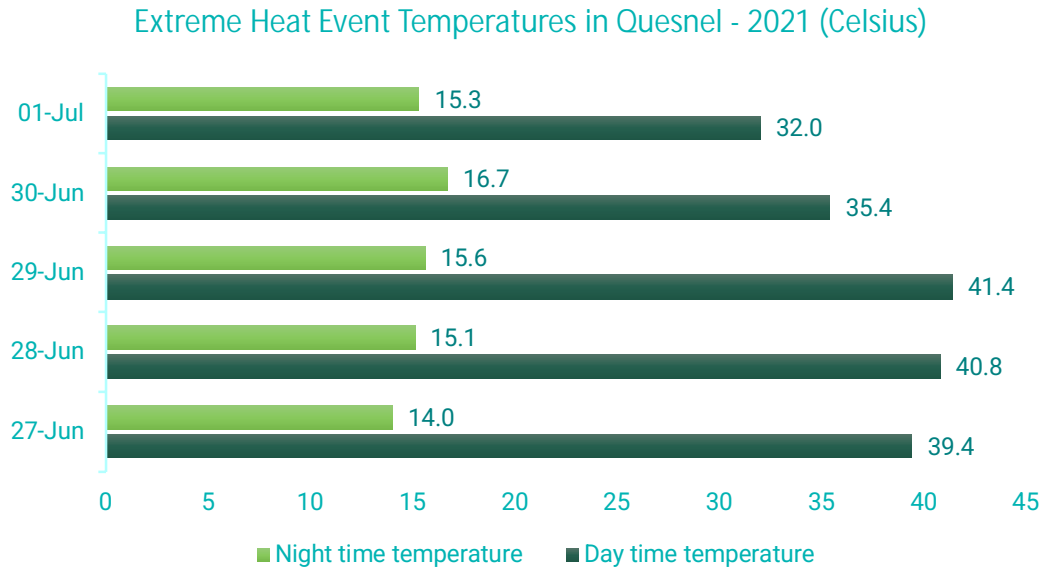


Figure 1. Extreme Heat Event Temperatures in Quesnel – 2021

Within Quesnel and the surrounding area there is great variability in how extreme temperatures can be and what their impact can be. Factors which influence the impact of heat include housing, tree canopy, proximity to services which offer a reprieve from heat, socio-economic factors such as income, and ability to seek out areas of higher elevation which are generally cooler. Detailed, reliable mapping is available from both Interior Health and the Université Laval to explore the unequal heat impacts on the residents of Quesnel. More detailed mapping has been developed by the Université of Laval department of geography, using data from Canada Mortgage and Housing Corporation (CMHC) and fine scale data from the Statistics Canada 2021 census.

A key indicator of heat impacts is the presence of urban heat islands which are the result of factors such as design and materials used in the built environment. Areas with urban heat island impacts experience higher temperatures, up to 15°C higher than what a vegetated area with high surface permeability would see. Typically, areas with higher urban heat island impacts have a higher proportion of paved areas, low permeability (so that heat cannot escape at night), dark surfaces such as roofing materials, higher vehicle traffic, and low tree canopy.

In a report recently released by the Canadian Climate Institute, researchers examined the social and economic costs of the 2021 heat wave in BC. Researchers examined the impact of urban greening on urban spaces in the Lower Mainland – a highly urbanized area greatly impacted by the effects of urban heat islands. This research showed that a drastic increase in urban greening (including tree canopy cover, green roofs, and light-reflecting surfaces) could decrease heat-related mortalities in the Lower Mainland by 12%. Further, this report found that long-term urban greening actions have the potential to be more effective than mechanical cooling in reducing mortality and hospitalizations.¹¹

The three maps below use the Université of Laval and CMHC mapping tool to gain an understanding of urban heat island effect, heat sensitivity, and vulnerability and exposure to extreme heat for Quesnel.¹²

¹¹ *The case for adapting to extreme heat: Costs of the 2021 B.C heat wave (climateinstitute.ca)*

¹² *Home - Vulnérabilité aux vagues de chaleur (ulaval.ca)*

Figure 2 for Quesnel shows the urban heat island effect for the area. The southwestern part of downtown has a very high degree of urban heat island effect, with up to a 15°C difference with baseline vegetated areas, as is indicated by the bright orange colour on the map. There are similar areas of intense urban heat island effect along the Cariboo Highway in the eastern part of town where there are large, paved retail areas and few trees. A significant contrast can be seen between these hot spots described and the forested area southeast of Johnston Avenue where temperatures are relatively stable with no variability.

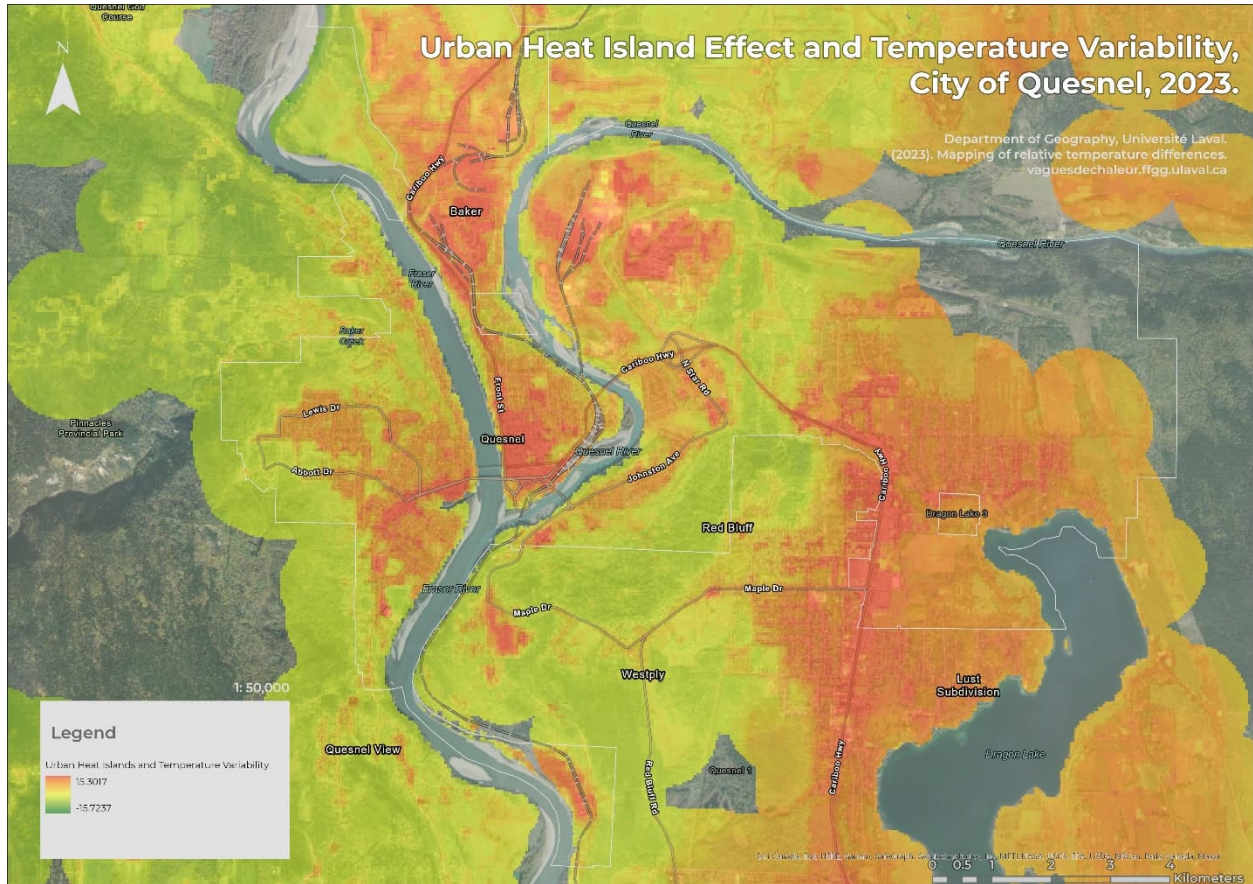


Figure 2. Urban Heat Islands and temperature variability, Quesnel

Heat can impact community members differently, depending on their income level, type and age of housing, their capacity to access cool areas, and their exposure depending on the urban heat island effect in their neighbourhood. The Université de Laval has used census and housing data as well as satellite images which indicate temperature, surface impermeability, and vegetation to map heat sensitive populations, as well as indicators of vulnerability and exposure. [Figure 3](#) below shows areas of the community where there are higher concentrations of people who are heat sensitive (in dark red), based on demographic and socio-economic data from the 2021 census.

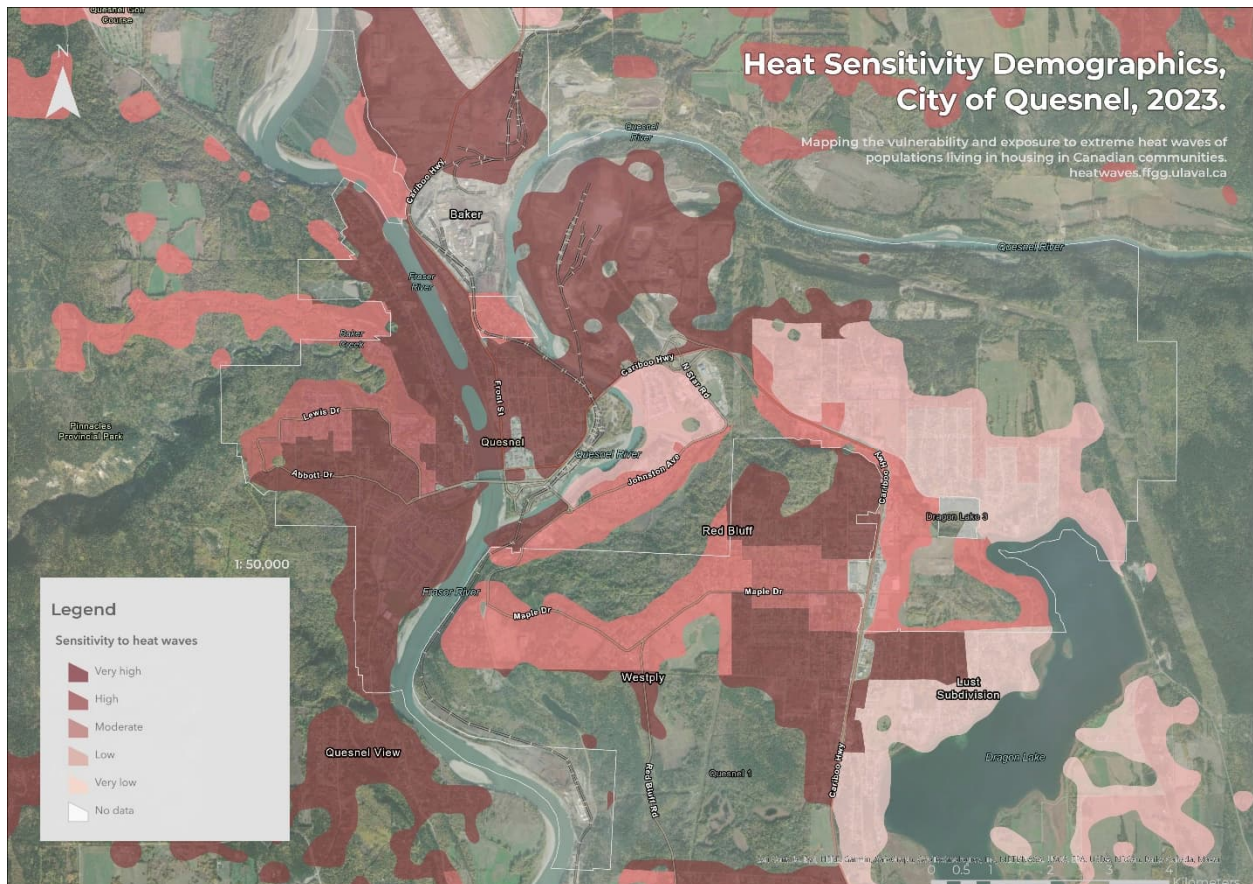


Figure 3. Heat Sensitive Demographics, Quesnel

Vulnerability to extreme heat refers to indices related to demographic and socio-economic variables combined with a coping capacity index considering indicators of proximity to places that proved shelter from heat. Figure 4 below, highlights that most Quesnel residential areas are highly vulnerable to extreme heat, as indicated by bright purple. Exposure is calculated based on data regarding temperature, ground cover/permeability, built environment, water proximity, altitude, and location. Only a few areas north of Dragon Lake show lowered vulnerability but high exposure, as indicated by the warm beige coloured area. A few areas of note with high vulnerability and moderate exposure include those areas in dark purple downtown and along the Cariboo Highway.

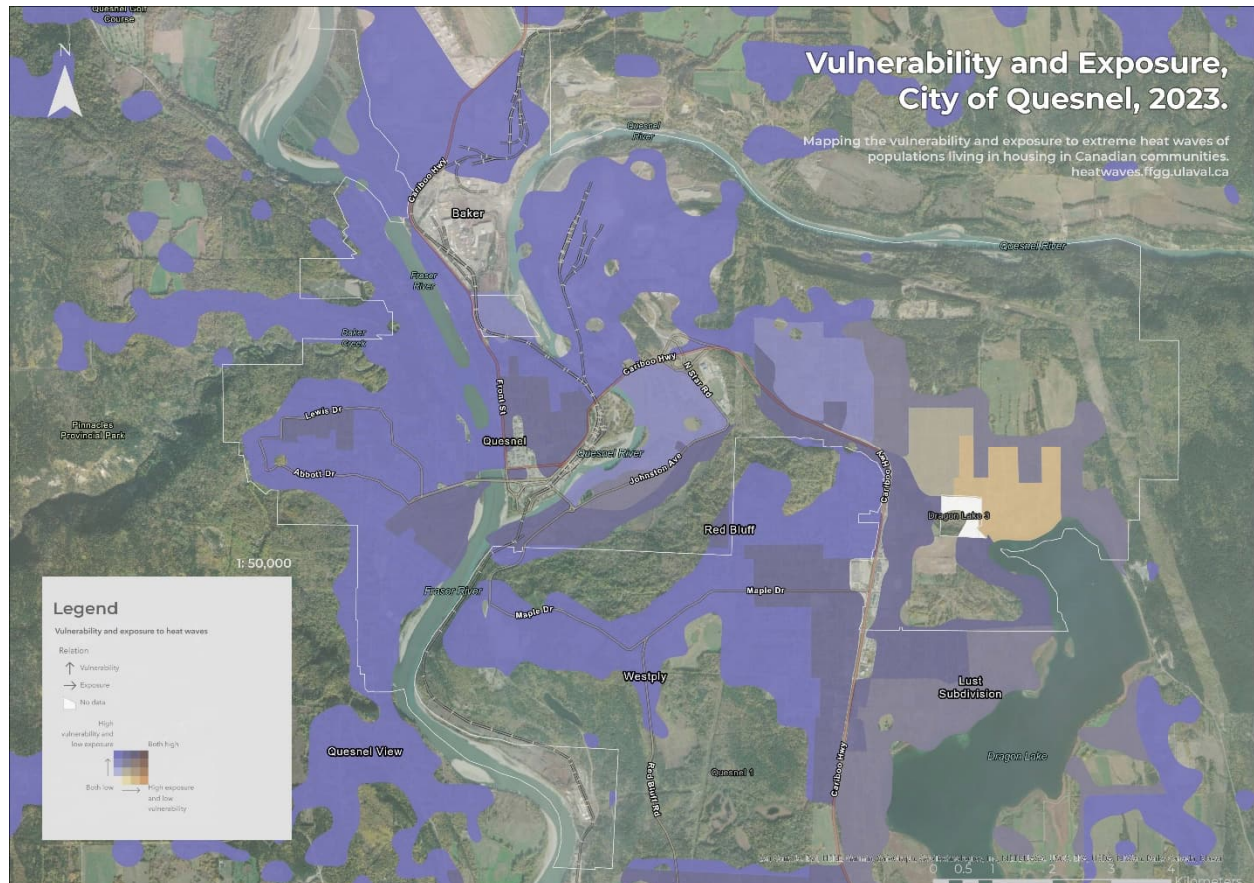


Figure 4. Vulnerability and Exposure, Quesnel

This mapping tool can quickly and easily identify areas which would benefit from more tree canopy and more surface permeability, particularly for populations which reside there due to economic factors or due to where services are located.

**Please note that there are some gaps in the data for Figures 1-3, represented by areas with no colour. These gaps are likely the result of locations within Quesnel without household data or without households as recorded in Statistics Canada census data.*

Who is Most Heat-Vulnerable?

Extreme Heat is the leading cause of weather-related mortality in Canada.¹³ There are several variables that impact health effects during heat events, including the number of days it is hot, when in the season the event occurs, how accustomed people of the area are to heat, and the ability of the community to respond. For example, the 2021 heat event was particularly high risk for health impacts because it was unseasonably early, and people weren't prepared.

Mortality from heat is usually greatest when indoor spaces are not cool enough to protect people from the effects of heat outside. In the 2021 heat dome, 98% of deaths occurred indoors.¹⁴ Indoor temperatures are affected by several variables, including building design and construction, orientation (e.g., south facing), structure (including ventilation, height, materials). In multi-story buildings, particularly those that are older with poor insulation, top floors can be considerably hotter than lower floors as heat infiltrates upward from lower floors as well as radiating through roofs.

Figure 5 shows the difference the use of air conditioning makes in a space.¹⁵ As outdoor temperatures rise in a heat event; indoor air-conditioned spaces maintain a stable temperature below outdoor temperature. Throughout a 24-hour period, non-air-conditioned spaces tend to rise and peak alongside outdoor temperatures (often reaching temperatures several degrees higher than outdoors). Indoor temperatures for spaces without air-conditioning will remain high after outdoor temperatures have decreased.

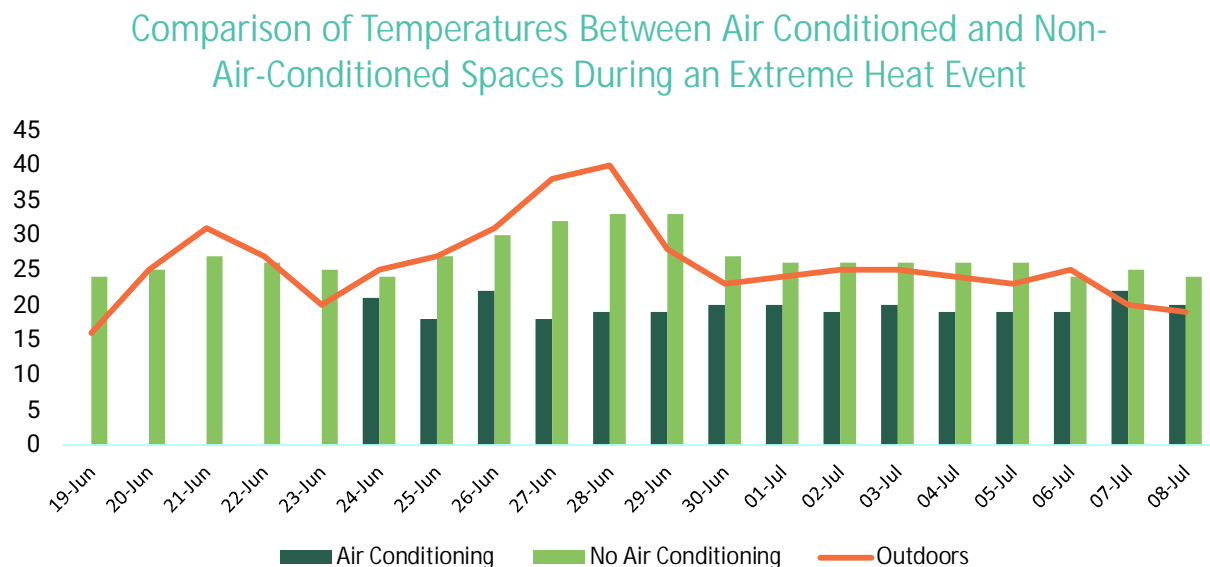


Figure 5. Comparison of temperature differences between air conditioned and non-air-conditioned spaces in an extreme heat event

¹³ Extreme Heat and Human Mortality: A Review of Heat-Related Deaths in BC in Summer 2021. Report of the Chief Coroner of BC. Extreme Heat Death Review Panel Report (gov.bc.ca)

¹⁴ Ibid.

¹⁵ Ibid.

While everyone is susceptible to the risks associated with extreme heat, certain groups are more vulnerable to heat than others.¹⁶ During the 2021 heat event in BC, more than half of those who died were people who lived alone.

Those most susceptible to heat-related health risks include:

- Older adults
- Infants and young children
- Pregnant women
- Individuals with underlying health conditions
- Individuals with substance use disorders
- Individuals with mental health disorders
- Those socially isolated
- Individuals with low income
- People in poor quality housing
- People living outdoors
- Individuals with low income

Heat-related deaths are preventable. Since some populations are more vulnerable to the health impacts of extreme heat events, targeted interventions and support systems are needed to address their specific vulnerabilities and ensure their well-being during extreme heat events.

What are the Health Impacts?

According to Interior Health, exposure to extreme heat can result in both direct and indirect impacts to health.¹⁷

The direct health impacts of extreme heat include:

- Heat-related illnesses such as dehydration, heat cramps, and heat stroke
- Accelerated death from heat from cardiovascular disease (e.g., heart attacks), respiratory disease (e.g., asthma attacks), or other chronic diseases (e.g., renal)
- Impacts to maternal, fetal, and child health, for example: sudden infant death syndrome, early delivery, or gestational diabetes

The indirect impacts of extreme heat include:

- Sleep loss, accidents (e.g., workplace accidents due to heat-exhaustion or -stroke), and violence
- Mental health impacts such as an increase in suicide, and an increase in admissions to hospital for mental health disorders
- Increased utilization of health care resources and services (e.g., emergency department visits, ambulance calls, telehealth calls, and visits to primary care practitioners).

¹⁶ Heat Alert & Response Planning for Southern Interior B.C. Communities: A Toolkit, June 2020 (interiorhealth.ca)

¹⁷ Ibid.

How can Impacts be Mitigated?

This Heat Response Plan is intended to contribute to improving health outcomes by implementing measures aimed at mitigating the negative health impacts associated with extreme heat. Some key areas where the City and community partners can make a significant impact include:

- As the municipal government is responsible for emergency management and response, the City can work with other organizations in the region to develop comprehensive emergency preparedness plans that incorporate and align with this and other local government Heat Response Plans.
- Encouraging community members to be proactive in preparing for heat. This includes learning about the health impacts of high heat¹⁸, adapting their homes to be less susceptible to heat¹⁹ (See [Resources for Extreme Heat Events in Quesnel](#)), making emergency plans for extreme heat events, and checking in on friends, family and neighbours who may be heat vulnerable. Resources to support individual community members preparedness are included in [Additional Resources](#).
- The City, community partners, and local health service providers can collaborate to facilitate the sharing of information, coordination of resources, and development of interventions targeting heat-vulnerable people to improve health outcomes during heatwaves. An example is supporting the creation of 'DIY Cool Kits' for those who are heat vulnerable.²⁰
- The City and Northern Health can collaboratively promote public health by implementing awareness campaigns and educational initiatives. These efforts can focus on heat-related illness prevention, the importance of staying hydrated, recognizing heat-related symptoms, and the availability of cooling spaces or resources during extreme heat events. Resources can be found in [Additional Resources](#).

By actively engaging in these areas, the City of Quesnel and community partners can play a vital role in improving health outcomes, promoting resilience, and ensuring the well-being of residents during extreme heat events.

18 National Collaborating Centre for Environmental Health, Health checks during extreme heat events (ncceh.ca)

19 Apartment condo heat protection (intactcentreclimateadaptation.ca); Home heat protection (intactcentreclimateadaptation.ca)

20 Cool kit: Build your own instructions (vancouver.ca)

Response Strategies

Risk of exposure to heat stress varies by community. The number of extreme heat days are expected to increase. In the 2050s in the Cariboo region, it is projected that there will be 2.5 times the number of warm summer days, and 6.5 times the number of extremely hot days.²¹ Based on this data, risk of exposure to heat stress is relatively high and any heat response actions should reflect the severity of risk.

Heat response strategies developed for this Plan take a contextual approach unique to Quesnel. The approach developed for this Plan is based on the suggestions and recommendations gathered during stakeholder engagement and during discussions with City of Quesnel staff. Although Quesnel falls within the Northern Health Authority Region, Quesnel's Plan is guided by the Interior Health Heat Alert & Response Planning Toolkit, as Northern Health does not currently have such a toolkit. Interior Health suggests that when approaching heat response strategies for rural communities, the following considerations should be made:²²

Build Community Capacity

Quesnel is a small community with limited municipal staff and many social service providers with strained resources. Stakeholders implied that Quesnel has the resources available within the community but that there needs to be a more organized, collaborative, and coordinated response to extreme heat events. Collaboration between community partners and City staff will be required, sharing the responsibilities of implementing this Heat Response Plan.

Increase the Availability of Cool Spaces

It is essential that residents have a place to cool off. Local stakeholders have reported that in Quesnel, few households have air conditioning and many low-income apartment residences have poor ventilation. Stakeholders also suggested that stand alone cooling centres have not been effective in Quesnel since many community members who are most vulnerable to heat are unable to access these centres due to transportation or mobility challenges. In the past, the Recreation Centre, which was used as a cooling centre went mostly unused.

Actions within this Plan provide additional cooling centre options and alternatives to cooling centres, such as numerous, easy to access cooling spaces with activities, for example promoting the retail stores and restaurants as possible cooling spaces. Extending the hours of available cool spaces into the evening would also help to maximize the benefit derived from these spaces, as the hottest part of the day is often later in the day, and residences often maintain heat longer into the nighttime hours. For more information on wise practices for operating a cooling centre, see [Wise Practices for Operating a Cooling Centre During Extreme Heat](#).

Develop and Enhance Engagement and Communication Channels

Guidelines for developing a clear [Communications Plan](#) are provided within this Plan; these guidelines outline roles and responsibilities of stakeholders, provide clear messaging to relay to residents, and outline communication approaches for both before and during an extreme heat event. Effective collaboration between community organizations will be essential in ensuring the community, and particularly those who are most heat-vulnerable, are made aware of heat advisories or warnings, and of resources, information, and facilities that will support the mitigation of heat-related health impacts.

Consider Heat-Vulnerable Populations

While it is essential that all residents are made aware of heat advisories and heat warnings and be provided with information and resources for how to stay safe in extreme heat situations, there are certain populations more heat-vulnerable than others. This Plan shows how a targeted response, which benefits from existing community service provider relationships with heat-vulnerable residents, can be employed to respond to harder to reach populations.

21 Climate Change Adaptation Program, Regional Adaptation Strategies Update: Cariboo (bcclimatechangeadaptation.ca)

22 Heat Alert & Response Planning for Southern Interior B.C. Communities: A Toolkit, June 2020 (interiorhealth.ca)

In addition to the more apparent heat-vulnerable groups, there are groups specific to Quesnel's rural context, for example, farmers and agricultural workers, tourists, tree planters, and those pursuing outdoor recreational activities that are highlighted in the response strategies of this Plan.

Address Competing Priorities and Integrate with Existing Emergency Response Planning

This Plan has been developed with the consideration that the impacts of climate change contribute to numerous other risks in the Cariboo Region (e.g., fire risk, decreased air quality due to wildfire smoke), and that managing multiple risks will require an integrated approach to emergency management and response. Solutions for mitigating health risks associated with extreme heat need to consider that extreme heat will likely be paired with poor air quality in future events, making those living in poorly ventilated and climate-controlled homes even more vulnerable to health impacts. Due to the multiple challenges faced by Quesnel and the Cariboo Region, this Plan takes an integrated approach to heat response planning, and as such this Plan works in alignment with the following plans, policies, and strategies:

- Cariboo Climate Change Adaptation Program²³
- Quesnel Emergency Preparedness Webpage²⁴
- Quesnel and Surrounding Area Community Wildfire Protection Plan²⁵
- The Cariboo Regional District Emergency and Protective Services²⁶
- Quesnel's Emergency Notification System²⁷

Stakeholder & Community Engagement

The City of Quesnel has limited capacity to directly reach all heat-vulnerable populations in the event of a heatwave. Therefore, it is of paramount importance for the City to establish connections and collaborate with various stakeholders for the purpose of resource, space, and knowledge sharing.

The City of Quesnel has led the development of this Heat Response Plan to ensure the well-being and safety of its residents during extreme heat events. With the growing frequency and intensity of heatwaves, the City recognizes the need for proactive measures. The endeavor of implementing this Plan requires interdepartmental adoption and participation of the Plan throughout various municipal departments. An overview of Quesnel's local government organizational framework which can be referenced when discussing the various departments and roles within the municipality (see [Local Government Organizational Chart Roles and Responsibilities](#)).

To ensure effective heat response planning for heat-vulnerable populations, it is crucial that community partners play a role in heat response planning and implementation. Establishing an Extreme Heat Response Committee will support collaboration and coordination of the response. The [Extreme Heat Response Committee Terms of Reference](#) template can support in establishing this committee.

Community partners may include service provider organizations such as those providing homecare services, poverty and literacy agencies, homelessness services, tourism centers, active living organizations, faith-based organizations, and governmental agencies. Approaches to determining the responsibilities of local organizations are subject to change as organizations evolve. Therefore, a stakeholder responsibility form should be filled out yearly to determine the organizations involved, respective responsibilities, and ensure there is adequate coverage for all at-risk populations.

Participants in engagement sessions recommended that the following service provider organizations be involved in ensuring heat-vulnerable individuals are reached. The community partners listed below should be engaged and encouraged to coordinate information and resources to the more intensely impacted groups.

²³ Climate Change Adaptation Program, Regional Adaptation Strategies Update: Cariboo (bcclimatechangeadaptation.ca)

²⁴ City of Quesnel, Emergency preparedness (quesnel.ca)

²⁵ Quesnel and Surrounding Area Community Wildfire Protection Plan (quesnel.ca)

²⁶ Cariboo and Regional District, Emergency and Protective Services (cariboord.ca)

²⁷ City of Quesnel, Emergency Notification System (quesnel.ca)

- RCMP
- City of Quesnel Fire Department
- Northern Health
- Canadian Mental Health Association (CMHA)
- BC Transit (HandiDart)
- EMBC
- Red Cross
- Building Managers
- Seniors' Advocacy Groups
- Cariboo Regional District - Emergency Preparedness
- Ministry of Family Development
- Dakelh Quesnel Community Housing Society
- Echen Healing Society
- Quesnel Tillicum Society Friendship Centre
- Quesnel and District Seniors' Centre
- BC Housing and AHMA
- Better at Home
- Quesnel Community Action Team
- Ministry and Church Groups
- Seasons House Shelter
- Association for Community Living
- Quesnel Shelter and Support Society
- Grace Young Activity Centre
- Bridges Supportive Housing
- Grace Young Wellness Centre
- Westside Mental Health and Addiction Services
- First Nations Health Authority
- Pharmacists
- Physicians and Primary Care Provider

Stakeholder Roles

Key stakeholder groups have been identified in [Table 2](#) along with the role they are recommended to play in heat response planning and implementation. The roles listed below follow the recommendations made within the Interior Health Heat Alert Response Toolkit.²⁸ In addition to the roles listed below, specific responsibilities will need to be established collaboratively among stakeholders using the [Stakeholder Responsibilities Form](#).

Table 2. Quesnel Heat Response Plan Stakeholder Roles

STAKEHOLDER GROUP	ROLES
Municipal	<p>The City of Quesnel:</p> <ul style="list-style-type: none"> · Convene and engage community partners in heat planning. · Ensure extreme heat is considered and integrated into existing emergency response plans. · Receive early warning of alerts from ECCC, through EMCR, and relay these to the community through communications. · Support communication about heat alerts and actions to mitigate heat risk via municipal websites, social media, and other communication channels. · Educate and engage municipal staff in developing and implementing heat response strategies. · Evaluate and update Heat Response Plans to ensure they stay relevant.
Regional	<p>Northern Health:</p> <ul style="list-style-type: none"> · Collaborate with Health Canada to develop communication tools such as guides, infographics, and communications templates. · Support the development of community heat preparedness and response plans. · Participate in regional briefing calls with local governments and First Nations to provide public health advice. · Communicate publicly about Heat Warnings and key public health messaging related to the prevention of heat-related illness. · Provide and review public health messaging for community heat response communications.

²⁸ Heat Alert & Response Planning for Southern Interior B.C. Communities: A Toolkit, June 2020 (interiorhealth.ca)

- Support the engagement of Northern Health staff in heat response planning and implementation internally.
- Monitor clients and patients who are vulnerable to heat-related illness.
- Provide available and appropriate public health surveillance data from previous heat events to partners to inform decision-making.

The Cariboo Regional District (CRD):

- Support and coordinate with Cariboo municipalities.

Provincial	<p>B.C. HEAT Coordinating Committee:</p> <ul style="list-style-type: none"> · Establish recommended actions, standardized language and key messaging that can be used in preparation for, and during an extreme heat event. · Created the B.C. Heat Alert and Response System in collaboration with key partners at the Ministry of Emergency Management and Climate Readiness (EMCR), ECCC, BCCDC, and health authorities to be used as a reference point for partners and local authorities to build out their heat plans. <p>Ministry of Emergency Management and Climate Readiness (EMCR):</p> <ul style="list-style-type: none"> · Communicate heat alert information to local governments prior to public notifications of heat events, to allow for preparation and activation of local Heat Alert Response System. · Developed a funding policy in relation to the Emergency Program Act which supports local authorities/ First Nations in accessing funds during Heat Warnings/Extreme Heat emergencies. · Developed an engagement plan for partners and the public on provincial extreme heat-related activity and support to date. <p>BC Ministry of Health</p> <ul style="list-style-type: none"> · Develops communications tools such as guides, infographics, and communications templates. <p>FNHA</p> <ul style="list-style-type: none"> · Collaborate with communities to assess health risks. · Provide guidance and support for heat response planning. · Offer resources and tools for addressing health impacts. · Coordinate with stakeholders for an integrated approach. · Support culturally appropriate messaging and education. · Advocate for community resilience and traditional knowledge. · Monitor health outcomes and addressing emerging issues.
Federal	<p>Environment and Climate Change Canada (ECCC)</p> <ul style="list-style-type: none"> · Communicate with EMBC, and other decision-makers a few days prior to a heat event about the potential of Heat Warnings and Emergencies. · Work with the BCCDC and health authorities to develop heat alert triggers for regions across B.C. <p>Health Canada</p> <ul style="list-style-type: none"> · Work closely with the Meteorological Service of Canada in monitoring the weather and developing heat advisories that underpin a successful heat response. · Produce educational, communications and promotional material on heat risks and adaptive behaviours that can be accessed online and sent to communities by request.

Community Partners	Organizations such as: homecare services, poverty and literacy agencies, Aboriginal Friendship Centres, Indigenous organizations and services, homelessness services, tourism centres, and active living and faith-based organizations, are encouraged to implement actions that mitigate the impact of extreme heat on any heat-vulnerable populations (e.g., seniors, those experiencing homelessness) they may serve.
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Communications & Awareness

Developing an effective response to extreme heat for Quesnel involves developing a plan for communications to ensure all residents are aware of heat risks and have the information, resources, and services needed to mitigate any heat-related health impacts. This Plan uses a comprehensive approach that coordinates communication between the stakeholders before an extreme heat event and during an extreme heat event and is intended to support both a targeted and dispersed response to extreme heat events. All communications content includes key messaging based on best practices and evidence-based best practices created by governmental health authorities and agencies.

Communications Approach

Key stakeholders, who may include those listed in [Stakeholder & Community Engagement](#), should begin planning both months in advance of the upcoming heat season and upon receiving notice of an upcoming heat event. When planning for the upcoming heat season the City will disseminate educational materials to all residents through City communications channels (e.g., website, mail-outs, social media, press releases, and any other platforms deemed appropriate). For the full communications package, including key messages content and resources, see the [Communications Plan](#).

The City will also convene the Extreme Heat Response Committee to prepare for the upcoming season. Collaboratively, the City and community partners will discuss responsibilities for heat response. The City will support community partners in ensuring communications for targeted groups have been disseminated to these groups. The City will work with Northern Health and community partners to tailor the communications messaging for both dispersed and targeted response.

As a part of pre-season preparedness planning, the City will identify and appoint an internal department, office, or entity to be the communications point-of-contact for the public. All staff working at this point-of-contact will be given an orientation on the Heat Alert Response Plan and will be briefed with information to support responses to heat-related calls. The BC Ministry of Health, ECCC, and the BCCDC recommend key communications message be delivered to the public based on the type of heat event being experienced.²⁹ [Communications Plan](#) includes a communications protocol and strategy which outlines what messages should be delivered to the public and when they should be delivered.

During the pre-season, it is important to create awareness and educate the public about the potential risks associated with extreme heat. Key messages should include information about heat-related illnesses, the importance of staying hydrated, seeking cool environments, availability of community resources, and being mindful of heat-vulnerable individuals in the community.

As heat events progress and become more severe, the messaging will be adapted accordingly. Pre-season heat advisories will focus on reminding individuals to take necessary precautions, such as reducing outdoor activities during peak heat hours, staying hydrated, and monitoring the well-being of family members, neighbors, and friends.

In the event of a Heat Warning, messaging will be sent out via the City's social media platforms, and during any Extreme Heat Emergency, the messaging will intensify and use a variety of platforms, emphasizing the critical nature of the situation and urging residents to take immediate action. This may include seeking shelter in air-conditioned spaces, utilizing community cooling centres, and contacting emergency services if needed.

²⁹ BC Provincial Heat Alerting Response System (BC Hars): 2023 (bccdc.ca)

Heat Alert Response System

The Heat Alert Response System developed in this Plan are intended to warn residents of imminent dangerous heat conditions. This System puts in place mechanisms and tools for mobilizing stakeholders to implement the Plan. Following the BC Heat Alert Response System framework³⁰, Quesnel's Heat Response Plan will be initiated by a heat alert trigger. The Plan outlines the actions that the City and community partners will take to mitigate heat-related risks during a heat warning or in the event of escalation to an Extreme Heat Emergency, through the following steps:

- 1) ECCC and the BCCDC issue an alert based on a heat-health analysis and specific weather conditions for Quesnel. Before issuing a public-facing warning, ECCC may send an internal 'Weather Notification' to its health and emergency management partner distribution list when forecasts warrant elevated likelihood of a heat event.
- 2) ECCC issues public warnings and alerts through the ECCC weather alerts page and the WeatherCAN app.
- 3) The City of Quesnel Protective Services activate their Heat Response Plan in response to the Heat Warning. Protective Services determines if a level 1 Emergency Operations Centre (EOC) should be activated to receive EMBC support and coordinate the local response. If Emergency Social Services (ESS) response is needed, a request is submitted to EMBC.

30 BC Provincial Heat Alerting Response System (BC Hars): 2023 (bccdc.ca)

Pre-Season Preparedness Activities

Pre-season preparedness activities should commence in early spring and should involve communications mailouts from the City to residents and stakeholders.

To prepare for the upcoming heat season, stakeholders on the committee will convene to discuss responsibilities, communications, targeted and dispersed community engagement approaches, and evaluation methods. Activities and actions that the City and community partners will be responsible for are listed below. These activities and actions have been specifically developed in collaboration with community partners and the City for the Quesnel context. If no specific community partner is mentioned, any or all partners could be involved.

City of Quesnel

- Convene the Extreme Heat Response Committee to review the Response Plan and clarify communications protocols and roles and responsibilities of stakeholders.
- Engage with community partners and encourage them to follow the heat response implementation steps recommended within this Plan.
- Review communications strategy for pre-season protocols and implement community awareness strategy.
- Include key heat risk and response communications messages in the following areas:
 - City of Quesnel website (City Initiative)
 - Social media
 - News/media releases
 - Community board posters
 - Seasonal emergency preparedness newsletter
- Update websites and social media and issue public service announcements, media/ press releases and radio broadcasts to include key heat risk and response communications messages.
- Utilize media/ press releases and online information booklets during Emergency Preparedness Week (May 1st to 7th).
- Train ESS volunteers in extreme heat activation response.
- Work with community partners to update the list of the community partners best positioned to support those most at-risk during heat events.
- Prepare frontline staff (e.g., City staff intercepting public concerns and questions) with the information required to respond to calls from the public during a heat event.
- Support community partners to prepare to provide targeted outreach to heat-vulnerable residents, distributing information to community partners for them to then distribute to their clients.
- Work with community partners to identify locations of heat-vulnerable populations, including key apartment buildings, trailer parks, and other heat-vulnerable locations, and develop community caring/check-in programs in these communities.
- Coordinate with community partners to convene volunteers for pre-season planning and recruit additional volunteers if appropriate. Engage faith-based groups to prepare any volunteers willing to support during heat events.
- Work with community partners to establish an opt-in list for wellness checks that can be leveraged during extreme heat events. Collaborate with community partners to develop models for a community wide response. Proposed models could include developing check-ins and neighborhood watch programs within neighborhoods, trailer park communities, apartment buildings, etc.
- Educate any front service staff in City-operated cooling centres so that they can educate community members or answer concerned community members questions during heat alert activation.

- Notify staff of heat risks and protective activities. Link to Work Safe BCs recommendations for reducing worker heat stress³¹ (see [Links and contacts of additional resources](#)).
- Contact municipal departments to ensure appropriate preparations are made for extreme heat events (e.g., check emergency response equipment such as fans, generators, and back-up communications capabilities to ensure these are available during an Alert 2).
- Place orders for resources to be used in cooling centres (i.e., water, fans, A/C units).
- Work with community partners to promote cool spaces additional to the designated cooling centres, such as retail stores, restaurants, parks, or entertainment or recreation venues.
- Develop mail outs for Pre-Season notification, Heat Alert 1, and Heat Alert 2.
- Provide public access to drinking water in key areas.
- Install misting stations and outdoor cooling stations.

Community Partners

- Participate in the Extreme Heat Response Committee to review the Response Plan, clarify communications protocols and commit to roles and responsibilities.
- Update websites and social media to include a link to the City's informational material. Print out physical copies of heat risk and response informational materials.
- Work with the City to update the list of the community partners best positioned to support those most at-risk during heat events.
- Ensure staff or volunteers have training in heat risk and orientation to the Heat Alert Response Plan.
- Prepare to provide targeted outreach to heat-vulnerable residents, distributing information to heat-vulnerable clients.
- Facilitate heat response workshops to introduce clients to different ways to stay cool during heat waves.
- Establish an opt-in list for wellness checks that can be leveraged during extreme heat events.
- Educate front service staff so that they can educate community members or answer concerned community members questions during heat events. Carry out education and training with staff who work with heat-vulnerable groups.
- Notify staff of heat risks and protective activities. Link to Work Safe BCs recommendations for reducing worker heat stress and practicing sun safety (see [Links and contacts of additional resources](#)).
- Ensure residents of long-term care facilities have access to air conditioning (i.e., in common rooms)
- Place orders for water bottles, fans, and AC units
- Work with the City to promote cool spaces additional to the designated cooling centres, such as retail stores, restaurants, parks, or entertainment or recreation venues.

³¹ Heat stress, WorkSafeBC (worksafebc.com)

Recommended Additional Actions

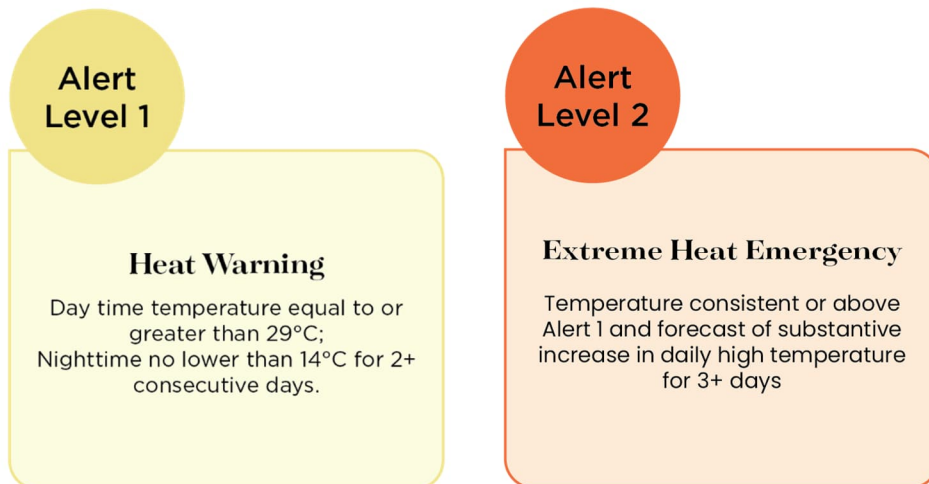
In addition to the activities and actions above suggested by stakeholders, there are some actions presented by the BCCDC which are considered best practice in public health. These include:³²

- Facilitating mock scenario plans and communications implementation.
- Conducting background data analysis of public health data from previous heat events (e.g., number of mortalities and related ambulance calls) to establish a baseline for monitoring.
- Holding a pre-season technical briefing with the local media.
- Ensuring appropriate staff are familiar with the heat alert response strategy and are signed up for heat alerts.
- Considering any additional staff or staff hours which may need to be added during a heat event.
- Ensuring alignment between all communications and responses.

**This list is not comprehensive but is intended to fill in some of the gaps left in the stakeholder recommended actions.*

Alert Types

Alert types have been determined using thresholds recommended by ECCC criteria for the Cariboo Region.³³ Quesnel has two alert types. Alert Level 1 indicates a *Heat Warning*, and Alert Level 2 indicates that the community is entering an *Extreme Heat Emergency*.



Weather conditions can be monitored using *Public Weather Alerts for Canada* or by using the *WeatherCAN app*.

Alert Level 1 - Heat Warning

- Daytime temperatures are forecasted to be $\geq 29^{\circ}\text{C}$ for two or more consecutive days and nighttime temperatures are $\geq 14^{\circ}\text{C}$.

Alert Level 2 - Extreme Heat Emergency

- Daytime temperatures meet the criteria of Alert Level 1 and will be $\geq 29^{\circ}\text{C}$ for 3 + consecutive days and nighttime temperatures are $\geq 14^{\circ}\text{C}$ and daily highs are forecasted to substantively increase day over day for three or more consecutive days.

Response Activities by Alert Type

Heat Alert 1 – Heat Warning

Trigger

- ECCC has forecast daytime temperatures of $\geq 29^{\circ}\text{C}$ for two or more consecutive days and nighttime temperatures are $\geq 14^{\circ}\text{C}$.

Alert Activation

- Alert Activated by ECCC and relayed by EMCR to the City of Quesnel Protective Services.

Stakeholders Alerted

- All stakeholders on the City of Quesnel Extreme Heat Response Committee heat alert contact list.

³³ Government of Canada, Criteria for public weather alerts (canada.ca)

- Public advisory using the Heat Alert Level 1 Communications Protocol - [Heat Warning Key Messages](#)

Response Actions

During a Heat Alert 1 – Heat Warning in Quesnel, the following response actions and responsibilities will be undertaken:

The City of Quesnel

- The Fire Chief in the Protective Services Department will activate HARS and send the alert notification to the City's communications personnel who will then send out social media notifications about the Heat Warning.
- Activate Heat Alert 1 Communications Protocol – [Heat Warning Key Messages](#), posting a social media graphic with heat warning information.
- Notify reception staff at City Hall of the alert and ensure they have access read and understand key messages, locations of cooling centre, and availability of other resources, in order to support calls from the public.
- Remind staff of risks and protective activities.

Community Partners

- Update websites and social media to include a link to the City's informational material. Print out physical copies of heat risk and response informational materials to distribute to clients.
- Activate all wellness checks, neighbourhood watch programs, and delivery services to provide targeted outreach to heat-vulnerable clients.
- Extend hours of air-conditioned facilities and places where people are likely to seek heat relief. Inform clients where they can find cooling spaces and places with water.
- Inform clients where they can find cool spaces and places with water.
- Mobilize staff/volunteers to assist with monitoring and responding to people who are more at risk and/or suffering from heat-related illness.
- Activate staff/volunteers to assist with monitoring and responding to people who are more at risk and/or suffering from heat illness.
- Encourage clients to reach out to friends, family, neighbours who are heat-vulnerable individuals who may not be connected to any services and may be socially isolated.
- Remind staff of risks and protective activities.

Heat Alert 2 – Extreme Heat Emergency

Trigger

- Daytime temperatures of $\geq 29^{\circ}\text{C}$ and forecast indicates substantive increase in temperature for three or more consecutive days with nighttime temperatures are $\geq 14^{\circ}\text{C}$.

Alert activation

- Alert Activated by ECCC and relayed by EMCR to the City of Quesnel Protective Services.

Stakeholders Alerted

- All stakeholders on the City of Quesnel Extreme Heat Response Committee heat alert contact list.
- Public advisory using the Heat Alert Level 2 Communications Protocol – [Extreme Heat Emergency Key Messages](#)

Response Actions

During an Extreme Heat Emergency, the City has the option of activating their EOC. Even a partial activation can support access to resources to monitor phone lines, support wellness checks, activate volunteer response, and provide supplies such as water.

During a Heat Alert 2 – Extreme Heat Emergency in Quesnel, the following response actions and responsibilities will be undertaken:

The City of Quesnel

- Activate the HARS Level 2 response and EOC will be activated if required to access additional resources.
- Send e-mail notifications to all HARS participating community partners who can post notices within their premises and on their online platforms.
- Utilize the existing 24-hour ESS number, inform the public that the City is experiencing extremely hot weather.
- Activate Level 2 Communications Protocol – [Extreme Heat Emergency Key Messages](#), utilizing the following distribution methods:
 - News/media release
 - City website
 - Social media
 - Email
 - Newsletter
- Contact venues that are cooling centres to notify them that the City is entering an extreme heat emergency and that the facilities remain open to residents. Support staff and volunteers to ensure they have the proper resources and information to continue in their roles.
- Remind staff of risks and protective activities. Offer alternative working hours outside of peak heat hours.
- Utilize Recreation Centre LED Sign for public notification of Extreme Heat Emergency.
- Work with community partners to issue the heat warning to all residents, schools, daycares, recreational groups, volunteer support groups, and transient populations (e.g., tourists), and at sporting events.
- Open all municipal cooling centres with extended hours.

Community Partners

- Update websites and social media to include a link to the City's informational material. Print out physical copies of heat risk and response informational materials to distribute to clients.
- Continue conducting wellness checks, neighbourhood watch programs, and delivery services to provide targeted outreach to heat-vulnerable clients.
- Continue offering extended hours at air-conditioned facilities and places where people are likely to seek heat relief. Inform clients where they can find cool spaces or cooling centres, and places with water. Continue supporting staff/volunteers to assist with monitoring and responding to people who are more at risk and/or suffering from heat-related illness and to assist at cooling spaces.
- Continue encouraging clients to reach out to friends, family, or neighbours who are heat-vulnerable individuals who are may not connected to any services or may be socially isolated.
- Remind staff of risks and protective activities.
- Work with City to issue the heat warning to all residents, schools, daycares, recreational groups, volunteer support groups, and transient populations (e.g., tourists), and at sporting events.
- Display Extreme Heat Emergency on LED sign adjusted to the appropriate alert level at partner facilities wherever possible.
- Encourage clients to reach out to friends, family, neighbours who are heat-vulnerable individuals who are may not connected to any services and may be socially isolated.

- Anticipate an increase in ambulance calls and visits to the emergency department due to heat-related illnesses. Ensure that healthcare providers and emergency responders are prepared to handle the surge in demand and provide appropriate care to individuals affected by the extreme heat.

Deactivation

The Quesnel HARS will be deactivated when the previous day's temperature is below the Heat Alert 1 threshold, and future predicted temperatures are also expected to be below the Heat Alert 1 threshold. Rescind the alert by all communication means that were used previously to alert the public of Heat Warning 1 and/or 2.

Seasonal Evaluation

The Extreme Heat Response Committee will collaborate on conducting seasonal evaluation following a heat season. This annual evaluation should follow the evaluation plan prepared in the pre-heat season. Evaluation activities will work to assess the post-heat season activities and identify any areas where the approach can be improved. The City and community partners will work to evaluate whether the actions implemented were timely, appropriate, effective, and whether they met local priorities and reduced heat-related harm.

Evaluation activities included in the Evaluation Plan are recommended to include:

- Mapping the community to see where the high-risk community areas are in relation to heat-vulnerable people.
- Determining what factors positively mitigate the impact of extreme heat events.
- Liaise with Northern Health regarding analysis of real-time health surveillance and population data on heat impacts.
- Identification of improvement opportunities.

Long-Term Strategies

The strategies outlined below involve longer-term considerations and best practices where implementation could potentially require planning, coordination, and adjustments to infrastructure. These measures typically yield lasting effects in addressing the impacts of extreme heat. The objective of these actions is to strengthen resilience, enhance infrastructure, and promote sustainable practices, all subject to the availability of funds and resources.

- Developing climate change adaptation strategies for Quesnel: This involves conducting a comprehensive assessment of the potential impacts of climate change on Quesnel, including projections for increased temperatures and heatwaves. Based on the assessment, adaptation strategies can be developed to address the specific vulnerabilities and risks associated with extreme heat. These strategies may include measures such as enhancing green infrastructure, improving building design and insulation, and implementing heat emergency response plans.
- Updating municipal emergency protocols: This action entails reviewing and revising existing emergency protocols to ensure they effectively address the challenges posed by extreme heat events. It may involve incorporating specific procedures and guidelines for heatwave emergencies, establishing communication channels, defining roles and responsibilities, and coordinating resources and support services. Regular training and drills can also be conducted to ensure the effective implementation of updated emergency protocols.
- Installing public water fountains, sunshades, misting stations, and spray parks: This action focuses on enhancing public access to water and cooling facilities. Installing water fountains in key locations throughout the city provides opportunities for residents to hydrate and cool down. Misting stations and spray parks offer additional relief from heat and serve as recreational spaces for families and individuals seeking respite from high temperatures. Consider adding shade structures to these public spaces.
- Planting trees and increasing canopy coverage: Increasing the number of trees and expanding canopy coverage is an effective strategy to mitigate the urban heat island effect and provide natural shade. Planting trees in parks, streets, and public spaces helps to reduce surface temperatures, provide cooling shade, and improve air quality. This action contributes to enhancing the overall comfort and livability of the city while offering ecological and environmental benefits.
- Initiate changes to the built environment to reduce heat: This action involves implementing modifications to the built environment to reduce heat absorption and mitigate heat-related issues. Examples include using high albedo surfaces (materials with high reflectivity) for buildings and pavements to minimize heat absorption and reduce surface temperatures. The installation of green roofs, cool roofs, and the implementation of urban design strategies that prioritize shading and natural ventilation also fall under this initiative.
- Ongoing monitoring and mapping of populations at high risk of heat impacts: This action focuses on identifying and monitoring populations, such as the elderly, young children, and individuals with pre-existing health conditions, who are particularly vulnerable to the impacts of extreme heat. Mapping these populations helps in targeted outreach and resource allocation, ensuring that the necessary support and assistance are provided during heatwave events.
- Setting up systems for people to self-register to receive updates on response measures and heat alerts: Establishing a registration system allows individuals to voluntarily sign up to receive timely updates on heat response measures, including the availability of cooling spaces, heat advisories, and other relevant information. These updates can be sent through various communication channels such as telephone, email, or text messages, ensuring that residents are informed and can take necessary precautions to protect themselves during extreme heat events.
- Cultivating social connectedness across the community: Resource and prioritize programs and initiatives that foster a sense of community and interconnectedness among community members.

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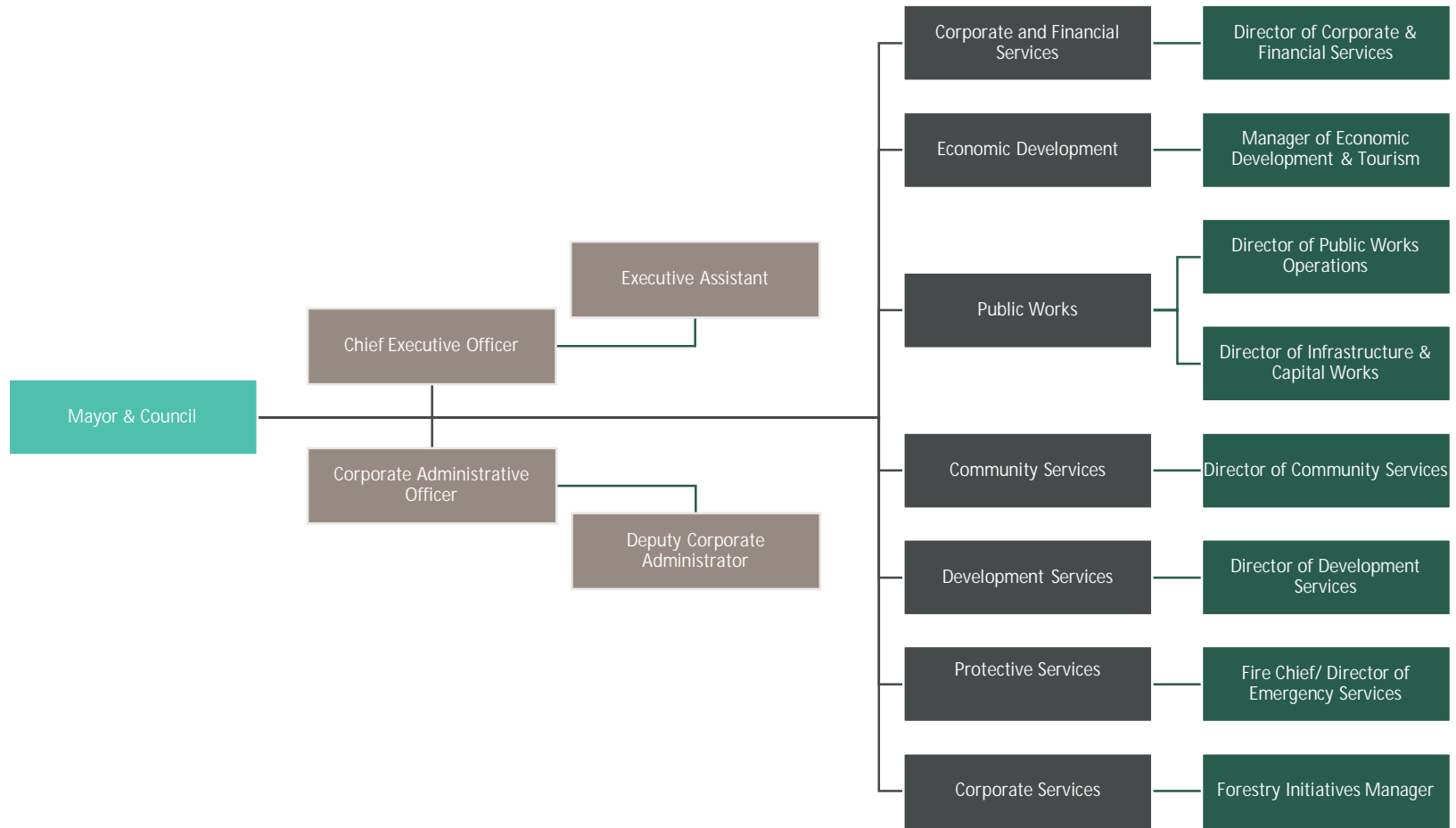
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Appendices

Quesnel

Appendix A - Local Government Organizational Chart Roles and Responsibilities



Appendix B - Extreme Heat Response Committee Terms of Reference

Mandate:

To coordinate community response to heat events and extreme heat emergencies.

Membership:

- City of Quesnel
 - Protective Services
 - ESS
 - *[Any other relevant internal departments or entities]*
- Community Stakeholders
 - Northern Health
 - First Nations Health Authority
 - Community social organizations serving heat-vulnerable populations

Responsibilities:

- Meet prior to heat season to review HARS and complete stakeholder responsibility form for that season
- Review communications systems and materials
- Update and prepare staff and volunteers for response
- Meet following an activation (post-season) to evaluate response and update HARS

Appendix C - Stakeholder Responsibilities

Quesnel Heat Response Plan – Stakeholder Responsibility Form

AT RISK POPULATION	ORGANIZATION	RESPONSE				
		Distribute information	Wellness Checks	Distribute water	Provide a cooling space	Other
Older adults						
Infants and young children, pregnant women						
Individuals with underlying health conditions, including limited mobility						
Individuals with substance use disorders and/or mental health disorders						

Individuals with cognitive challenges						
People who are socially isolated/live alone						
Individuals with low income						
People in poor quality housing						
People living outdoors						

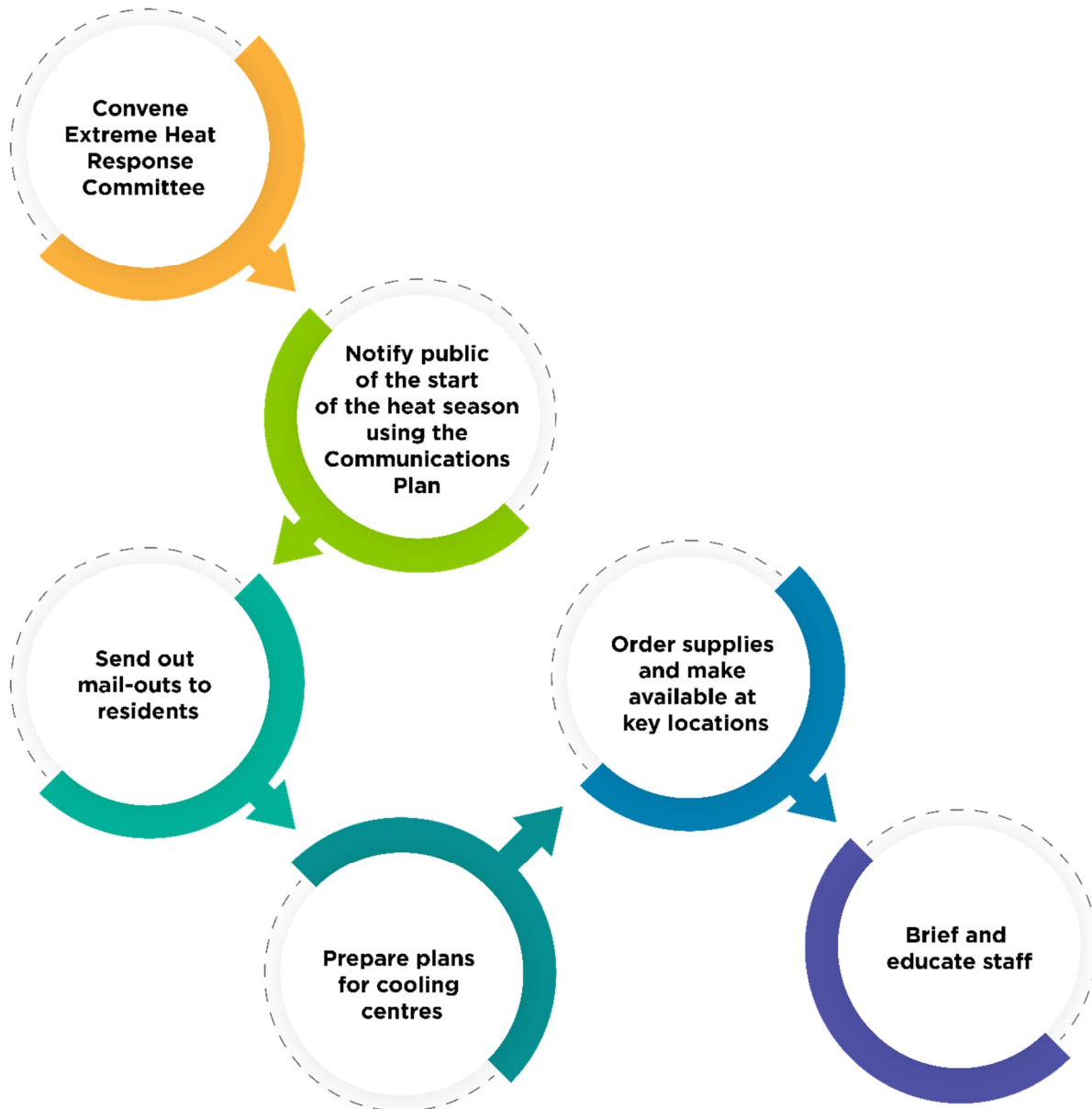
Other Populations at risk						

Appendix D - Notification Process and Protocol Template

Pre-Season Heat Planning

Notification Process

TRIGGER: The City prepares for upcoming season of possible Heat Alerts.



Protocol Template: Pre-Season

PRE-SEASON HEAT PLANNING	PROTOCOL #1
TRIGGERS: Annually in early spring	
<input type="checkbox"/> Extreme Heat Response Committee has been convened and emails sent out to all HARS participating stakeholders	
<input type="checkbox"/> Internal City of Quesnel entity has been identified as point-of-contact for public communications	
<input type="checkbox"/> Public has been notified of the beginning of the heat season through a public awareness campaign <ul style="list-style-type: none"> <input type="checkbox"/> City website (City Initiative) updated <input type="checkbox"/> Social media posts issued <input type="checkbox"/> News/ media release distributed <input type="checkbox"/> Posters distributed to community boards <input type="checkbox"/> Seasonal emergency preparedness newsletter produced and distributed 	
<input type="checkbox"/> Information and notification materials for Alert Levels 1 and 2 have been prepared and updated	
<input type="checkbox"/> Necessary supplies (water, fans, AC units) have been ordered or on hand	
<input type="checkbox"/> Locations of cooling centres have been confirmed	
<input type="checkbox"/> City staff and volunteers have been briefed and educated.	

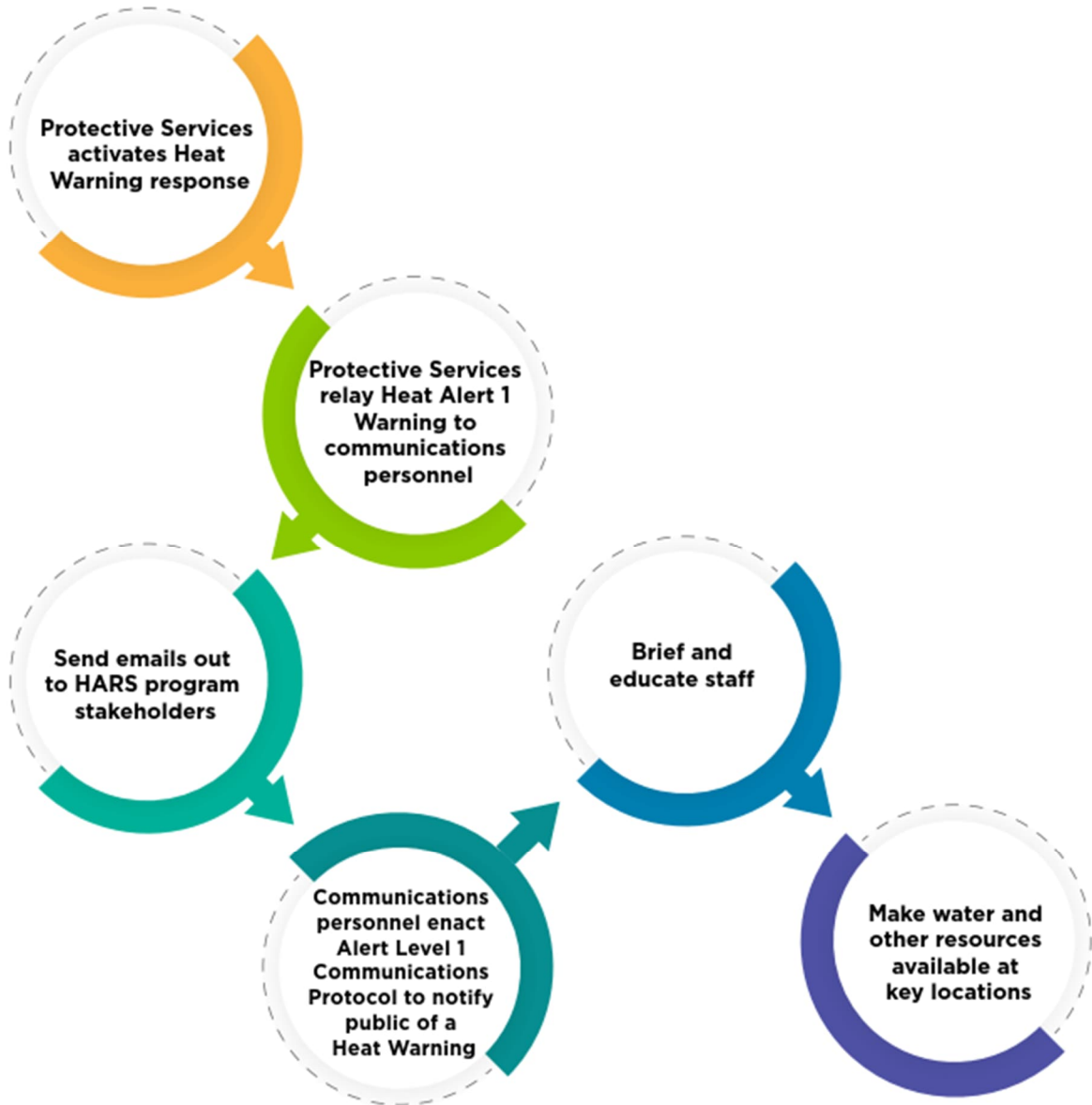
Key Contacts:

NAME	ORGANIZATION	ROLE	EMAIL
Ron Richert	City of Quesnel	Fire Chief/ Director of Emergency Services	r-richert@quesnel.ca
Jeff Norburn	City of Quesnel	Director of Community Services/ESS lead	j-norburn@quesnel.ca
Adelle Wilson	City of Quesnel	Bylaw Supervisor	awilson@quesnel.ca
Gary Stuart	City of Quesnel	Facilities Manager	g-stuart@quesnel.ca
Teann Fung	City of Quesnel	Communications	tfung@quesnel.ca

Heat Alert 1 – Heat Warning

Notification Process

TRIGGER: ECCC has forecasted daytime temperatures are $\geq 29^{\circ}\text{C}$ for two or more consecutive days and nighttime temperatures are $\geq 14^{\circ}\text{C}$. ECCC has identified an increase in health impacts.



Protocol Template: Heat Warning

ALERT 1 – HEAT WARNING	PROTOCOL #2
TRIGGERS: ECCC has forecasted daytime temperatures are $\geq 29^{\circ}\text{C}$ for two or more consecutive days and nighttime temperatures are $\geq 14^{\circ}\text{C}$. ECCC has identified an increase in health impacts.	
<input type="checkbox"/> Extreme Heat Warning Response activated by Protective Services	
<input type="checkbox"/> Emails sent out to all HARS program stakeholders	
<input type="checkbox"/> Protective Services relayed Heat Alert 1 Warning to communications personnel	
<input type="checkbox"/> Public has been notified of the Heat Warning via City social media platforms – utilizing the Communication Plan and media alerts templates	
<input type="checkbox"/> Community advised of availability of cool spaces, access to water, and other resources	
<input type="checkbox"/> Necessary supplies (water, fans, AC units) are being distributed	
<input type="checkbox"/> Crew talk held with Public Works and Parks City workers	
<input type="checkbox"/> Social media updated upon Heat Alert deactivation	

Key Contacts:

NAME	ORGANIZATION	ROLE	EMAIL
Ron Richert	City of Quesnel	Fire Chief/ Director of Emergency Services	rrichert@quesnel.ca
Jeff Norburn	City of Quesnel	Director of Community Services/ESS Lead	jnorburn@quesnel.ca
Adelle Wilson	City of Quesnel	Bylaw Supervisor	awilson@quesnel.ca
Gary Stuart	City of Quesnel	Facilities Manager	gstuart@quesnel.ca
Teann Fung	City of Quesnel	Communications	tfung@quesnel.ca

Heat Alert 2 Extreme Heat Emergency

Notification Templates Process

TRIGGER: Daytime temperatures are $\geq 29^{\circ}\text{C}$ for three or more consecutive days and nighttime temperatures are $\geq 14^{\circ}\text{C}$. ECCC has identified an increase in health impacts.



Protocol Template: Extreme Heat Emergency

ALERT 2– EXTREME HEAT EMERGENCY	PROTOCOL #3
TRIGGERS: ECCC has forecasted daytime temperatures are $\geq 29^{\circ}\text{C}$ for three or more consecutive days and nighttime temperatures are $\geq 14^{\circ}\text{C}$. ECCC has identified an increase in health impacts.	
<input type="checkbox"/> Emails sent out to all HARS program stakeholders	
<input type="checkbox"/> EOC activated if required to access resources	
<input type="checkbox"/> front-line staff briefed regarding emergency response and community resources	
<input type="checkbox"/> ESS number activated for heat emergency information	
<input type="checkbox"/> Public has been notified of the Extreme Heat Emergency <ul style="list-style-type: none"><input type="checkbox"/> City website (City Initiative) updated<input type="checkbox"/> Social media posts issued<input type="checkbox"/> News/ media release distributed<input type="checkbox"/> Community partners encouraged to share out posters and City posts<input type="checkbox"/> LED sign displaying Alert 2 – Extreme Heat Emergency has been activated	
<input type="checkbox"/> Necessary supplies (water, fans, AC units) are being distributed	
<input type="checkbox"/> All cooling centres have been opened and their hours extended into the evening	
<input type="checkbox"/> LED sign Alert 2 – Extreme Heat Emergency has been activated	
<input type="checkbox"/> Any City staff or volunteers supporting the Alert 2 response have been deployed	
<input type="checkbox"/> Crew talk held with Public Works and Parks City workers	
<input type="checkbox"/> When Heat Warning is deactivated: <ul style="list-style-type: none"><input type="checkbox"/> Update website and social media<input type="checkbox"/> Inform community partners<input type="checkbox"/> Close cooling centres and return hours to pre-heat event schedule<input type="checkbox"/> Deactivate LED sign	

Key Contacts:

NAME	ORGANIZATION	ROLE	EMAIL
Ron Richert	City of Quesnel	Fire Chief/ Director of Emergency Services	rrichert@quesnel.ca
Jeff Norburn	City of Quesnel	Director of Community Services/ESS lead	jnorburn@quesnel.ca
Adelle Wilson	City of Quesnel	Bylaw Supervisor	awilson@quesnel.ca
Gary Stuart	City of Quesnel	Facilities Manager	gstuart@quesnel.ca
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Appendix E - Wise Practices for Operating a Cooling Centre During Extreme Heat

Introduction

Cooling centres are used to mitigate the risks of heat-related illnesses during extreme heat events. To ensure their effectiveness, it is crucial to address barriers to access and provide enhanced services for heat-vulnerable populations. Operating a cooling centre during extreme heat requires thoughtful planning, addressing barriers to access, and providing tailored services for heat-vulnerable populations.

This summary combines wise practices for operating cooling centres with strategies for the needs of various populations, including managing challenging behaviors. There are several considerations when establishing a cooling centre, including location selection, accessibility, multi-functionality, services and facilities, communication, safety, and staffing.

Location Selection

Choose accessible locations for cooling centres to ensure broader community reach. Consider heat risk vulnerability maps and select sites that are easy to access by walking or public transportation.

Prioritize buildings without physical or mental barriers. Address transportation barriers by offering safe and reliable transportation options or vouchers for heat-vulnerable populations. Opt for existing public buildings, such as libraries, community or recreation centers, non-profit organizations, and faith institutions, to enhance social activity and foster a sense of belonging.

Having a variety of smaller, pre-existing cooling centres also reduces the burden on staff at any given location and can help reduce tension between different cooling centre user groups by providing need specific activities.

Accessibility

Ensure cooling centre buildings accommodate people with disabilities or reduced mobility. Reduce cost barriers by providing free or subsidized access. Consider pet-friendly policies or alternative arrangements to alleviate concerns of leaving pets behind.

Multi-Functionality

Utilize a variety of facilities that cater to diverse populations and provide activities or services aimed at heat-vulnerable groups. Capitalize on existing places where people are familiar and engaged, such as libraries, community centers, and non-profit organizations. Using places where there are existing things to do or services aimed at heat-vulnerable populations increases the likelihood that heat-vulnerable people will feel comfortable remaining in the space rather than requiring that people go somewhere that is inconvenient in order to access cool spaces.

Services and Facilities

Ensure cooling centres are equipped with reliable and efficient air conditioning systems, accessible drinking water, and recreational water options. Have health provisions such as medical supplies, and trained staff to identify and respond to signs of heat illness.

Consider extending operating hours, including public swimming pools, beaches, parks, and large cooled buildings to cater to diverse schedules. If possible, consider providing overnight accommodations during prolonged extreme heat events.

Communication

Promote cooling centre locations and services through pre-event advertising and clear signage. Address self-perceptions of vulnerability by raising awareness of heat-related risks for various populations. Develop outreach materials in multiple languages, considering cultural and language preferences of the local community. Collaborate with transportation providers, non-profit organizations, health authorities, and other stakeholders to enhance communication and reach.

Pre-event advertising: Promote cooling centre locations and services in advance of extreme heat events.

Clear signage: Develop recognizable signs that indicate the location of cooling centers.

Develop educational campaigns: Raise awareness of heat-related risks for a variety of populations and the importance of utilizing cooling centers before extreme heat events. Many people do not visit cooling centres because they do not perceive themselves as being at risk from extreme heat.

Collaboration and partnerships: Engage with various partners to support the successful implementation of cooling center operations. This could include transportation providers, non-profit organizations, school boards, health authorities, religious institutions, and other relevant stakeholders to ensure comprehensive support for heat-vulnerable populations.

Safety

Avoid overcrowding by selecting larger spaces and allowing for physical distancing. In a single space, allow for areas of congregation, including room dividers so that the space is not overcrowded and can accommodate diverse populations.

Establish partnerships with Indigenous organizations to open culturally safe spaces. Consider offering more than one cool space in the community to accommodate a variety of population needs.

Provide hand hygiene supplies, practice increased cleaning and disinfection, and ensure proper ventilation. Train staff and volunteers in first aid, infection control, and de-escalation techniques.

COVID-19 continues to be present in our communities. Health Canada (2020) suggest the following measures to reduce the risk of COVID-19 in cooling centre facilities:

Avoid overcrowding by understanding the capacity limits of your space to allow for physical distancing. Opening more locations and selecting larger spaces can help to give everyone enough space to feel comfortable.

Have access to hand hygiene and cough etiquette supplies like hand sanitizer and paper towel.

Practice increased cleaning and disinfection.

Ensure facilities have properly operating and maintained ventilation.

Follow the latest public health guidelines which may recommend screening for symptoms, physical distancing, using masks, or one-way circulation.

Staffing

Ensure clear points of contact, task assignments, and training for volunteers and staff. Train them in recognizing signs of heat illness, conflict management, and cultural safety. Schedule breaks and provide a cool space for staff to decompress.

Consider involving community navigators or outreach staff to connect individuals with community services and culturally appropriate resources.

Appendix F - Communications Plan

Key Messages Content

Pre- Heat Advisory Key Messages

- The *Pre-Heat Notification* marks the beginning of the heat season and residents should be prepared for extreme heat events.
- The *Heat Warning* means that temperatures are hot enough to be a moderate risk to the public.
- The *Extreme Heat Emergency* notification means that temperatures are dangerously high and risk to public health is very high.

Having a plan for Heat Warnings and Extreme Heat Emergencies is crucial. Please refer to the [Prepared BC emergency guides and resources](#) for detailed information on this topic.

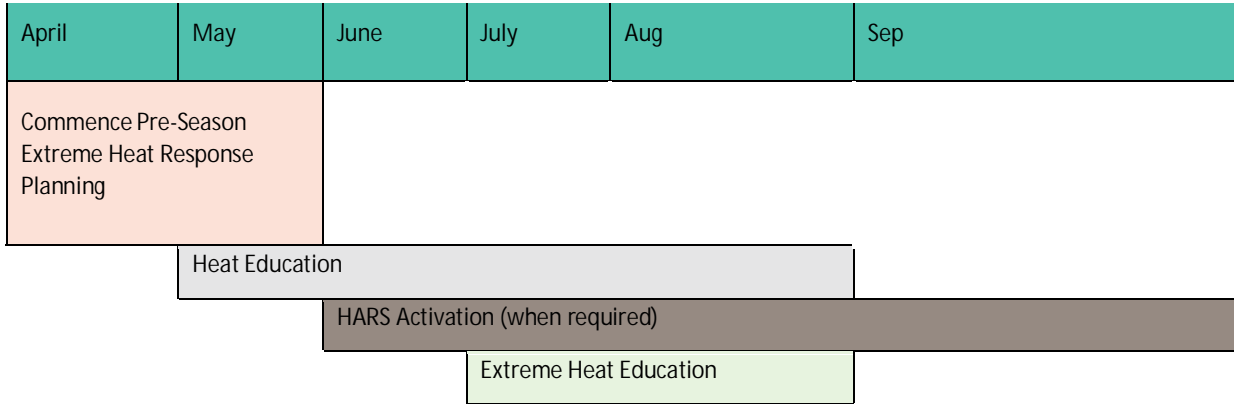
Heat Warning Key Messages

- Be prepared. Ensure you have supplies needed to stay hydrated and keep cool.
- Indoor temperatures over 26°C can cause increased risk for susceptible people. Know the signs of heat exhaustion and dehydration.
- Heat stroke is a medical emergency, so call 911 immediately. While waiting for help, try to move the person to a cooler place if possible and apply cold water to large areas of their skin.
- Pay close attention to infants and children during extreme heat events. Check in on people you know who are at increased risk.
- Plan strategies for keeping your home cooler by shading windows and opening windows and doors after sundown to allow cool air to enter your home.

Extreme Heat Emergency Key Messages

- Please be aware that indoor environments without effective air conditioning can become dangerously hot as temperatures continue to rise in the coming days.
- Regularly monitor indoor temperatures, both for yourself and for those you are checking on. Sustained exposure to indoor temperatures between above 26°C can be dangerous.
- Be aware that the top floors of buildings and rooms with windows facing west and south are likely to be particularly hot. If possible, block these with blackout curtains, cardboard, or aluminum foil.
- Check City of Quesnel website or social media for locations of cool spaces in the community you can access.
- For employers with workers working in hot conditions, modify hours of operation if feasible.
- Check in on others multiple times a day, especially in the evening, to ensure their well-being during the extreme heat.

Communications Calendar



	News Release	Website	Social Media	City Page	Email Blast	City Building Signage
Pre-season heat education		√	√	√	√	
HARS Alert 1 Activation			√	√	√	
HARS Alert 2 Activation	√	√	√	√	√	√
Extreme Heat Education		√	√	√	√	

Extreme Heat Risk Communications Package

Heat Season Content

City of Quesnel

August 2023





It's Time to Start Preparing for the Heat Season: Stay Safe in Extreme Heat

CITY OF QUESNEL

(CONTACT INFORMATION)

Pre-Heat Notification - The Heat Season Begins

As the heat season approaches, it is important to be prepared for extreme heat events. The Pre-Heat Notification marks the beginning of the heat season and serves as a reminder to residents to take necessary precautions. Here's what you need to know:

- Be aware that temperatures will be rising, and extreme heat events can occur.
- Stay informed about weather forecasts and heat advisories issued by the City of Quesnel by signing up for Everbridge Alert (insert contact information) where you will receive up to date notifications of heat warnings and emergencies.
- Take steps to protect yourself and your loved ones from the impacts of extreme heat.
- If you or someone you know needs extra support during heat events, opt in to have someone check on you or your loved one during heat warning and emergencies.

Alert 1 – Heat Warning – Moderate Risk

When a Heat Warning is issued, it means that temperatures have reached a level that poses a moderate risk to the public. Here's what you need to know:

- Take extra precautions to stay safe in the heat.
- Stay hydrated by drinking plenty of water and avoid excessive outdoor activities during the hottest parts of the day.
- Seek shade or cool indoor spaces and use fans or air conditioning to keep cool.
- Check on heat-vulnerable individuals, such as elderly neighbours or those with pre-existing conditions.
- Follow the guidelines provided by the City of Quesnel and be prepared to take necessary actions.

Alert 2 – Extreme Heat Emergency – Very High Risk

An Extreme Heat Emergency notification means that temperatures have reached dangerously high levels, and the risk to public health is very high. Here's what you need to know:

- Take immediate action to protect yourself and others.
- Seek air-conditioned, cool spaces.
- Check on neighbours, family, and friends, especially those who may be more heat-vulnerable to heat-related illnesses.
- Follow the instructions and guidance provided by the City of Quesnel and emergency authorities.

Have a Plan: Heat Warnings and Extreme Heat Emergencies

Here are some important steps to consider:

- Stay informed by regularly checking weather updates and heat advisories from the City of Quesnel.
- Create an emergency kit including essential items such as water, non-perishable food, medication, and a first aid kit.
- Develop a communication plan with your friends and family to stay connected during emergencies.
- Stay cool and hydrated. Identify cool spaces in the community and have a plan to keep yourself and others hydrated.
- Follow the guidelines and resources provided by [Prepared BC emergency guides and resources](#).

Stay Calm and Stay Cool!

Stay calm. Stay cool.

Prepare for extreme heat season.



Take the following steps to help you prepare for an extreme heat event.

1. Identify loved ones who will need extra care and support during a heatwave.

This includes:

- Seniors aged 65 years or older
- People who live alone
- People with pre-existing health conditions such as diabetes, heart disease or respiratory disease
- People with mental illness such as schizophrenia, depression, or anxiety
- People with substance use disorders
- People who are marginally housed
- People who work in hot environments
- People who are pregnant
- Infants and young children
- People with limited mobility

2. Check you have enough supplies. Useful items include:

- Bottled water
- Medications
- First-aid kit
- Infant formula and diapers
- Pet food
- Batteries
- Digital thermometer to track indoor temperatures
- Fans or air-conditioning units (check they are in good condition)
- Window covers

3. Know where to go if your home gets too hot. Cooling spaces in Quesnel may include Spirit Centre, the spray park, retail centres, parks, water bodies, or restaurants. In Quesnel, the following official cooling centres will be made available from (open time – close time) when a heat alert is issued:

- Quesnel Arts and Recreation Centre
- West Fraser Centre
- Quesnel Public Library

Follow trusted sources to get up-to-date information about heat alerts in Quesnel.

Stay calm. Stay cool.



Prepare for extreme heat season.

Did you know? B.C. has two levels of heat alerts: heat warnings and extreme heat emergencies. Stay informed by monitoring the City of Quesnel's website and social media accounts. You will receive up-to-date notifications of heat emergencies.

Heat Warning

A Heat Warning means that temperatures have reached a level that poses a moderate risk to the public.

Take the following steps:

- Stay hydrated and avoid excessive outdoor activities. Use fans or air conditioning to keep cool.
- Check on heat-vulnerable individuals. This includes seniors, individuals with pre-existing health conditions or mental health disorders, people who are pregnant or live alone, as well as infants and young children.
- Be prepared to take additional necessary actions.

Extreme Heat Emergency

An Extreme Heat Emergency notification means that temperatures have reached dangerously high levels. The risk to public health is very high. Take immediate action to protect yourself and others.

What you need to know:

- Monitor indoor temperatures and avoid sustained exposure to temperatures above 26°C.
- If you have no means to cool your home, relocate to another cooler location, such as libraries, shopping malls, movie theatres, and cooling centres.
- If you are caring for a vulnerable individual, prioritize moving them to a cooler location.

In the meantime, prepare or re-visit your household emergency plan so you know what to do when a heat alert is issued. This includes:

- ✓ Check you have enough supply of water, medications, and food.
- ✓ Check that your fans or air-conditioning units are in good working condition.
- ✓ Identify where you will relocate if your home gets too hot.
- ✓ Follow trusted sources to get up-to-date information about heat alerts in Quesnel.

Before an Extreme Heat Event

GRAPHIC	FACEBOOK
<p>An infographic that outlines three key steps:</p> <ol style="list-style-type: none"> 1) Identify heat-vulnerable household members. 2) Check your supplies. 3) Know where to go. 	<p>Stay calm, stay cool. Follow these steps to prepare for extreme heat season. Learn more: XXX.</p>
<p>Heatwaves are the leading weather-related cause of death in Canada.</p>	<p>During the extreme heat event of 2021, there were 595 heat-related deaths in B.C. between June 25 and July 1.³⁴</p> <p>Keep your household safe by having an emergency plan that covers what to do during extreme heat. Learn more: XXX.</p>
<p>Working together for a heat-safe community</p>	<p>Let's work together to stay safe and beat the heat during extreme weather events this summer!</p> <p>Remember to check on your neighbours, friends, and older family members, especially those who are chronically ill, to make sure that they are cool and hydrated.³⁵ Learn more: XXX.</p>
<p>Understanding heat alerts</p>	<p>Did you know? There are two types of heat alerts in BC: heat warnings and extreme heat emergencies. These heat alerts come from Environment and Climate Change Canada.</p> <p>Check for heat alerts on weather.gc.ca.</p>

34 Province of British Columbia, Extreme heat social media package (gov.bc.ca)

35 Province of British Columbia, Prepared BC: Household Preparedness Guide (gov.bc.ca)

During an Extreme Heat Event

GRAPHIC	FACEBOOK	INSTAGRAM
Heat Alert 1 – Heat Warning for the City of Quesnel	<p>🚨 A Heat Warning has been issued for the City of Quesnel. Residents are advised to stay hydrated, check on heat-vulnerable family and friends, and monitor for signs of heat stroke.</p> <p>Learn to recognize and treat heat-related illnesses: www.preparedbc.ca/extremeheat #BCHeat</p>	<p>🚨 It's getting hot in here! A Heat Warning has been issued for the City of Quesnel.</p> <p>Residents are advised to stay hydrated, check on heat-vulnerable family and friends, and monitor for signs of heat illness. This includes headaches, cramps, and heavy sweating.</p>
Heat Alert 2 - Extreme Heat Emergency for the City of Quesnel	<p>🚨 An Extreme Heat Emergency has been issued for the City of Quesnel. Residents are advised to stay hydrated, check on heat-vulnerable family and friends, and monitor for signs of heat stroke.</p> <p>Learn to recognize and treat heat-related illnesses: www.preparedbc.ca/extremeheat #BCHeat</p>	<p>🚨 It's getting hot in here! An Extreme Heat Emergency has been issued for the City of Quesnel.</p> <p>Residents are advised to stay hydrated, check on heat-vulnerable family and friends, and monitor for signs of heat illness. This includes headaches, cramps, and heavy sweating.</p>
Staying cool at home	<p>Did you know? Indoor temperatures typically peak around 9 p.m. Follow these tips for a comfortable sleep tonight:</p> <ul style="list-style-type: none"> ✓ Reconfigure the coolest location in your home so you can sleep there. ✓ Check that the outside temperature is cooler than inside before opening windows and doors. ✓ Take a cool shower or bath and sleep in light, loose clothing. <p>More tips: [link]³⁶</p>	<p>Did you know? Indoor temperatures typically peak around 9 p.m. Follow these tips for a comfortable sleep tonight:</p> <ul style="list-style-type: none"> ✓ Reconfigure the coolest location in your home so you can sleep there. ✓ Check that the outside temperature is cooler than inside before opening windows and doors. ✓ Take a cool shower or bath and sleep in light, loose clothing.
Working together for a heat-safe community	<p>During an extreme heat event, health risks are greatest for older adults, infants and young children, people with chronic illnesses, and those who are pregnant.</p>	<p>During an extreme heat event, health risks are greatest for older adults, infants and young children, people with chronic illnesses, and those who are pregnant.</p>

36 Province of British Columbia, Tips to stay safe, cool during extreme heat wave (news.gov.bc.ca)

	<p>This is your reminder to check in on your neighbours and loved ones to make sure they are staying safe and cool. Let's work together to stay safe in this heat! [link]</p>	<p>This is your reminder to check in on your neighbours and loved ones to make sure they are staying safe and cool.</p> <p>If you live alone, find an extreme heat buddy. This is someone who can check on you when it gets hot, and who you can also reach out to for help.³⁷ Let's work together to stay safe in this heat!</p>
Heatwave temperature check	<p>Indoor temperatures over 26°C can be dangerous. Check the temperature inside and try to get to somewhere cool for a few hours or find ways to cool down by taking a cool shower or bath, or wearing a shirt or towel soaked in cool water.</p> <p>Make a DIY cool kit: (insert link)</p>	<p>Indoor temperatures over 26°C can be dangerous. Check the temperature inside and try to get to somewhere cool for a few hours or find ways to cool down by taking a cool shower or bath.</p> <p>Make a DIY cool kit: (insert link)</p>
Heatwave health check	<p>If you take regular medications, drugs, or have a health condition, ask your doctor or pharmacist whether it increases your health risk in the heat and follow their recommendations.</p> <p>Know the signs and symptoms of heat-related illness so you can identify problems early on: [link]</p>	<p>Know the signs and symptoms of heat-related illness so you can identify problems early on. Headaches, muscle cramps, extreme thirst, and dark urine are signals you need to hydrate and cool down immediately.</p> <p>If you take regular medications, drugs, or have a health condition, ask your doctor or pharmacist whether it increases your health risk in the heat and follow their recommendations.</p>
Heatwave health check	<p>If someone is experiencing severe headache, confusion, loss of thirst, nausea/vomiting, these are signs of dangerous heat-related illness. This is a medical emergency. Call 911 and take immediate action to cool them down.</p> <p>This can look like:</p> <ul style="list-style-type: none"> - Moving them to a cooler location - Placing them in front of a fan and spraying them with cool water - Applying ice packs or cool wet towels on the neck, armpits, and groin <p>More tips: [link]</p>	<p>Do you know what to do if someone is experiencing a heat illness? Symptoms such as severe headache, confusion, loss of thirst, and nausea/vomiting due to heat are considered a medical emergency. If you notice these symptoms, call 911 and take immediate action to cool them down.</p> <p>This can look like:</p> <ul style="list-style-type: none"> - Moving them to a cooler location - Placing them in front of a fan and spraying them with cool water - Applying ice packs or cool wet towels on the neck, armpits, and groin

37 Province of British Columbia, Prepared BC: Household Preparedness Guide (gov.bc.ca)

Stay calm. Stay cool.



Resources for Extreme Heat Events in Quesnel

The City of Quesnel is committed to making sure everyone in our community stays healthy and cool during extreme heat events. This page contains information and resources on how to prepare for extreme heat season as well as what to do when a heat alert is issued.

There are currently no extreme heat emergencies in effect for Quesnel.

Last updated: June 6, 2023 12:00 Pacific

Weather conditions can be monitored using *Public Weather Alerts for Canada* or by using the *WeatherCAN app*.

Before an Extreme Heat Event

It's important to have an emergency plan that covers what to do during extreme heat. Follow these steps to create a plan for your household.

- 1) Identify loved ones who will need extra care and support during a heatwave. This includes:
 - Seniors aged 65 years or older
 - People who live alone
 - People with pre-existing health conditions such as diabetes, heart disease or respiratory disease
 - People with mental illness such as schizophrenia, depression, or anxiety
 - People with substance use disorders
 - People who are marginally housed
 - People who work in hot environments
 - People who are pregnant
 - Infants and young children
 - People with limited mobility
- 2) Check you have enough supplies. Useful items include:
 - Bottled water
 - Medications
 - First-aid kit
 - Infant formula and diapers
 - Pet food
 - Batteries
 - Digital thermometer to track indoor temperatures
 - Fans or air-conditioning units (check they are in good condition)
 - Window covers
- 3) Know where to go if your home gets too hot. This can include libraries, shopping malls, and cooling centres. Ideally, choose a location where you will enjoy spending time, as it can take a long time to cool off after getting overheated. Consider whether you will have access to water or if you should bring some with you to stay hydrated. Make sure to write down your preferred locations in your emergency plan.

The following cooling spaces are being made available at the following locations and times:

- Quesnel Public Library (opening – closing)
- West Fraser Centre (opening – closing)

Types of Heat Alerts

B.C. has two levels of heat alerts: heat warnings and extreme heat emergencies.

Heat Warning

A Heat Warning means that temperatures have reached a level that poses a moderate risk to the public.

Take the following steps:

- Stay hydrated and avoid excessive outdoor activities. Use fans or air conditioning to keep cool.
- Check on heat-vulnerable individuals. This includes seniors, individuals with pre-existing health conditions or mental health disorders, people who are pregnant or live alone, as well as infants and young children.
- Be prepared to take additional necessary actions.

Extreme Heat Emergency

An Extreme Heat Emergency notification means that temperatures have reached dangerously high levels. The risk to public health is very high. Take immediate action to protect yourself and others.

What you need to know:

- Monitor indoor temperatures and avoid sustained exposure to temperatures above 26°C.
- If you have no means to cool your home, relocate to another cooler location, such as libraries, shopping malls, movie theatres, and cooling centres.
- If you are caring for a heat-vulnerable individual, prioritize moving them to a cooler location.

Stay informed by signing up for the City of Quesnel's Everbridge Alert. You will receive up-to-date notifications of heat alerts.

What to do during an Extreme Heat Event

A Heat Alert will be issued by the City of Quesnel when high temperatures are expected for two or more consecutive days. To protect yourself during extreme heat events, take the following steps:

- Check on family members, neighbours, and friends who are vulnerable to heat and make sure they are comfortable and safe.
- Stay hydrated by drinking plenty of water. Avoid caffeine, alcohol, and drinks that are high in sugar.
- Slow down! Avoid outdoor activities during the hottest hours of the day. Plan activity before 10 a.m. or after 4 p.m.³⁸
- If you need to be outdoors, wear lightweight, loose-fitting clothing. And don't forget your sunscreen! Sunburn decreases the body's ability to cool.
- Keep windows, blinds, or curtains closed during the day to prevent excessive heat from entering homes.
- If you have access to air conditioning, turn it on to maintain a comfortable environment. It is not necessary to set it to the highest level; even a moderate setting can help ensure your safety.

Did you know?

- Indoor temperatures typically peak around 9 p.m. This means indoor environments may be most hazardous during the overnight period. Check that the outside temperature is cooler than inside before opening windows and doors.
- Sustained exposure to temperatures between 26°C and 31°C may pose a risk to the most susceptible individuals. Sustained exposure to temperatures above 31°C should be avoided whenever possible. Use thermometers to monitor indoor temperatures.
- Fans alone cannot effectively lower core body temperature, especially for older adults. Additional measures may be necessary to stay cool and safe.

Types of Heat Illnesses

Overheating can pose a serious threat to your health. It is essential to take appropriate measures to stay cool and avoid prolonged exposure to extreme heat.

There are two types of heat illnesses: heat exhaustion and heat stroke. Each requires a different set of actions. Look for the following symptoms.

Heat Exhaustion

- Heavy sweating
- Headache
- Muscle cramps
- Feeling unwell
- Extreme thirst
- Dark urine

What to do:

Seek a cooler environment, drink plenty of water, take a cool shower, and get some rest.

Heat Stroke

- High body temperature
- Confusion
- Dizziness, or fainting
- Flushed skin
- Dry skin, no sweating
- Nausea or vomiting

What to do:

Call 911 immediately. A heat stroke is a medical emergency. While waiting for help, move the person to a cooler place if possible and place ice packs or cool wet towels on the neck, armpits and groin.

Headline: Stay calm, stay cool: Prepare for the summer sizzle

Subhead: Let's work together to support each other during extreme heat season

Summer is here! While this means lots of outdoor fun and activities, it also requires extra care and caution around sun safety and heat events. Quesnel residents are reminded to stay vigilant, take necessary precautions, and work together to ensure the safety of all residents during the scorching days ahead.

Extreme heat events can pose serious health risks, especially to heat-vulnerable individuals such as the elderly, young children, and those with chronic illnesses. Remember to check on family members, neighbours, and friends who are vulnerable to heat to make sure they are comfortable and safe. People who are pregnant, those with limited mobility, or individuals who live alone are also at high risk of health impacts related to heat.

Once you have identified loved ones that need extra care and support, make sure you prepare or re-visit your emergency plan for heat events. Gather your household members, review the plan, and check you have enough supplies. Useful items include:

- Bottled water
- Medications
- First-aid kit
- Infant formula and diapers
- Pet food
- Batteries
- Digital thermometer to track indoor temperatures
- Fans or air-conditioning units (check they are in good condition)
- Window covers

Next, make sure to identify trusted sources of information to ensure you can stay up to date on local weather forecasts and heat alerts.

[Add list here]

The City of Quesnel is working with community partners to actively prepare for extreme heat events. This includes identifying cool spaces, which will provide a safe place for those to cool down, hydrate, and connect with support services.

[add quote here by City official]

By working together and staying prepared, Quesnel residents can beat the heat and enjoy a safe summer season. Remember, a small act of kindness or a simple check-in on a neighbour can make a significant difference in someone's well-being during extreme heat events.

For more information on heat safety tips and resources, visit the City's website or XXX. Stay calm, stay cool, and let's support one another through this summer's heat wave season!

EMAIL TO COMMUNITY PARTNERS

Email Subject: Heat Warning issued – ACTION NEEDED

Dear Community Partners,

A heat alert has been issued for the City of Quesnel. This is a reminder to review your heat response plans and take necessary precautions to protect the health and safety of our community.

As of [date and time], Environment Canada is forecasting that we are expecting an extended period of extreme heat until [date and time].

Here are some important actions to take:

1. Share educational information: Distribute heat safety information through your communication channels (e.g., social media, newsletters, etc.) Emphasize the importance of staying hydrated, checking in on heat-vulnerable individuals, and recognizing the signs of heat-related illnesses.
2. Activate organizational heat response plans
3. Promote trusted sources of information: This will ensure that they will receive up-to-date notifications of heat alerts. The City will also be posting updates on its official website and social media channels.
4. *[Add other key steps outlined in the Heat Response Plan]*

Please feel free to reach out if you have any questions, need assistance, or require further information. Your collaboration and support are deeply appreciated. Let's act swiftly and prioritize the safety of our residents during this heat alert.

[Add contact info here]

Stay calm. Stay cool.



What to do when a Heat Alert is issued

The City of Quesnel is committed to ensuring the health and well-being of our community members during periods of elevated temperatures. Please be aware that with the current and potentially upcoming weather conditions there will be an increased risk of extreme heat-related illnesses.

High temperatures can have severe impacts, especially on heat-vulnerable individuals. This includes:

- Seniors aged 65 years or older
- People living alone
- Those with pre-existing health conditions such as diabetes, heart disease, or respiratory disease
- Individuals with mental illnesses such as schizophrenia, depression, or anxiety
- People with substance use disorders
- Individuals with limited mobility
- Those who are marginally housed
- People working in hot environments
- Pregnant individuals
- Infants and young children

To protect you and your loved one during extreme heat events, take the following steps:

- Check on family members, neighbours, and friends who are heat-vulnerable to heat and make sure they are comfortable and safe.
- Stay hydrated by drinking plenty of water. Avoid caffeine, alcohol, and drinks that are high in sugar.
- Slow down! Avoid outdoor activities during the hottest hours of the day. Plan activity before 10 a.m. or after 4 p.m.³⁹
- If you have access to air conditioning, turn it on to maintain a comfortable environment. It is not necessary to set it to the highest level; even a moderate setting can help ensure your safety.

Stay Informed

The City of Quesnel is working closely with our community partners, emergency management agencies, and health authorities to monitor the situation and take appropriate actions. Updates and guidance will be provided as needed.

For further information and additional resources on staying safe during extreme heat events, please visit (City Website) or the Northern Health Extreme Heat Website at www.northernhealth.ca or contact the City of Quesnel Heat Response ESS number at (ESS Number).

³⁹ Province of British Columbia, Tips to stay safe, cool during extreme heat wave (news.gov.bc.ca)

[DATE]

EXTREME HEAT EMERGENCY IN EFFECT FOR QUESNEL

Environment and Climate Change Canada is issuing an Extreme Heat Emergency for Quesnel in response to predicted sustained high temperatures.

Environment Canada is forecasting that Quesnel will experience an extended period of extreme heat from [date and time] until [date and time].

What is an Extreme Heat Emergency?

An Extreme Heat Emergency notification means that temperatures have reached dangerously high levels. The risk to public health is very high. Take immediate action to protect yourself and others.

What you need to know:

- Monitor indoor temperatures and avoid sustained exposure to temperatures above 26°C.
- If you have no means to cool your home, relocate to another cooler location, such as libraries, shopping malls, movie theatres, and cooling centres.
- If you are caring for a vulnerable individual, prioritize moving them to a cooler location.

What residents need to know:

- Check on family members, neighbours, and friends who are vulnerable to heat and make sure they are comfortable and safe. Pay close attention to seniors aged 65 years or older, individuals who are pregnant, infants and young children, people with pre-existing health conditions, and those who have limited mobility.
- Prepare your household. Check you have enough supplies of bottled water, medications, food, and first-aid items. If you have access to air conditioning, turn it on to maintain a comfortable environment. It is not necessary to set it to the highest level; even a moderate setting can help ensure your safety.
- If your home gets too hot, relocate to a cooler location. Cooler locations may include Spirit Centre, the spray park, retail centres, parks, water bodies, or restaurants. The following official cooling centres are being made available from (open time – close time) at the following locations:
 - Quesnel Arts and Recreation Centre
 - Quesnel Public Library
 - West Fraser Centre
- Stay informed by following the City of Quesnel on social media [add socials accounts]. Subscribers will receive up to date information about emergencies in Quesnel.

The City of Quesnel is working closely with its community partners, emergency management agencies, and health authorities to monitor the situation and take appropriate actions. It is crucial to be prepared. Updates and guidance will be provided as needed.

Media contact:

Name

Title

Organization

Email

Phone number

Appendix G - Links and contacts of additional resources

- *The BC Provincial Heat Alert and Response System (BC HARS)*, prepared by BC Ministry of Health, Environment and Climate Change Canada, and the BC Centre for Disease Control
- *Heat Alert & Response Planning for Interior BC Communities: A Toolkit*, prepared by the Interior Health Authority
- *Heat Alert and Response Systems to Protect Health: Best Practices Guidebook*, prepared by Health Canada
- *BC Municipal Heat Response Planning in British Columbia, Canada*, prepared by the BC Centre for Disease Control
- *Extreme Heat Webpage*, prepared and presented by Interior Health
- *Heat Check-In Support Framework* A resource for non-governmental organizations to guide health check ins with heat vulnerable populations
- *Heat stress - WorkSafeBC* A guide sharing how workers can stay safe during extreme heat

Appendix H - Additional Resources



Health checks during extreme heat events

A guide for doing in-person or remote health checks

Extreme heat events can lead to dangerous indoor temperatures in homes without functioning air conditioning. Health checks are used to assess how people at high risk of heat-related illness are doing during extreme events. In-person health checks are best, but a remote health check is better than no health check.



Rapid risk assessment checklist

This guide has five pages with important information for doing health checks during extreme heat events.

PAGE 1
Rapid risk assessment checklist

PAGE 2
Recognizing and responding to heat-related illness

PAGE 3
In-person health checks

PAGE 4
Remote health checks

PAGE 5
Measuring body and room temperature

To assess whether someone is at risk, check all the personal factors that apply on the following list. **The more boxes checked, the higher the potential risk.**

- Older adult (60 years+)** The body's ability to cool itself is impaired as people age.
- Mental illness or cognitive impairment** Conditions such as schizophrenia, depression, anxiety, and dementia can reduce awareness of heat-related risks.
- Chronic disease** Chronic diseases such as diabetes, heart disease, respiratory disease, and cancer can limit the body's ability to cool.
- Living alone or socially isolated** People who live alone or do not have strong social connections are at higher risk because they have fewer people looking out for them.
- Substance dependency or use** The ability to sense and respond to heat can be affected by use of drugs or alcohol, especially for those who are dependent.
- Impaired or decreased mobility** People with impaired or reduced mobility might be less able to take protective measures during extreme heat events.
- Medication use** Some prescription medications for common conditions can cause dehydration and affect the body's ability to cool itself.
- Poor physical fitness** People who are not engaged in regular physical activity are less able to keep cool in the heat.





Recognizing and responding to heat-related illness

Heat-related illness occurs when the body overheats. It is caused by prolonged exposure to high temperatures, and can be made worse by high humidity. The signs and symptoms of heat-related illness can range from mild to severe and can progress rapidly. **If you are unsure, treat it like a life-threatening emergency and start cooling measures.**

Severe heat-related illness

Severe heat-related illness is a life-threatening emergency. Act immediately to get help and start emergency cooling measures.

Signs and symptoms

Any of the following can be signs of **severe** heat-related illness:

- Fainting or loss of consciousness
- Unusual confusion or disorientation
- Severe nausea and vomiting
- Difficulty speaking
- Unusual coordination problems
- Hot, flushed skin or very pale skin
- Not sweating
- Rapid breathing and faint, rapid heart rate
- Body temperature $>39^{\circ}\text{C}$ (102°F)
- Very low, dark urine output

Emergency measures

If someone is experiencing severe heat-related illness, take all the following actions:

- Call 911 immediately
- Stay with the individual until emergency services arrive
- Move to a cooler area, if possible
- Remove excess clothing
- Have the individual rest comfortably flat on their back facing up or in a semi-upright position and offer water
- Apply cool, wet towels or ice packs around the body, especially to the neck, armpits, and groin, until emergency services arrive

Moderate heat-related illness

Moderate heat-related illness can rapidly become severe heat-related illness. Immediate cooling is important to prevent progression.

Signs and symptoms

Any of the following can be signs of **moderate** heat-related illness:

- Nausea
- Light-headedness
- Weakness
- Extreme fatigue, malaise
- Very thirsty or dry mouth
- Difficulty swallowing
- Heat rash, unusual swelling, or cramps
- Rapid heart rate
- Body temperature $>38^{\circ}\text{C}$ (100°F)
- Reduced, dark urine output

Immediate measures for mild to moderate heat-related illness

If someone is experiencing mild to moderate heat-related illness, take as many of the following cooling actions as possible:

- Relocate individual to a cooler area
- Remove excess clothing and provide low-level fanning
- Activate air conditioning or open windows in different areas to create a cross-breeze
- Keep the individual resting comfortably flat on their back facing up or in a semi-upright position.
- Encourage sitting upright and drinking water
- Apply cool, wet towels or ice packs around the body, especially to the neck, armpits, and groin
- Call 911 if symptoms persist or get worse

Mild heat-related illness

Mild heat-related illness can rapidly become severe heat-related illness. Immediate cooling is important to prevent progression.

Signs and symptoms

Any of the following can be signs of **mild** heat-related illness:

- Feeling unwell
- Dizziness
- Headache
- Irritability
- Fatigue
- Thirst
- Skin feels very warm and sweaty
- Increase in resting heart rate
- Reduced urine output





In-person health checks



Before doing a health check, read page 2 on **Recognizing and responding to heat-related illness**

What you should have for an IN-PERSON HEALTH CHECK

- This 5-page document, either printed or digital
- Fully charged cell phone for emergency calls
- Information about others to contact if the individual is at risk
- Ear or mouth thermometer for taking body temperature
- Environmental thermometer for taking room temperature
- Wash cloths or towels for soaking in cool water
- Spray bottle
- Bottled water
- Ice packs and extra ziplock bags

Guidance for in-person health checks

- ▶ Do health checks at least twice daily, because heat-related illness can come on fast. Do one check during the evening hours when it is hottest indoors.
- ▶ When you enter the home, make sure the person is not in immediate distress and can communicate with you. **If someone is in immediate distress or cannot communicate with you, follow emergency measures** (page 2).
- ▶ Assess the situation with your own senses. Does the individual look or seem unwell? Does the environment feel hot? **If someone seems unwell and the environment is hot, take immediate measures to start cooling** (page 2) and alert others to the situation. Ask the individual for emergency contacts if you do not have this information.
- ▶ If you see no immediate risk, consider the rapid risk assessment checklist (page 1). If you do not know the individual well, ask them some questions to help with your risk assessment.
- ▶ Ask the individual about whether they have had any signs and symptoms of heat-related illness (page 2) since their last health check.
- ▶ If possible, use personal and environmental thermometers to help you understand the situation. See table on page 5 for information on measuring temperatures and cooling strategies.
- ▶ If you feel that the situation could become risky, alert others. Ask the individual for emergency contacts if you do not have this information.
- ▶ If you feel confident that the situation is safe, let the individual know when to expect the next health check, if possible.



Remote health checks



In-person health checks are best

It is much more difficult to assess how someone is coping with extreme heat during a health check by phone or digital media. However, remote health checks are better than no health checks. **If you cannot get through to the individual for a remote health check, take action.** Call someone who can help to arrange an in-person health check, such as a relative, a neighbour, a friend, or 911.



Before doing a health check, read page **2** on **Recognizing and responding to heat-related illness**

What you should have for a REMOTE HEALTH CHECK

- This 5-page document, either printed or digital
- Residential address of the individual in case you need to call 911
- Information about others to contact if the individual is at risk
- Some personal information about the individual such as age and general health

Guidance for remote health checks

- ▶ Do health checks at least twice daily, because heat-related illness can come on fast. Do one check during the evening hours when it is hottest indoors.
- ▶ Start by asking the individual simple questions about themselves and their general wellbeing. Listen carefully to how they respond, considering the signs and symptoms of heat-related illness (page **2**).
- ▶ Ask the individual about the general temperature of their home. If they have a thermostat or thermometer, ask them to tell you the current temperature. See table on page **5** for information on indoor temperatures.
- ▶ Ask about how much water or other fluids they have been drinking. Recommend that the individual drink water regularly through all hours of the day.
- ▶ Ask about how they have been sleeping in the heat and what they have been doing to stay cool overnight.
- ▶ Make suggestions for keeping themselves and their home cool. See table on page **5** for information on cooling strategies.
- ▶ If you feel that the situation could become risky, alert others. Ask the individual for emergency contacts if you do not have this information.
- ▶ If you feel confident that the situation is safe, let the individual know when to expect the next health check, if possible.



Measuring body and room temperature

If you can get information on body temperature or room temperature, it may help you to assess the situation during health checks. Use the following tables to guide you.

Body temperature



- A normal body temperature is 36.5-37.0°C (97.7-98.6°F).
- A resting body temperature over 38°C (100.4°F) may indicate moderate heat-related illness.
- A resting body temperature over 39°C (102.2°F) requires immediate emergency attention.

Indoor temperature



- Indoor temperatures of 26°C (78.8°F) and below are usually safe.
- Risk of heat-related illness starts to increase at indoor temperatures over 26°C (78.8°F) for susceptible people.
- Risk of heat-related illness increases significantly at sustained indoor temperatures over 31°C (87.8°F) for susceptible people (page 1).

Reducing body temperature

- Take off extra layers of clothing to expose as much skin as possible.
- Have access to cool drinking water and drink regularly, even when not feeling thirsty.
- Prepare damp towels in a plastic bag and put them in the fridge to apply on the body regularly.
- Take cool showers or baths or sit with feet in cool water.
- Fill a spray bottle with cool water for misting.
- Limit physical activity and exposure to the outdoors during the hottest hours.

Reducing indoor temperatures

- Turn on an air conditioner, if available.
- Turn on fans if the room temperature is below 35°C.
- Move to a cooler space within the home, if safe to do so.
- Draw curtains, shades, or shutters to help block direct sunlight.
- Cover windows with a blanket or cardboard if there are no curtains or shades.
- Close windows during the heat of the day to trap cooler air indoors.
- Open windows overnight or whenever there is a cool breeze, keeping safety in mind.
- Turn off heat-generating devices such as appliances, electronics, lights, etc.



COOL KIT

Cool down on hot days with these tips and tools.



Thermometer

- Monitor indoor temperatures for yourself and those you are checking on
- It may be unsafe for some people at greater risk of heat illness to spend extended time in temperatures 26°C to 31°C
- Spending more than a brief period in temperatures over 31°C should be avoided for people who are at greater risk of heat illness



Small Tote

- Take a cool shower, bath, or sponge bath to cool off. Cool water helps evaporate heat from the body
- If you do not have access to a bath, fill the cool kit tote with cool water and soak parts of your body in it or give yourself a sponge bath



Towel

- Wet the towel and apply it to your skin
- You can also wear a wet shirt or other garment



Gel Compress

- Place the gel compress in the freezer
- Once chilled, wrap a piece of cloth around the compress and apply it to the sides of your neck, armpits or groin area
- Keep one in the freezer and rotate



Water Bottle

- Drink plenty of water to stay hydrated, before you feel thirsty



Spray Bottle

- In addition to wearing a wet shirt or towel, fill the spray bottle with cool water and mist your skin
- Apply a lot of water and often

For more information and updates, visit:
vch.ca/heat or vancouver.ca/hot-weather
(translations available).

THREE STEPS TO COST-EFFECTIVE APARTMENT AND CONDO HEAT PROTECTION

Step 1: Plan ahead to keep cool

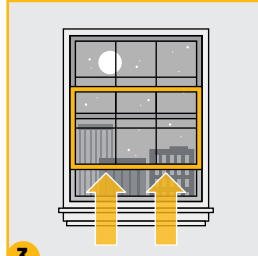
Do-it-yourself, \$0



1 Help vulnerable neighbours, family, friends prepare and arrange to check on them during heat events.



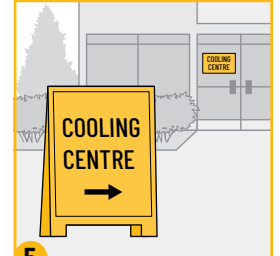
2 Sign up for heat alerts on your phone (e.g., [WeatherCan](#)).



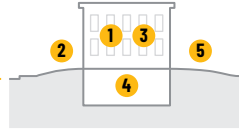
3 Learn how to best use windows and doors to naturally ventilate your unit, particularly at night.



4 Choose energy efficient lights and appliances that produce less “waste” heat.

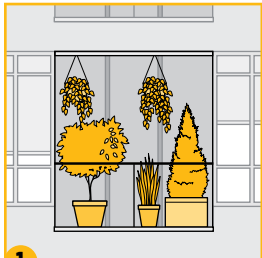


5 Arrange to work or sleep in a cooler place (e.g., shared cooling space).

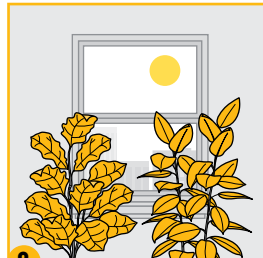


Step 2: Complete simple upgrades

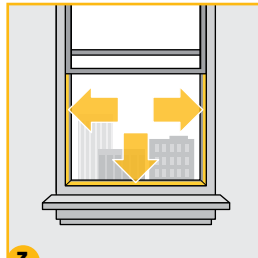
Do-it-yourself, for under \$250



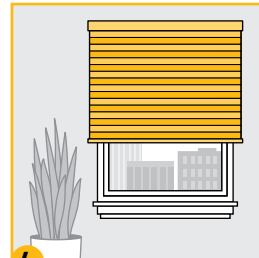
1 Green your balcony or deck with potted, hanging and climbing plants.*



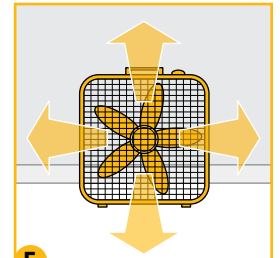
2 Place tall plants with large leaves near light-facing windows.



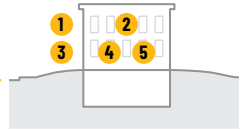
3 Improve unit insulation and air tightness (e.g., draft strips).



4 Install blinds, heat-resistant curtains, or films on windows.

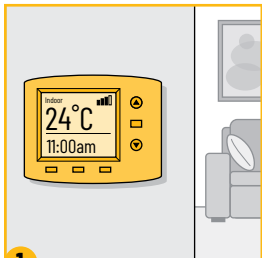


5 Use portable or ceiling fans that increase air circulation.

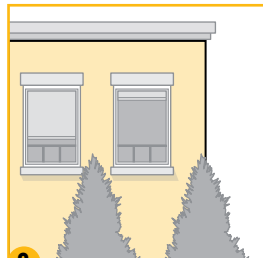


Step 3: Complete more complex upgrades

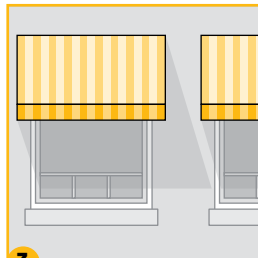
With building managers, for over \$250



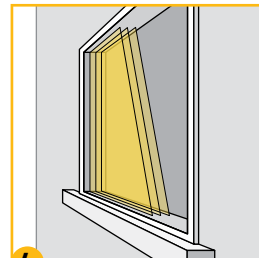
1 Install temperature and humidity monitors or controls.



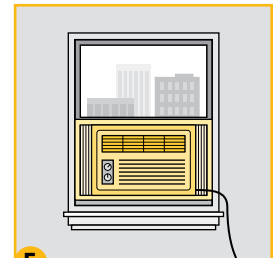
2 Paint unit walls with white paint or light colours.



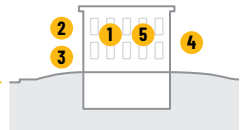
3 Shade windows with outdoor shutters and awnings.



4 Install windows and doors with low Solar Heat Gain Coefficients, that let less heat in.



5 Install and maintain a heat pump or air conditioning unit.



* In places at risk of wildfire, the use of green infrastructure must be considered alongside [FireSmart™](#) guidance.



THREE STEPS TO COST-EFFECTIVE HOME HEAT PROTECTION

Step 1: Plan ahead to keep cool

Do-it-yourself, \$0



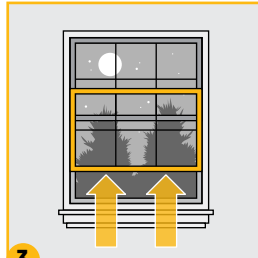
1

Help vulnerable neighbours, family, friends prepare and arrange to check on them during heat events.



2

Sign up for heat alerts on your phone (e.g., [WeatherCan](#)).



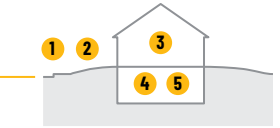
3

Learn how to best use windows and doors to naturally ventilate your home, particularly at night.



4

Choose energy efficient lights and appliances that produce less "waste" heat.



5

Temporarily arrange to work or sleep in cooler rooms (e.g. basement).

Step 2: Complete simple upgrades

Do-it-yourself, for under \$250



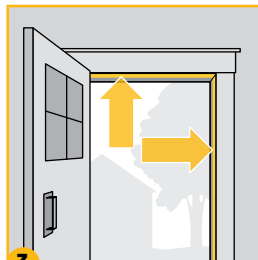
1

Plant and maintain shade trees, especially along south, east and west facing walls.*



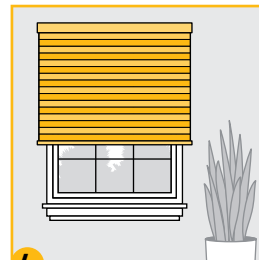
2

Grow plants climbing up your walls, and on decks and balconies.*



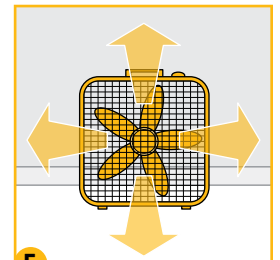
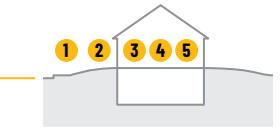
3

Improve home insulation and air tightness (e.g., draft strips).



4

Install blinds, heat-resistant curtains, or films on windows.



5

Use portable or ceiling fans that increase air circulation.

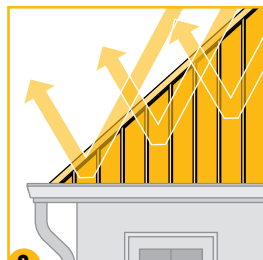
Step 3: Complete more complex upgrades

Work with a contractor, for over \$250



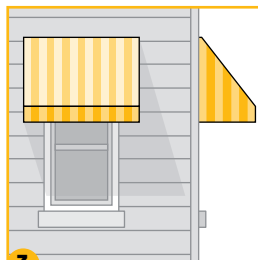
1

Convert paved areas to vegetation which absorbs less heat and more water.*



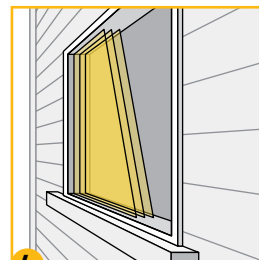
2

Install a green (vegetated) or reflective roof.*



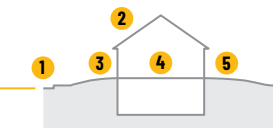
3

Shade windows with outdoor shutters and awnings.



4

Install windows and doors that have a low Solar Heat Gain Coefficient (let less heat in).



5

Install and maintain a heat pump or air conditioning unit.

* Seek local advice on appropriate native species, and, in places at risk of wildfire, consider [FireSmart™](#) guidance.



Scan the code or click the link for additional resources at www.intactcentre.ca

Appendix I – Community Engagement Report

Engagement activities conducted to inform this Plan involved:

- Gathering input to understand the state of current vulnerabilities and risks to support planning for future extreme heat events,
- Seeking community feedback regarding experiences during the 2021-2022 extreme heat events,
- Identifying the best communication approaches and tactics in each community for the various populations, and
- Identifying priorities and next steps to prepare for extreme heat events in region.

The engagement process completed to inform this Plan included active involvement of municipal staff and community partners, and was informed by an advisory committee made up of municipal staff from Williams Lake, 100 Mile House, and Quesnel. This committee's collective knowledge, insights, and collaboration greatly contributed to the development of a robust heat response plan for Quesnel.

Stakeholders engaged to inform the development and implementation of this Plan include:

Representatives from the City of Quesnel

- Bylaw Supervisor/ Building Inspector
- Facilities Manager
- Director of Development Services
- Planning Technician
- RCMP
- Fire Chief

Representatives from Key Service Providers/ Community Partners

- Ministry of Child and Family Development
- Dakelh Quesnel Community Housing Society
- Quesnel Shelter and Support Society – Seasons House, Bridges Supportive Housing
- Quesnel Association for Community Living
- North Cariboo Seniors Council
- Quesnel Tillicum Society

Health Authority Staff (Northern Health)

- Advisor, Healthy Settings
- Manager of Specialized Services
- Manager of Critical Care and Surgery

Community and stakeholder engagement processes involved the following:

- The Project Advisory Committee mentioned above was established, comprised of municipal staff from neighbouring Cariboo communities, to support the development of Heat Response Plans in the three Cariboo communities. The committee met regularly to provide valuable input, share expertise, and collaborate on the development of the heat response plans.
- An Extreme Heat Impacts and Considerations workshop was successfully conducted with representatives from municipal government, health authorities, and community partner organizations.
- Local stakeholders, including community service provider organizations, healthcare providers, were identified and engaged throughout the planning process. They were provided with comprehensive information and education materials on heat risks, mitigation strategies, and the ongoing heat response planning efforts. This ensured broad awareness and involvement in the development of the Heat Response Plan.

- Interviews and focus groups were conducted with key community stakeholders, such as municipal officials, emergency services personnel, health care professionals, and individuals serving clients who are amongst a heat-vulnerable population. Their valuable perspectives, insights, and experiences related to heat events and their impacts were gathered. These inputs were instrumental in understanding local needs, challenges, and strategies to enhance the effectiveness of the Heat Response Plan.
- The community participated in a vulnerability and asset mapping process. Collaborative workshops and online platforms allowed community members and stakeholders to identify heat-vulnerable areas and populations in the Cariboo communities. Additionally, available community resources and assets that could be mobilized during heat events were mapped. This mapping exercise informed the prioritization of interventions and the effective allocation of resources.
- Stakeholder workshops were conducted to develop and refine a community alert protocol for heat events. Representatives from emergency services, healthcare providers, local government, community organizations, and other relevant stakeholders actively participated. Through collaborative discussions, the workshops resulted in the development of a communication and response plan. This system enables timely notifications and provides guidance to the community during extreme heat events.