



Heat Alert & Response Planning
for Interior BC Communities:
A TOOLKIT

July 2020

ACKNOWLEDGEMENTS

Interior Health gratefully acknowledges the participation of multiple stakeholders for their time, intellectual contribution and commitment to informing the content of this toolkit. The communities of Ashcroft, Osoyoos and Lytton, as well as regional and provincial agency representatives, have been leading in the adaptation of existing practices to the rural context and have been innovating promising practices to the small rural community setting. What we have learned through consultation and engagement is reflected throughout this toolkit.



Interior Health



Health Canada Santé Canada

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This toolkit was prepared by Kerri Klein, SHIFT Collaborative

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A Message from Dr. Sue Pollock, Medical Health Officer, Interior Health

Climate change and its impacts on health are critical considerations as we move forward and prepare for extreme weather, and particularly extreme heat. Communities throughout British Columbia's interior are hotter than other areas of Canada and this makes them more vulnerable to current and expected future extreme heat. Implementing measures that anticipate extreme heat and its impacts on health helps communities and the people who live there to be ready and prevent the most severe consequences of heat on health. I look forward to continuing to learn together and adapting our plans and approaches as needed to maintain health and prevent illness in response to climate change. We each have a role to play and working together will have a greater impact on the overall health of our communities.

1. INTRODUCTION

Due to changes in the climate, British Columbia is experiencing an increase in annual summer temperatures and extremely hot days. On average, Canada is warming at about double the magnitude of global warming, and British Columbia is warming faster than many parts of Canada.¹

Episodes of very hot weather, also known as heatwaves, are dangerous for the health and wellbeing of your community and can cause illness and death. Even though we often have hot summers in British Columbia's interior, we can expect an increase in the frequency, duration and severity of extreme heat events due to climate change.

As the health risks from extreme heat are expected to continue rising, it is critical that partners work together across sectors to prepare for hot weather and increase the resilience of our Interior communities. The good news is that effective adaptation can greatly reduce the negative impacts of heat. Fortunately, we can learn from efforts that are underway in communities across Canada to develop heat response systems and strategies that have been successful and adapt them to our unique context in the Interior of BC.

Purpose of this Toolkit

The purpose of the toolkit is to provide community partners practical information and resources that will assist them in developing and implementing systems and strategies to respond to extreme heat, specifically **in rural communities**.

¹ Environment and Climate Change Canada (2019). Canada's Changing Climate. [changingclimate.ca](https://www.changingclimate.ca)

2. IT'S GETTING WARMER

In B.C., average annual temperature increases of 1.3 to 2.7°C are expected by 2050, with projected impacts including more frequent and severe heat waves resulting in increased heat-related illnesses.²

Over the next 30 years, the number of extremely hot days (> 30°C) in a year is expected to more than double in some parts of Canada.

While the interior of B.C. has always been known for its hot summer weather (and is often the 'hot spot' in Canada and B.C., see Figure 1) climate models show that this region is expected to become even warmer, with more frequent and severe extreme heat events.

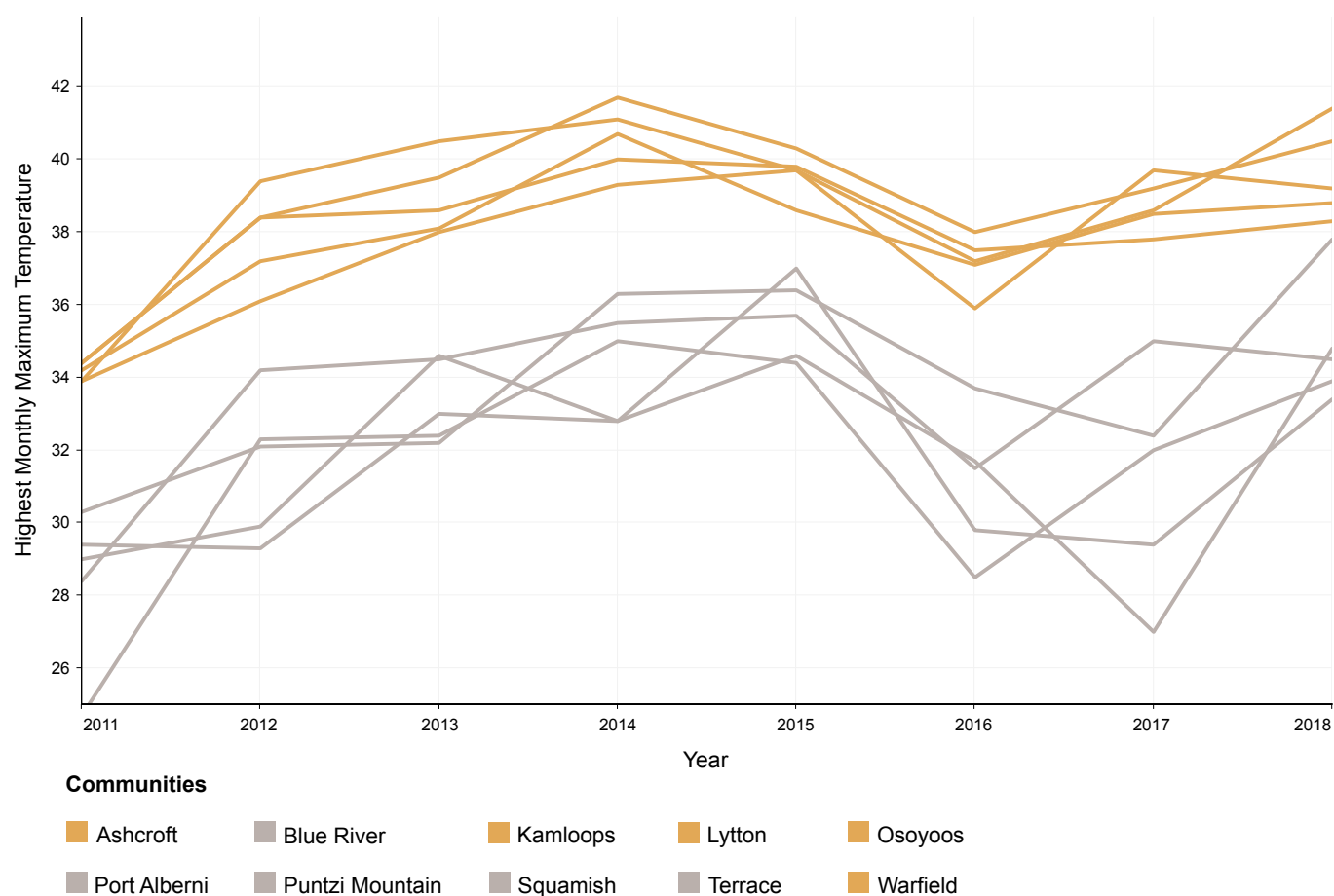


Figure 1. Highest monthly maximum temperature for the month of July (2011-2018): Interior region vs hottest communities in BC

² Province of British Columbia (2020). Impacts of Climate Change. www2.gov.bc.ca/gov/content/environment/climate-change/adaptation/impacts



What is a 'heatwave'?

Heat waves are extended periods of time (at least two days) with relatively high temperatures for a given location. Interior Health collaborates with Health Canada and Environment and Climate Change Canada (ECCC) to monitor and issue heat warnings for the region. For example, a heat warning is called in the Interior Health region when temperatures are **above 35°C for two consecutive days and overnight temperatures remain above 18°C³**.

Factors that play a role in the magnitude of a heatwave include humidity, nighttime temperatures, and regional variations in relative extreme temperatures.

The number of heat warnings issued to communities in the Interior can vary significantly across the region. The Southern Interior tends to have the most heat warnings (see Figure 2).

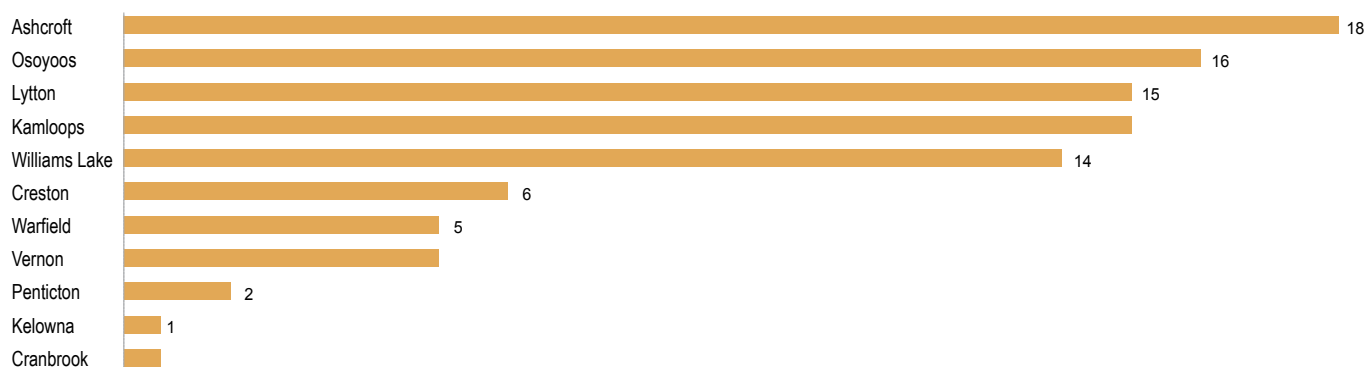


Figure 2. Number of heat warnings for select communities in the Interior Region (2013-2017)

³ Interior Health (2020). Heat Advisories. [www.interiorhealth.ca/YourEnvironment/Emergency/ExtremeHeat/Pages/Heat-alert-and-response-system-\(HARS\).aspx](http://www.interiorhealth.ca/YourEnvironment/Emergency/ExtremeHeat/Pages/Heat-alert-and-response-system-(HARS).aspx)

3. HEALTH IMPACTS OF EXTREME HEAT

In Canada, heat waves are the leading weather-related cause of death. People tend to adapt to gradually rising temperatures, but extreme heat events relative to average temperatures can manifest in dire health consequences.⁴ For example, in 2009, B.C. experienced a heat wave that brought temperatures of > 31°C in coastal areas and > 36°C inland. This event contributed to approximately 200 additional deaths and a total cost estimated at around \$120 million.⁵

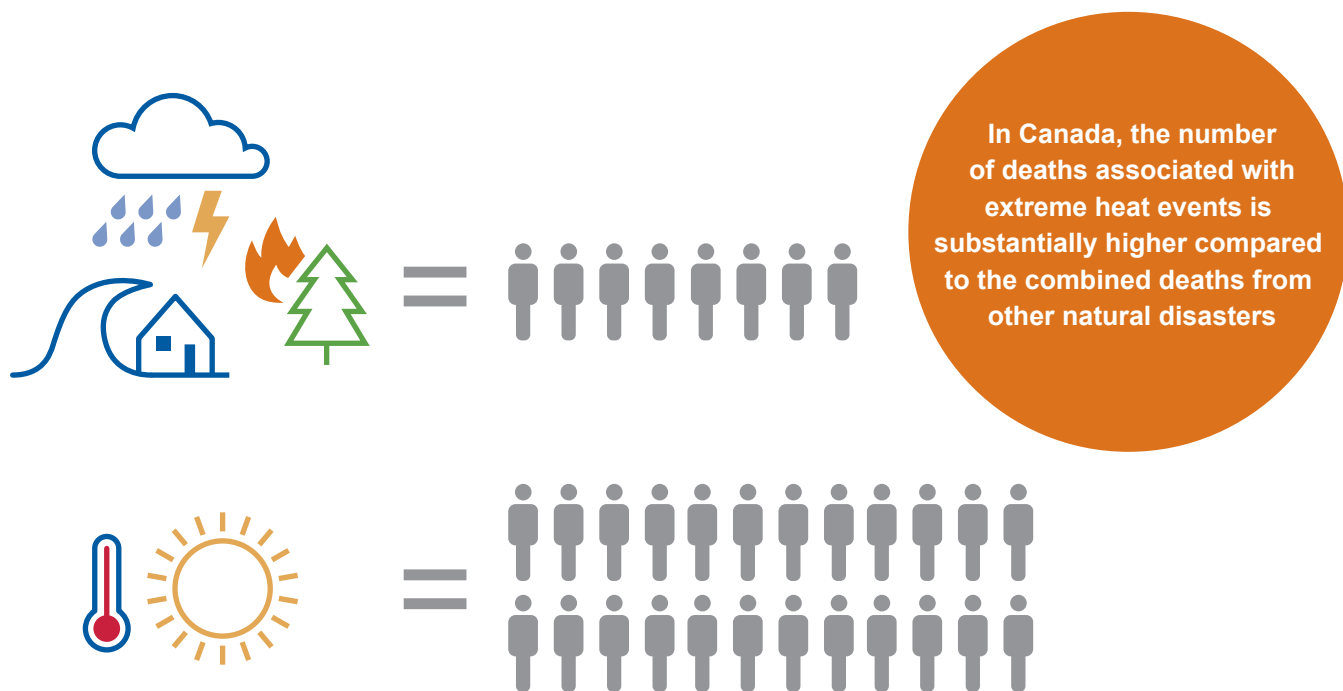


Figure 3. Number of deaths associated with extreme heat⁶

4 Province of British Columbia (2019). BC Climate Risk Assessment Summary. www2.gov.bc.ca/assets/gov/environment/climate-change/adaptation/climate-risk-summary.pdf

5 Henderson, S. B., Wan, V., & Kosatsky, T. (2013). Differences in heat-related mortality across four ecological regions with diverse urban, rural, and remote populations in British Columbia, Canada. *Health & Place*, 23, 48-53. Retrieved from doi.org/10.1016/j.healthplace.2013.04.005

6 Y Guo, Gasparrini, Li, S et al. (2018). Quantifying excess deaths related to heatwaves under climate change scenarios: A multicountry time series modelling study & S.1 Appendix. *PLoS* 15(7): e1002629. doi.org/10.1371/journal.pmed.1002629

Impacts of Heat on Human Health

Heatwaves have severe negative consequences for human health. Direct impacts to health from heat can result in a cascade of illnesses including heat cramps, heat exhaustion, and life-threatening heatstroke. During periods of extreme heat, people may also succumb to underlying health conditions (e.g. respiratory, cardiovascular conditions) that are heat sensitive.⁷ Heat also has important indirect health effects (see Figure 4). For example, heat waves can trigger or exacerbate mental, behavioural, and cognitive disorders ranging from negative feelings of exhaustion or stress to suicide. In addition, a heat wave may place stress on infrastructure and transportation systems, economic productivity, and ecosystems.

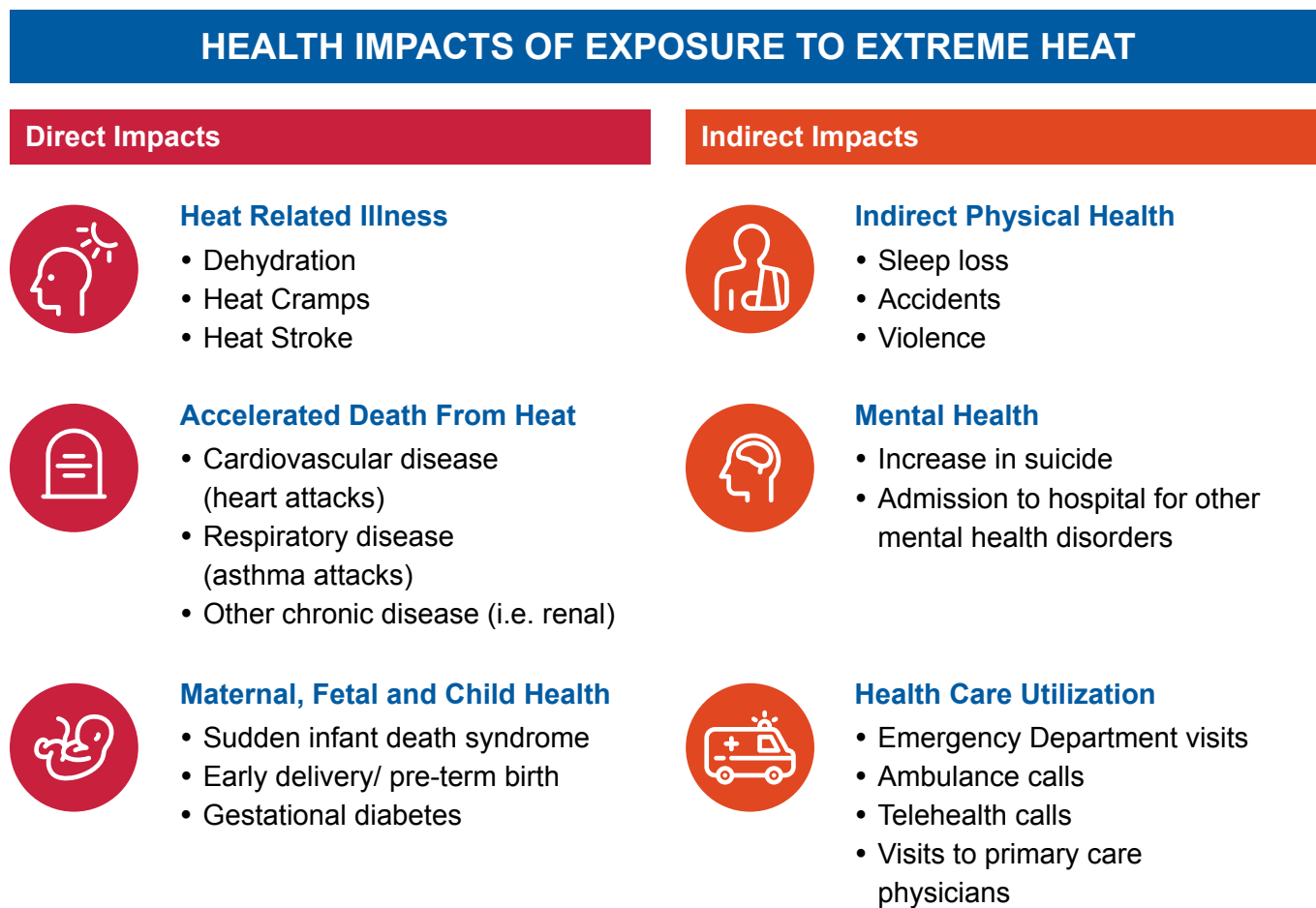


Figure 4. Direct and indirect health impacts of exposure to extreme heat

7 Health Canada (2012). Heat Alert and Response Systems to Protect Health: Best Practices Guidebook. Located on March 30, 2020 at: www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/pdf/pubs/climat/response-intervention/response-intervention-eng.pdf



What Elements Impact Heat Health Risk?

There are five main elements of heat exposure that are projected to increase under climate change and compound the health risks associated with heat waves:

- **Frequency** – The more often extreme heat events occur, the greater the risk of adverse health outcomes. The lack of a rest period between events magnifies the risk.
- **Duration** – The longer the heat event, the higher the health risk and the greater the likelihood of impacts on other sectors (power outages).
- **Intensity** – The higher the daily maximum and minimum temperature (or other indices of heat stress) the greater the health impact.
- **Heat Season (Duration and Timing)** – the heat season may start earlier and end later which could result in an inability to acclimatize sufficiently or implement cooling strategies. Early summer extreme heat events generally result in higher health impacts than those occurring later in the summer.
- **Geographic Location and Range** – due to climate change, we may experience extreme heat events in places where they have never before occurred.

Who is Most Vulnerable to Impacts of Heat?

Some populations and individuals in your community will be more vulnerable to the negative health risks from extreme heat. Therefore, it is important to understand who is at particular risk in order to effectively target extreme heat response strategies and ensure everyone in the community is safe. Characteristics that can make someone more vulnerable to extreme heat include:












	Older Adults: may have physiological characteristics that can make them more vulnerable to heat, including mobility challenges and social isolation
	Infants & Young Children: physiologically more vulnerable to heat; dependent on caregivers to recognize heat impacts and take action
	Pregnant Women: maternal and fetal health outcomes may be adversely impacted (i.e. pre-term births, lower birth weights)
	No air conditioner: or not using it during extreme heat events
	Poor health status: chronic illness, need for medications that increase heat-health risks, dependence on caregiver
	Substance use disorders: use of alcohol or drugs can impact heat regulation
	Mental health disorders: certain psychiatric medications can increase heat-health risks and certain disorders may be exacerbated by heat waves
	Social isolation: people who live alone or are socially isolated, homeless or unsheltered may have limited access to heat-health information and services; limited social networks
	Low income: concerns with costs associated with running an air conditioner and accessing other cooling options; living in older housing that may gain and retain heat
	Outdoor Physical Activity: greater environmental exposure and physical strain
	Type and location of place of work and/or residence —people in occupations with exposure to high temperatures or those living on higher residential floors without air conditioning

Figure 5. Heat-vulnerable groups⁸

8 Adapted from Health Canada (2011). Adapting to Extreme Heat Events: Guidelines for Assessing Health Vulnerability, pg 7. www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/hecs-sesc/pdf/pubs/climat/adapt/adapt-eng.pdf

4. HEAT RESPONSE IN INTERIOR RURAL COMMUNITIES

The majority of the 60 municipalities in the Interior Health Region are **rural communities** with diverse assets and needs. Some of the important considerations for developing a heat response plan for rural communities in the Interior of B.C. are:

- **Exposure to heat stress:** The Kootenays, Okanagan and Thompson Cariboo Shuswap regions all have different levels of exposure to extreme heat. Thus, heat response plans are not ‘one size fits all’. Communities can work with Interior Health to assess the specific heat risk for their region and plan accordingly.
- **Community Capacity:** Not all rural communities will have planners and emergency management staff that can provide leadership to the development and implementation of a Heat Alert Response System (HARS). Thus, strong community partnerships, collaboration, and volunteers will be critical to preventing health risks from heat.
- **Cooling Centres:** Cooling centres are air-conditioned spaces that the public are encouraged to use to cool off during extreme heat events. In urban communities, these spaces are commonly recreation centres, pools, libraries, and shopping malls. The types of cooling centres in rural communities may look very different, depending on infrastructure in the community. They may include spaces such as places of worship, community halls, seniors centres or legions.⁹
- **Engagement and Communication Channels:** One of the main steps in developing a HARS is the development of a communications plan. While many rural communities will not have their own radio station or newspaper, communities may rely more on social networks (e.g. caregivers, community groups) to raise awareness of heat alerts and adaptations.
- **Special Populations to Consider:** Rural Rural communities will also have unique heat vulnerable groups to consider such as outdoor workers (e.g. farmers, agricultural workers, tree planters), tourists and those recreating outside (e.g. campers, RV’s, hikers).
- **Competing Priorities:** Rural communities are often on the frontlines of adapting to climate change, responding to hazards such as wildfires, air quality from wildfire smoke, flooding, drought and water quality/quantity concerns. While the impact of extreme heat is hard to visualize relative to other climate hazards like wildfire and floods, it can have serious consequences for health and wellbeing in communities. It is important that heat is integrated into rural Emergency Response Plans to ensure a robust and coordinated response to potentially multiple, concurrent and or successive challenges.

⁹ In 2020, communities and health authorities needed to give special consideration to adapting their HARS to align with physical distancing guidelines to prevent spread of COVID-19. One example of “Managing Heat Risk During COVID-19” can be found here: www.ghhin.org/assets/Checklist-COVID-HEAT-final.pdf

Example of a Heat Alert and Response System (HARS) from a Rural Interior Community: Village of Ashcroft

Historic temperature data shows that Ashcroft is one of the hottest municipalities within the Southern Interior region of B.C. In 2018, Interior Health partnered with the Village of Ashcroft and a Community Stakeholder Committee to develop and implement a HARS plan to lessen the negative health impacts of extreme heat events, with a focus on at-risk populations. The Community Stakeholder Committee is comprised of local and regional government partners, community members and organizations, and First Nation Band members. Various community stakeholders were engaged in the development of the plan and they are responsible for their respective response actions during an extreme heat event. The Village of Ashcroft is the lead agency responsible for initiating the plan once a heat alert is issued.



The plan outlines protocols and actions—including who is responsible—for three stages of a heat alert:

- **Pre-heat Notifications:** Education and awareness that the Village is starting to experience hot weather and to watch for further heat alerts (i.e. mail out of pamphlets, update heat information on website, email stakeholder contacts, educate employees).

Level 1 Heat Advisory: Notify the public that the Village of Ashcroft will be experiencing extremely hot weather ($\geq 35^{\circ}\text{C}$ for 2 consecutive days AND overnight temperature $\geq 18^{\circ}\text{C}$) along with key public health messaging related to prevention of heat related illness.

Level 2 Heat Advisory: Notify the public that the Village is experiencing extremely hot weather ($\geq 35^{\circ}\text{C}$ for 3 consecutive days AND overnight temperature ≥ 18) affecting the health of the population. Messaging aims to protect those that are more susceptible to heat related health problems (i.e. prepare cooling centres, signage in parks to limit outdoor activity, review operating hours at pool, etc.) Public messaging may need to include information on cooling facilities with operating times and other offered services by participating stakeholders. The general public may need assistance to avert heat related illness (i.e. open and promote community hall as cooling centre, bottled water available at key locations, etc.)

An annual review of the heat response plan is suggested to evaluate what is working well and what can be done differently to adapt the plan accordingly.



5. WHAT CAN YOUR COMMUNITY DO TO PREPARE FOR HEAT?

Keeping everyone safe during extreme heat events requires collaboration across public health, emergency management departments, local governments, community partners and community members.




Heat Alert and Response Systems (HARS)



Communities across Canada are preparing for extreme heat by developing a **Heat Alert and Response System** (HARS) which:

- **alerts** the public about the risks of heat,
- facilitates the development of a **community response** to help people at highest risk, and
- provides individuals with **information** and other **resources** to help them take protective actions before and during an extreme heat event.

Most communities already have an all-hazard or emergency response plan in place which can be adapted for extreme heat.

A HARS involve the following elements and tasks that would be shared by various stakeholders such as Interior Health, local governments, and community partners:

Core Element of a HARS	Purpose	Key Tasks
 <p>Community Mobilization & Engagement</p>	<p>Requires a coordinating agency to prepare the community for the upcoming heat season by identifying community needs, recruiting stakeholders and developing plans to implement a HARS.</p>	<ul style="list-style-type: none"> • Identify a principal coordinating agency for the community • Engage broad stakeholders to identify community needs • Mobilize the community to develop and maintain the HARS plan • Initiate and mobilize pre-heat season preparations
 <p>Alert Protocol</p>	<p>Identifies weather conditions that could result in increased heat-health impacts in the region. The protocol is used to alert the public, as well as government officials and stakeholders, who then take pre-determined actions from the HARS plan to protect health.</p> <p>Interior Health has established a heat advisory system that is activated when temperatures are above 35°C for two consecutive days and overnight temperatures above 18°C.</p>	<ul style="list-style-type: none"> • Establish formal alert protocol • Monitor local weather conditions • Monitor heat-health vulnerabilities • Include protocol activation: <ul style="list-style-type: none"> » Alert public, government officials & stakeholders » Initiate pre-determined actions (communications plan and response plan) • Include deactivation protocol
 <p>Communications Plan</p>	<p>Raises awareness about the impacts that heat may have on health and provides advice on how to reduce health risks (e.g. through media releases, websites, social media, etc.).</p> <p>Communication happens before and during the heat season and during extreme heat events through media, interpersonal networks and community events.</p>	<ul style="list-style-type: none"> • Establish formal communication plan • Develop pre-heat season education and awareness campaign • Include audience-specific heat-health messages and outreach strategies

Core Element of a HARS	Purpose	Key Tasks
 <p>Community Response Plan</p>	<p>Mobilizes the community and individuals to take actions that protect against extreme heat.</p> <p>Facilitates actions of community partners to develop and implement strategies aimed at reaching vulnerable individuals who require assistance during periods of extreme heat.</p>	<ul style="list-style-type: none"> • Establish formal community response plan • Include measures tailored to the needs of those who are most vulnerable to heat • Engage stakeholders to implement the plan.
 <p>Evaluation Plan</p>	<p>Assesses post-heat season activities and identifies areas for improvement.</p> <p>Evaluates the extent to which implemented measures are timely, relevant, effective and meet local priorities and contribute to the reduction of health impacts.</p>	<ul style="list-style-type: none"> • Establish formal evaluation plan • Implement real-time health surveillance • Hold end-of-season evaluation • Assess effectiveness of measures • Identify improvement opportunities

A HARS is most effective when it is delivered in conjunction with preventative actions that provide long-term and sustainable protection from extreme heat events such as reducing greenhouse gas emissions, improving social networks and promoting healthy communities.

HEAT ALERT RESPONSE SYSTEMS (HARS)

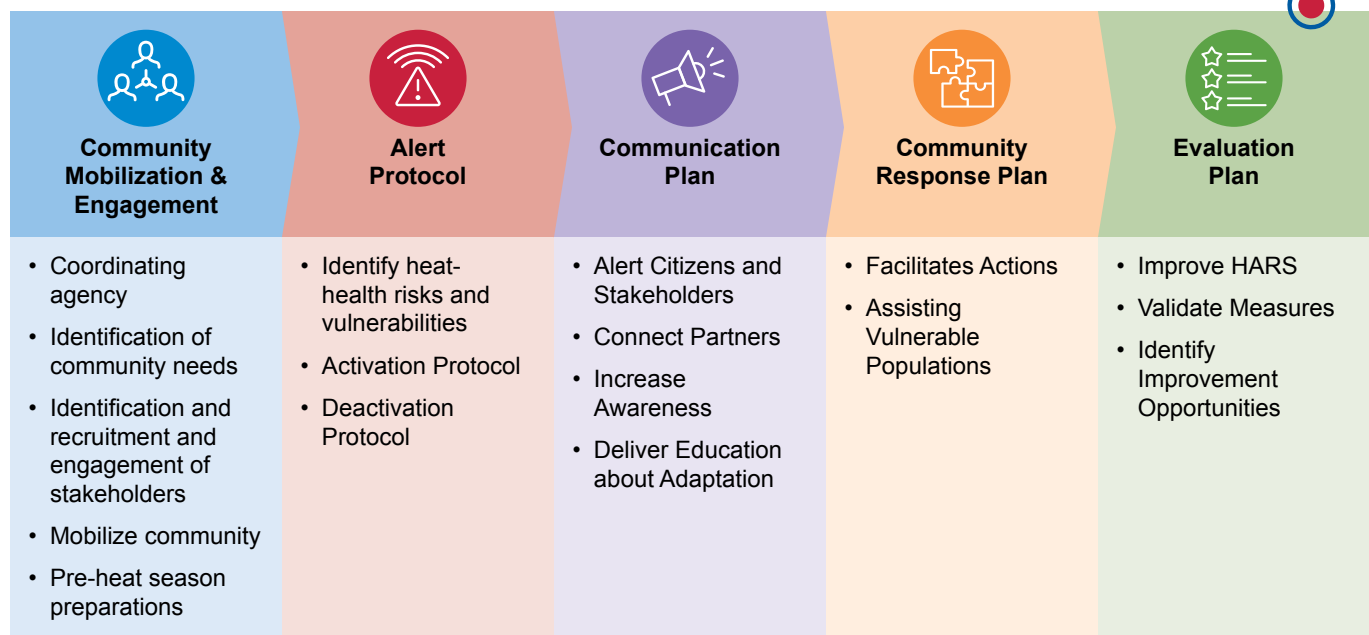


Figure 6. Community heat alert and response system and preventive actions to reduce heat-health risks



5.1 COMMUNITY MOBILIZATION AND ENGAGEMENT

Developing and implementing a HARS requires collaboration, leadership and engagement across several sectors and stakeholders. Some of the most common stakeholders involved in heat response planning include:

- Public health officials
- Local and regional governments
- First Nations
- Emergency management staff
- Fire officials
- First responders (EMT, etc.)
- Community organizations that work with vulnerable populations (seniors, low income, homeless)
- School districts
- Home support staff
- Staff from seniors' homes
- Community members and volunteers



To develop a HARS, it is important to **identify an organization that will be responsible for leading the initiative**. The lead organization coordinates overall development of the plan, engages partners and assumes the role of, or picks, a local champion. The lead agency needs to be clearly identified to all participants. The stakeholders should understand their respective roles and responsibilities and be engaged in various stages of the plan development. (Note: local governments are often the lead organization for a community HARS.)

Health Canada (2012). Heat Alert and Response Systems to Protect Health: Best Practices Guidebook

Specific Roles

Federal and Provincial Government

Federal and provincial bodies support heat alert and response by providing up to date data and research as well as producing resources, training, tools and promotional materials for staying safe and healthy in extreme heat.

- Environment and Climate Change Canada (ECCC) works with health authorities to develop heat alert triggers for regions across Canada. Health Canada works closely with the Meteorological Service of Canada in monitoring the weather and developing heat warnings that underpin a successful heat response.
- Health Canada also produces educational, communications and promotional material on heat risks and adaptive behaviours that can be accessed online and sent to communities by request.
- Emergency Management BC is the province's lead coordinating agency for all emergency management activities, including response, planning, training, and testing.

Interior Health

Interior Health can support communities across the region to reduce the impact of extreme heat events and develop a HARS. Specifically, Interior Health can:

- Issue heat advisories that keep communities informed about the increasing risk caused by high temperatures;
- Review public health messaging for community heat response communications;
- Support the development of a HARS;
- Support the engagement of stakeholders in Interior Health in heat response planning and implementation.



Local Governments

Local governments are critical for providing leadership and support for any type of community-led planning and implementation. Local governments can:

- Convene and engage local partners and stakeholders in HARS planning;
- Ensure extreme heat is considered and integrated into existing emergency response plans;
- 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.

Community Partners

Community partners are essential contributors to the development and implementation of outreach and communication strategies, particularly agencies that work with populations at highest risk.

- Engage organizations that deliver homecare services, poverty and literacy agencies, homelessness services, tourism centres, and active living and faith-based organizations to ensure the HARS plan includes partners that can support specific populations (e.g. seniors, homeless, etc.) during heat events.

Early in the process of developing a HARS, ensure a **stakeholder engagement plan** is developed. All partners that are involved in developing and implementing the HARS should be provided with information about the risks of extreme heat and why it is important that the community work together to plan for action now.



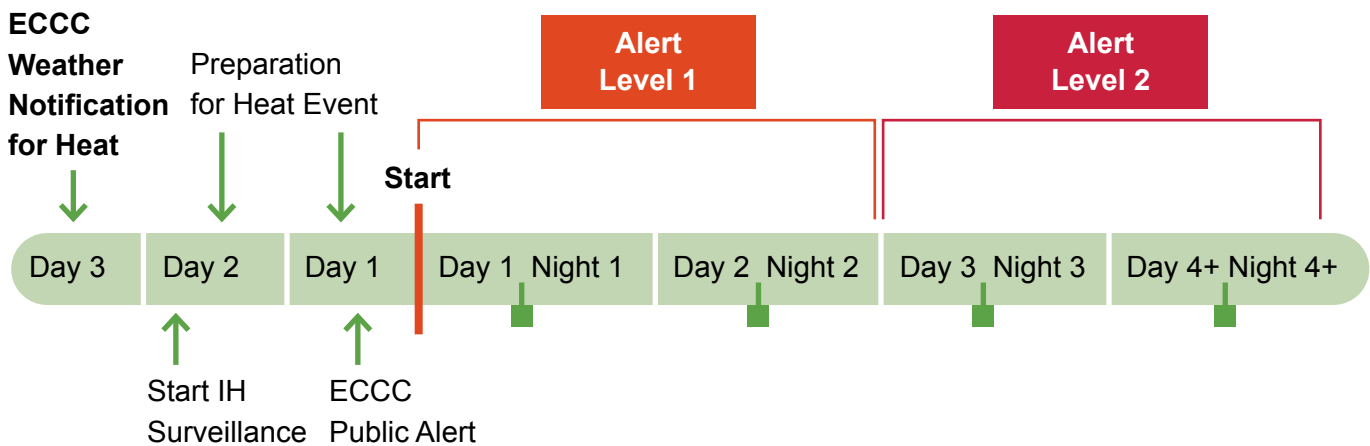
5.2 HEAT ALERT PROTOCOL

The first step that activates a community's heat response plan is a **heat alert trigger** which is established through the following process:

#1. Environment and Climate Change Canada (ECCC) and the BC Centre for Disease Control establish an **alert trigger** based on findings from a heat-health analysis and community and region-specific weather conditions.

#2. ECCC communicates the potential¹⁰ for a heat warning to Interior Health and other decision-makers a few days prior to a heat event, allowing enough time for partners to **mobilize and prepare a response**.

#3. Interior Health and other key community partners respond to the heat warning by **activating their community heat response plan**. The plan provides information on the actions that the lead agency and community partners will take to reduce heat-related risks when a heat warning is called.



Temperature Threshold:

2 consecutive **days** with temperature $\geq 35^{\circ}\text{C}$ **AND** overnight temperature $\geq 18^{\circ}\text{C}$

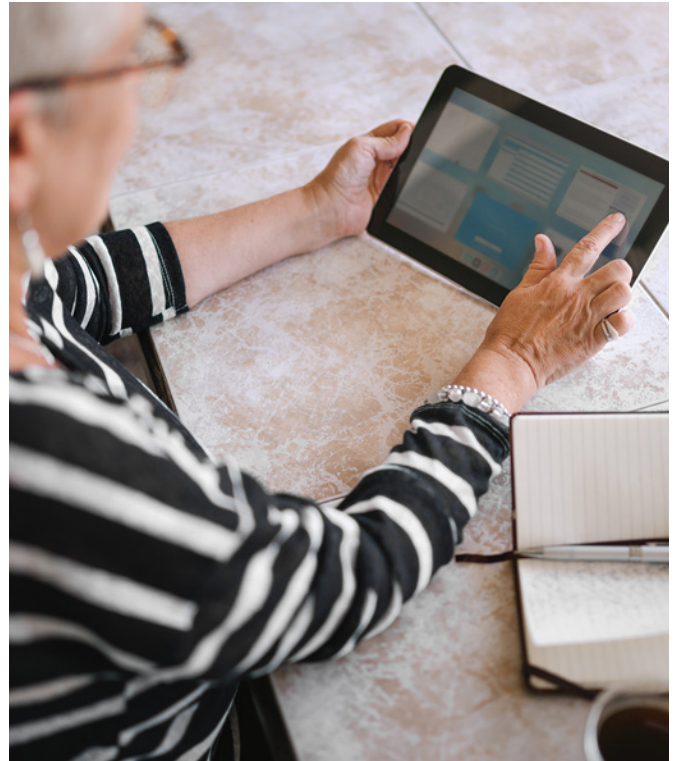
¹⁰ NOTE: ECCC will communicate the **potential** of a heat warning a few days in advance, a full decision on issuing a heat warning will not be made until the day prior to the warning is expected to be achieved.



5.3 COMMUNICATIONS PLAN

Effective communication to the public and community partners is critical to reduce heat-health risks and the implementation of the HARS plan. To increase the effectiveness of heat-health communication, a communications plan is needed to support collaboration among community stakeholders, public health, emergency management and municipal officials to deliver consistent, audience-appropriate and easily understood messages.

- Communications activities need to be delivered before and during the heat season and during extreme heat events.
- Partners involved in the HARS plan will have different roles in communicating with the public and specific populations about the dangers of extreme heat and protective behaviours that individuals can take to stay safe. For example, Interior Health communicates about extreme heat on their website/social media and does public service announcements during extreme heat events.
- Health Canada has produced a number of public communications materials about extreme heat that are available to municipalities free of charge (see Section 6 for more details).





5.4 PRACTICAL STRATEGIES FOR HEAT PLANNING

The ultimate objective of a HARS plan is to increase community resilience to extreme heat and develop actions that are most effective in reducing heat-health risks, especially for those who are most vulnerable. While there is no one-size-fits-all plan, there are a number of practical strategies that have been effective in other Canadian communities.

Before an Extreme Heat Event	
Communications & Engagement	<ul style="list-style-type: none">• Convene key community partners (including Interior Health) to review and plan for the upcoming heat season• Update websites and distribute promotional material from related agencies and partners(e.g. Health Canada) with information about health risks from heat and how to stay cool• Issue public service announcements with reminders about health risks from extreme heat• Distribute information to community service providers (e.g. targeted outreach)• Offer education and training to community partners and stakeholders that work with heat-vulnerable groups• Contact municipal departments to encourage appropriate preparations (e.g. check emergency response equipment such as fans, generators, back-up communications capability)
Developing & Preparing Strategies	<ul style="list-style-type: none">• Identify heat-vulnerable populations and target groups in your community• Plan for summer vacations by identifying and educating substitute staff to ensure adequate coordination of activities and communications• Develop plans to offer cooling facilities¹¹ /public air-conditioned buildings (e.g. community centres, town halls) and cooling options (e.g. pools, shade in parks, etc.)• Alert staff/volunteers that these facilities may be opened beyond regular hours during extreme heat events• Develop plans/strategies to provide drinking water (e.g. in parks, for the homeless, and to outdoor workers)• Identify transportation options to get people to and from cooling facilities• Work with community partners to develop strategies for Home Care clients


¹¹ In 2020, communities and health authorities needed to give special consideration to adapting their HARS to align with physical distancing guidelines to prevent spread of COVID-19. One example of "Managing Heat Risk During COVID-19" can be found here: www.ghhin.org/assets/Checklist-COVID-HEAT-final.pdf

During an Extreme Heat Alert

Communications & Engagement	<ul style="list-style-type: none"> • Work with Interior Health to raise awareness of heat impacts and promote actions to stay cool via: website, media releases, social media, interviews on TV, radio, etc. • Issue heat alerts and warnings to residents, schools, daycares, recreational groups, volunteer support groups, transient populations (e.g. tourists) and sporting events
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Community Response	<ul style="list-style-type: none"> • Open well-identified cooling centres (i.e. libraries, community centres) • Put volunteers on stand-by to assist at cooling facilities and with drinking water distribution • Ensure residents of long-term care facilities have access to air conditioning (i.e. in common rooms) • Extend hours of air-conditioned facilities and places where people are likely to seek heat relief • Modify or cancel scheduled sports and outdoor events at daycares, summer camps, etc. • Suggest alternative work hours for some occupational groups (e.g. outdoor workers), where staff work evenings or nights to avoid intense heat during the day • Provide public access to drinking water in key areas • Distribute fans to populations at risk • Activate staff/volunteers to assist with monitoring and responding to people who are more at risk and/or suffering from heat illness
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After a Heat Event

 Evaluation	<ul style="list-style-type: none"> • Convene community partners to evaluate how well the response was carried out and gather suggestions for future improvements
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Long Term Strategies and Preventive Actions

- Develop climate change adaptation strategies
- Update municipal emergency protocols
- Install public water fountains
- Plant trees and increase canopy coverage
- Change to the built environment to reduce heat (high albedo surfaces for buildings and pavements)
- Research/map populations at high risk to heat in your community
- Set up systems for people to self-register to receive updates on response measures (e.g. new cooling facilities) and heat alerts by telephone, e-mail, text message.

Contact

To learn more about how Interior Health can support your community to develop a Heat Alert and Response System (HARS), please contact through this email address: HBE@interiorhealth.ca

6. RESOURCES

Guidebooks

Health Canada (2012). Heat Alert and Response Systems to Protect Health: Best Practices Guidebook

www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/pdf/pubs/climat/response-intervention/response-intervention-eng.pdf

Health Canada has developed a best practices guidebook for developing a HARS. The Guidebook helps users take into consideration community-specific vulnerabilities and identify appropriate outreach and response activities.

Health Canada (2011). Adapting to Extreme Heat Events: Guidelines for Assessing Health Vulnerability.

www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/hecs-sesc/pdf/pubs/climat/adapt/adapt-eng.pdf

Health Canada has developed this resource to provide guidance on the steps needed to better understand the vulnerabilities of different populations in Canadian communities.

Health Canada (2011). Communicating the Health Risks of Extreme Heat Events: Toolkit for Public Health and Emergency Management Officials.

www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/hecs-sesc/pdf/pubs/climat/heat-chaleur/heat-chaleur-eng.pdf

Health Canada has developed a guidebook on best communication practices for targeting heat-health messages to specific populations at risk. The guidebook is based on leading research and practices used by communities to communicate with vulnerable populations through health promotion campaigns.

BC Centre for Disease Control (2017). Developing a Municipal Heat Response Plan: A Guide for Medium-Sized Municipalities.

www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Health-Environment/Developing%20a%20municipal%20heat%20response%20plan.pdf

The BCCDC has developed a short practical guide for municipalities that outlines key considerations before, during and aft a heat event.

Promotional / Communication Materials

Health Canada has produced a number of public communications materials that are available to municipalities free of charge.

- **Infographic:** Staying Healthy in the Heat: www.canada.ca/en/health-canada/services/publications/healthy-living/infographic-staying-healthy-heat.html
- **Video:** [Extreme Heat Awareness Video](#)
- **Brochures and Posters:** Hard copies of all Health Canada extreme heat communication materials (i.e. brochures, infographics) are available **free of cost** and can be mailed to your community. Please contact: Publications, Health Canada Tel.: (613) 954-5995 E-Mail: hc.publications-publications.sc@canada.ca

Other Resources

BC Centre for Disease Control (2017).

Municipal Heat Response Planning in British Columbia, Canada.

www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Health-Environment/BC%20Municipal%20Heat%20Response%20Planning.pdf

This report reviews the various approaches taken by a number of urban BC Municipalities to respond to extreme heat. The report presents findings, gaps in knowledge and makes recommendations to advance heat response planning in BC.

Managing Heat Risk During COVID (2020). Global Heat Health Information Network.

www.ghhin.org/assets/Checklist-COVID-HEAT-final.pdf

This checklist provides a list of measures to consider when adapting heatwave plans and interventions in the context of the COVID-19 outbreak. It is designed for different levels of government coordinating heatwave preparedness and response measures.



Interior Health