Outdoor Cooling Space during COVID-19 GUIDE

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Table of Contents

Disclaimer	2
Purpose	2
Extreme Heat and Wildfire Smoke Risks	2
What is an Outdoor Cooling Space?	3
Shade	4
Space and Physical Distancing	8
Outdoor Air Cooling: Active and Passive Measures	9
Mobility and Accessibility	10
Resources and Supplies	10
Prevention Supplies	11
Site Cleaning and Disinfection	11
Appendix A: Tips to Beat the Heat Poster	14
Appendix B: Heat related Illness Table: What to Look for & What to Do	15
References	16

Disclaimer

This document was prepared in response to the risks of an extremely hot weather event and COVID-19 pandemic. The information presented is based on the publicly available publications and best judgment of the authors. It has not been reviewed by any health officials. The authors assume no liability for any damage, injury, or expense that may be incurred or suffered as a result of the use of this publication, including products or practices. Nothing in this publication is an endorsement of any particular product. The views expressed herein do not necessarily represent those of any individual contributor or BC Housing. It is always advisable to seek specific information on the use of products in any application or detail from manufacturers or suppliers of the products and consultants with appropriate qualifications and experience.

Purpose

This document was developed for site staff of affordable housing buildings to create outdoor cooling spaces. It provides interim guidance for designing and implementing outdoor cooling spaces for social housing tenants to reduce the risk of illnesses related to extreme heat, as well as the risk of transmission of the COVID-19 coronavirus.

The BC Center for Disease Control (BC CDC) suggests that the best strategies for addressing extreme heat during the pandemic are the following, in order of preference: 1. In-unit cooling. 2. Outdoor cooling space. 3. Indoor cooling space. Since most affordable hosing suites do not have cooling, creation of the outdoor cooling space should be considered. This document is meant as a guide to support this recommendation. It should be used in conjunction with existing extreme heat response plans and apply the latest guidance from the health authorities related to COVID-19.

This interim guidance is based on reports from the CDC, BC CDC and National Collaborating Centre for Environmental Health (NCCEH) up to June 2020 about the transmission and severity of COVID-19.

Extreme Heat and Wildfire Smoke Risks

Exposure to extreme heat can cause people to suffer from heat-related illnesses, and even death. People suffer heat-related illness when their bodies are unable to properly cool. Older adults, young children, and people with chronic medical conditions are at high risk for heat-related illness and death (CDC, 2016). Heat related illnesses include heat stroke, heat cramps, heat exhaustion and heat rash (CDC Warning Signs and Symptoms of Heat-Related Illness, 2017). Extreme heat can also increase premature death rates. For example, during the 2009 heat waves in Vancouver, over 100 premature deaths were recorded due to extreme heat over the course of a week (BC CDC, 2020).

Extreme Heat is especially important to consider in urban environments because of the heat island effect. Built urban environments with higher building density and less greenspace retain more heat than any other location. This includes areas like the downtown east side in Vancouver. The heat island effect is caused mainly by the absorption and retention of solar radiation by buildings and the production of anthropogenic heat (Doulos et al., 2004). Vulnerable populations are at the highest risk of extreme heat effects because these communities often do not have access to cooling spaces. This is important because the effects of covid-19 and extreme heat disproportionately effects vulnerable populations and further considerations need to be taken to ensure vulnerable communities are protected (Han et al., 2020) (Voelkel et al., 2018).

Covid-19 restrictions are important to consider when addressing extreme heat issues and creating outdoor cooling response measures. Preventative actions like physical distancing, hand washing, and the use of protective equipment (such as face masks) or infrastructure (such as plexiglass) should always be used to mitigate modes of covid-19 transmission. As currently known, main modes of transmission for covid-19 include contact with the respiratory droplets of an infected person (Freeman & Eykelbosh, 2020). However, someone can be infected and not display any symptoms. Therefore, outdoor cooling spaces should work to prevent the spread of respiratory droplets between visitors while allowing them to cool off. This document offers suggestions on how to create an effective cooling space while also reducing the risk of COVID-19 transmission.

Wildfire Smoke and Poor Air Quality

Poor air quality and wildfire smoke can amplify extreme heat illness and may even lead to higher rates of viral infections. This is because exposure to common pollutants may exacerbate the susceptibility to and severity of respiratory virus infections (Ciencewicki & Jaspers, 2007). In addition, air pollution caused by poor air quality and wildfire smoke may lead to transmission through more coughing and sneezing from increased irritation. For these reasons, it is important to consider poor air quality and wildfire smoke when developing an outdoor cooling space.

In BC, the Province Government issues <u>Air Quality Advisories</u> following wildfire events or in situations of poor air quality. Air Quality Advisories are based on the Air Quality Health Index (AQHI) values. The lowest AQHI values are between 1-3 and demonstrate good air quality. AQHI levels at 7-10 and beyond are considered unhealthy and even hazardous. When an issued BC air quality advisory is above an AQHI value of 7, it is recommended to consider reducing the amount of time spent outside for all populations. Consider checking BC's air advisory readings for your regions prior to setting up an outdoor cooling space to ensure that you are not putting visitors and tenants at any greater risk of covid-19 transmission and health related illness. More information about air quality readings here: http://www.env.gov.bc.ca/epd/bcairquality/readings/find-stations-map.html

What is an Outdoor Cooling Space?

An outdoor cooling space is a designated area outside that offers complete shade and/or cooler ambient temperatures for visitors to cool themselves off. When considering where to put an outdoor cooling space, the first thing that should be considered is the availability of shade. At its most basic level, an outdoor cooling space must provide 100% shade within its designated boundaries. In addition, seating should be provided in an outdoor cooling space that is covered by shade and separated by 2 meters to maintain physical distancing rules. Shade can be provided in multiple ways, including using existing tree cover in greenspaces or creating temporary cover from white top canopy tents. The quantity and quality of the shade provided will impact the effectiveness of the outdoor cooling space. Outdoor cooling spaces should provide 100% shade cover to visitors and exist for the purpose of allowing individuals to cool themselves off.

Outdoor cooling spaces typically use passive measures, including using shade, utilizing wind or natural breezes (if available) and selecting outdoor areas away from direct sunlight.

Additional considerations for outdoor cooling spaces include:

- Providing seating for visitors
- Providing space and access for visitors in wheelchairs
- Providing space and access for visitors with pets
- Providing water stations
- Posting communications material for visitors

All these considerations need to be addressed while following best practices for covid-19 mitigation from the BC Centre for Disease Control.

Shade

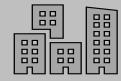
Shade contributes to an outdoor cooling space by blocking solar radiation (sunlight) from the sun. Solar radiation is energy from the sun that warms the surface of the earth and human bodies. Air temperature refers to the degree of heat or cold of the air (Climate Change Canada, 2019). Heat exposure is a combination of many factors, including both sunlight exposure and air temperature (United States Depart. of Labour, n.d.). Air temperature increases when there are a greater number of surfaces that easily absorb solar radiation and emit heat. Urban surfaces like concrete and asphalt readily absorb heat from the sun and radiate it back to surrounding areas (Doulos et al., 2004). As more heat is absorbed by urban landscapes, it increases air temperatures. Conversely, greenspaces like grass areas, trees and parks absorb solar radiation and use it to grow (Makido et al., 2019). Therefore, in existing urban areas, providing shade alone (via a white top tent) will not decrease the air temperature. Although it is important to consider that shaded urban areas help 'block' sun exposure on individuals, preventing them from being 'heated' by the suns rays and allowing them to cool off. In addition, shade protects from harmful UV rays that can cause damage to the skin and eyes. A hierarchy of shade provided for outdoor cooling spaces can be observed below:



Best Shade: The outdoor cooling spaces is located in a greenspace with 100% of shade being provided by large or medium trees throuhgout the entire outdoor cooling space.



Good Shade: The outdoor cooling space is partially located in a greenspace (50% or less of the cooling space includes greenspace) with some canopy cover from a mix of large, medium and small trees. Shade is provided 100% throughout the entire cooling space using a mix of tents and tree cover.



Basic Shade: The outdoor cooling space islocated in a dense urban location with little to no greenspaces or tree cover. Shade is provided 100% througout the entire designated cooling space via tents or tarps.

Greenspaces and shade

Shade provided from trees and greenspaces is the most important type of shade because **greenspaces have the ability to cool environmental temperatures and block solar radiation**. Natural greenspaces with lots of tree canopy cover that provide shade are the best areas for outdoor cooling spaces. Tree canopy cover (areas with shade) depends on the size of trees. Tree size is determined by trunk diameter and tree height. The following outlines the definition of a small, medium and large tree.

Tree Size	Height Range (ft)	Trunk Diameter (inches)
Small	< 25ft	< 20 inches
Medium	24 – 40 ft	20 – 30 inches
Large	> 40 ft	> 30 inches

Source: USDA forest Services <u>https://www.fs.fed.us/psw/topics/urban_forestry/products/cufr_511_large_tree_argument.pdf</u>

If cooling spaces are set up under tree shade it is important to ensure that the space is fully shaded by the tree canopy throughout the entire duration of the cooling space. Outdoor cooling spaces that provide complete shade at all times of the day are the most effective. This is important because shade availability may change due to different sun positions. An outdoor cooling space utilizing shade from many large existing trees is the most desirable when complete shade is provided by the trees all day. Locations with many large trees that provide lots of shade are the best for cooling spaces. This is because canopy cover from trees greatly reduces ambient temperatures. For example, when compared to high canopy greenspaces and residential areas, hard **industrial landscapes can increase ambient temperature by an average 6.9 °C** (Makido et al., 2019). If greenspaces are available around social housing sites with existing shade provided by **multiple large or medium trees**, this may be a good spot for a tenant cooling space. Furthermore, it is important to consider both tree quality (size and ability to provide lots of shade) and quantity (number of trees) when integrating tree shade into cooling site locations.

As mentioned above, greenspaces with lots of canopy cover from large or medium trees represent bestcase-scenario locations for setting up cooling spaces. If shade cover from multiple large trees isn't available, using tents or other short-term sun blocking methods may be the best option for creating and developing outdoor cooling sites on social housing residencies.

White top 'party' tents and other ways to create shade in urban environments

Unlike greenspaces, **tents set up in urban locations only block solar radiation (sunlight)**. Blocking sunlight prevents urban surfaces like concrete roads and walkways from absorbing the suns heat and radiating it back into urban spaces. Creating cooling spaces with white top tents reflects sunlight and creates shaded spaces where visitors can cool themselves off. Moreover, it is important to consider **while setting up white top party tents to create outdoor cooling spaces blocks sunlight and provides shade, it doesn't necessarily cool ambient air temperatures**. For more information about ambient air cooling options in outdoor cooling spaces, read the below section 'outdoor air cooling and fans'

Tents that would work best for outdoor cooling spaces include large **white top party tents**. White top canopy tents are the best option because white reflects solar radiation, compared to darker colour

tents, which would absorb solar radiation and make the area under the tent warmer. Outdoor tents can be purchased from amazon, Walmart, home depot and many other sporting-goods suppliers. If purchased, white top canopy tents cost anywhere between \$130 – \$3000 depending on their size and material. tent sizes, costs and colours specified in the table below.

Tent Size	Tent Price (Range)	How many people to set up	Colour
10 ft x 10 ft	\$130 - \$300	One or two	white, black, red, blue
10 ft x 20 ft	\$150 - \$500	Two or more	white
12 ft x 20 ft	\$150 - \$500	Two or more	White
12 ft x 26 ft	\$150 - \$600	Two or more	White
18 ft x 20 ft	\$200 - \$1000	Two or more	White
20 ft x 30 ft	\$500 – 1000+	Three or more	White
30 ft x 30 ft	\$1500 +	Three or more	White
30 ft x 40 ft	\$2500 - \$3500 +	Three or more	White
30 ft x 50 ft	\$3500 +	Three or more	White

If tents are purchased, information regarding set up and take down procedures need to be provided to site staff. In addition, safe tent storage needs to be organized to prevent theft when tents are not being used. If purchasing tents is not an option, tent rentals can also be done. This could be the best option for creating short term temporary cooling spaces. In metro Vancouver alone, there are multiple event rental companies with options for delivery and set up/ take down of white top party tents. Tent rental prices depend on the size and the type of tent being rented.

Tent Size	Length of rental	Price	Set up provided?
10 ft x 10 ft	1 day – 3 days	\$65 - \$150	No
10 ft x 15 ft	1 day – 3 days	\$100 - \$200	No
10 ft x 20 ft	1 day – 3 days	\$150 - \$200	If needed
10 ft x 30 ft	1 day – 3 days	\$200 -\$ 500	If needed
20 ft x 20 ft	1 day – 3 days	\$250 - \$500	If needed



Image: Example of how an outdoor cooling space could look using white top tents with seating for visitors.

Most companies that offer white top tents for rent have smaller sized tents (10 ft x 10 ft, 10 ft x 15 ft, or 10 ft x 20 ft) and add them together to create larger shaded outdoor areas if necessary. Costs for a single 10ft x 10ft white top tent can range from \$65/day to \$150/day depending where it is rented from, delivery and set up/ take down (based on tent rental companies throughout the lower mainland). The amount and size of tents used in an outdoor cooling space depends on the size of the outdoor cooling space. For example, if an outdoor looking space is along a wide urban pedestrian walkway at about 10 ft x 40 ft, four 10x10ft tents will be required to shade that area. If each 10x10ft tent costs around \$100/ per day to rent (including delivery, set up and take down) then the white top tent rental for the that outdoor cooling space is going to cost around \$400 (prices differ with each rental company). The size and costs associated with tent rental will depend on two things: site space and site suitability. Site space depends on the total area designated for the outdoor cooling centre and site suitability refers to the ability for the tents to 'fit' in the urban location without blocking or hindering existing infrastructure. For example, tents are not obstructing municipal road signs, building awnings, blocking emergency exits, blocking windows, etc. Once these considerations have been made, tent rentals can be organized with municipal tent rental companies. If ordering tents from an event rental company, ensure you specify the following:

- Specify what size of tent you would like to order
- What time you would like the tent to be dropped off and where you want it to be dropped off
- How long you need the tent for (length of rental, ex 1 day or 3 days)
- Specify if you would like the tent to be set up and taken down by the rental company (this may cost extra)
- Specify when you want it picked up
- Clarify any additional costs associated with the rental

Final remarks on shade

The presence of shade is the baseline minimum requirement for an outdoor cooling space. As mentioned above, **the first requirement of an outdoor cooling space is that it must provide 100% shade within its designated boundaries.** Other considerations including space availability, seating availability, location accessibility, and resource availability also impact the effectiveness of a cooling space and need to be addressed with a covid-19 lens. More information on considerations for cooling spaces is presented below.

Space and Physical Distancing

An outdoor cooling space **must have enough shaded area to allow visitors to maintain a 2-metre physical distance from each other at all times**. Depending on the physical environment of the cooling space, visual markers, physical barriers, or designated seating areas can help guide visitors to follow social distancing rules. The visitor capacity of an outdoor cooling space depends on the total area it has for visitors. Visual and physical markers to promote social distancing rules in outdoor spaces includes:

- The use of physical distancing circles (pictured below). Specifically, these are white circles painted on grassy areas (or any ground surface) that are 1.5-2meters in diameter with 2 meters of distance separating them. These have been implemented in San Francisco, CA and Brooklyn, New York public parks. Similar visual markers could be used in cooling areas with concrete surfaces or grass.
- Using tape or paint on concrete or urban grounds to indicate 2-metre distances between individual places visitors can be within the cooling space.
- Using physical barriers to identify spaces 2 meters apart in outdoor cooling spaces
- Providing seating throughout a designated cooling area with a 2-metre distance between seats.

The best available outdoor locations for cooling sites (based on shade availability) may only be able to accommodate a few visitors at a time. This could lower capacity, so consider setting up a greater number of smaller outdoor cooling centers.



Image: Dolores Park, San Francisco California, using social distancing circles in a greenspace. Source: LA times

Seating

Providing seating for individuals in cooling areas is important to allow visitors to more effectively cool off. **Seating in outdoor cooling spaces should be completely under shade and separated by 2 meters to maintain physical distancing rules**. Individuals from the same households do not need to physical distance as they are already in close contact with each other regularly. Providing seating via chairs, stools or benches creates a more welcoming spot for visitors to rest and cool down quicker. While sitting, individuals heart rates slow down and less internal body heat is generated.

Outdoor Air Cooling: Active and Passive Measures

Passive Measures: Natural Breezes

Promoting air circulation using either passive measures will increase the cooling abilities of an outdoor space. If setting up a cooling space in an urban environment, consider choosing locations where natural breezes occur to promote air circulation. These options are the most affordable and the best option if available. Using passive measures like natural breezes decrease the risks of heat illness by allowing visitors to cool themselves.

Active Measures: Fans and evaporative coolers

Setting up fans in outside cooling spaces to increase airflow may make cooling more effective for visitors. in addition, the CDC warns that while electric fans may provide comfort, when air temperatures are in the high 90s (95°F = 35°C, fans will not prevent heat-related illness. Taking a cool shower or bath

or moving to an air-conditioned place is a much better way to cool off. More information about fan use and cooling measures on the CDC website here: <u>https://www.cdc.gov/disasters/extremeheat/faq.html</u>

If used, fans should be set up to promote one direction of air flow throughout the outdoor cooling space. Evaporative coolers work to cool air by saturating air with more water, increasing the humidity and cooling the air. This works by moving air over moist cooling pads and dispersing it in a desired location. These types of coolers draw less energy than traditional air conditioners because they are not forcing air across condenser coils. Evaporative coolers are a good option for outdoor cooling centers in urban spaces because they cool the air. They cost between \$100-\$500 depending on the size and efficiency of the evaporative cooler and work in any humidity.

Fans and COVID-19

Although COVID-19 transmission has been identified mainly though physical contact and exposure to an infected persons' respiratory droplets, areal transmission remains a concern for many (Morawska & Cao, 2020). Therefore, all possible precautions against airborne transmission should be taken. This includes considering air flow and air direction from fans to reduce breathing flow of cooling site visitors. At the time this report is written, the BC CDC is currently working on guidelines for fan use during COVID-19. This includes addressing concerns for air flow and transmission. Currently, the BC CDC recommends using fans with extreme caution so as not to create a directional airflow that connects the breathing zones of multiple users. In addition, in indoor spaces always direct the air flow perpendicular to a row a people, rather than parallel to a row of people (BC CDC). Furthermore, the BC CDC recognizes that extreme heat can be a bigger risk than COVID-19, which is why they are emphasizing the safe use of fans, rather than prohibiting their use all together.

Mobility and Accessibility

It is important to consider accessibility and mobility options for cooling space visitors, this includes:

- Having wheelchair accessible locations for cooling spaces.
- Having communications material offered in different languages in outdoor and outdoor cooling spaces for community members.
- Having designated areas for individuals to sit with pets
 - Requiring that all dogs must be on a leash while within the outdoor cooling center
 - Maybe consider providing a water bowl for dogs to cool off as well.
- Having designated smoking areas for individuals who smoke (including e cigarettes and vaporizers) and having communications material indicating where these locations are.

Resources and Supplies

Drinking Water

Providing drinking water with outdoor cooling sites allows visitors to cool themselves off more effectively. To make this possible, consider setting up water stations. Post communications material about the importance of drinking water during hot days and have site staff remind visitors about drinking water. Encourage visitors to bring their own water bottles and to carry water with them. Have access to bottled water in case of emergencies. Consider providing bottled water in extreme cases when vulnerable people may be dehydrated and show symptoms of heat related illnesses.

Prevention Supplies

Masks

For protocols on mask use, please check the following documents: 1. <u>BC Housing sector covid-19 operations manual</u>

2. BC Centre for Disease Control's Interim Guidance to Social Service Providers for the Prevention and Control of COVID-19 in their Facilities

Masks should be used when physical distancing of 2 meters is not possible. However, wearing a mask may make it difficult for individuals to breathe and cool down.

Hand sanitizer and hand washing

the CDC requires that all cooling centers must have prevention supplies on site for staff, volunteers, and visitors, including soap, alcohol-based hand sanitizers that contain at least 60% alcohol, tissues, and trash baskets.

First aid and emergency cooling measures

Ensure that all first aid materials are up to date and easily accessible. <u>Know the signs of extreme heat</u> <u>illness</u> and share this information with visitors. Consider having cool wet towels to place on visitors' foreheads if visitors are showing symptoms of heat related illnesses to cool them off more effectively. Placing a cool cloth or towel on your skin is a great way to effectively cool off quickly. Encourage tenants to do this during hot days or when they feel particularly hot. In addition, consider encouraging outdoor cooling space visitors to bring their own bandanas or towels to use to cool themselves off. Maintain all covid-19 precautions when helping tenants directly. If providing cold towels to visitors in emergency situations, make sure sanitary measures are in place. Follow all existing health and safety protocols when emergency situations occur.

Site Cleaning and Disinfection

Follow the Centers for Disease Control and Prevention (CDC) <u>cleaning and disinfection guidelines for</u> <u>community facilities</u>, and <u>cleaning facilities if someone is sick</u>. Because even individuals with no symptoms can still transmit the virus, and the virus can survive for several days on non-porous surfaces, it is important to continue routine cleaning and disinfection (every day if possible) with a focus on high touch surfaces, including those in common areas, outdoor seating (if provided in outdoor cooling space) and bathrooms.

Communication and Education Resources

Below is a list of resources useful for an effective communication about COVID-19 and extreme heat. Use health messages and materials developed by credible public health sources, such as your local and state public health departments or Centers for Disease Control (CDC), for educating yourself, your staff and tenants.

COVID – 19 resources

- BC CDC
 - COVID-19 and Wildfire Smoke <u>http://www.bccdc.ca/health-info/diseases-conditions/covid-19/prevention-risks/wildfires</u>
 - About COVID-19, Prevention and Risks <u>http://www.bccdc.ca/health-info/diseases-conditions/covid-19</u>
 - Posters on physical distancing, hand washing and others <u>http://www.bccdc.ca/health-info/diseases-conditions/covid-19/resources-at-a-glance</u>

Extreme heat resources

- BC Housings Resources:
 - Tips to Beat the Heat During COVID-19 (See Appendix A)
 - Other resources for staff and tenant education <u>https://www.bchousing.org/extreme-heat</u>
- Health Canada
 - Health risks and safety tips, information, brochures, infographics and videos. <u>https://www.canada.ca/en/health-canada/services/sun-safety/extreme-heat-heat-waves.html</u>
- CDC
 - Heat related Illness table: <u>https://www.cdc.gov/disasters/extremeheat/warning.html</u> (See Appendix B)
- Health Link BC
 - Extreme heat preparedness and heat related illness symptoms material, offered in 8 different languages: <u>https://www.healthlinkbc.ca/health-feature/beat-the-heat</u>

Poor air quality and wildfire smoke resources

- <u>Current Air Quality Data Map Air Quality Health Index</u>. Real time data of British Columbia's current air quality: <u>http://www.env.gov.bc.ca/epd/bcairquality/readings/find-stations-map.html</u>
- <u>Current Particulate Matter PM2.5 Data Map</u>. Real time update on Current Particulate Matter rates across BC and alerts: <u>http://www.env.gov.bc.ca/epd/bcairquality/readings/find-stations-map-PM25.html</u>
- <u>BC Air Quality Advisories</u>. Find up to date air quality advisories across BC: <u>https://www2.gov.bc.ca/gov/content/environment/air-land-water/air-quality/air-advisories</u>
- BC CDC Air Quality and Wildfire Smoke Resources: <u>http://www.bccdc.ca/health-info/prevention-public-health/wildfire-smoke</u>

- Wildfire Smoke and COVID-19 Poster: <u>http://www.bccdc.ca/Health-Info-Site/Documents/COVID19_WildfireSmoke.pdf</u>
- Health Effects of Wildfire Smoke Poster: <u>http://www.bccdc.ca/resource-</u> gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Healt <u>h-Environment/BCCDC_WildFire_FactSheet_HealthEffects.pdf</u>
- Wildfire Smoke and Air Quality Poster: <u>http://www.bccdc.ca/resource-</u> <u>gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Healt</u> <u>h-Environment/BCCDC%20WildFire_FactSheet_SmokeAndAirQuality.pdf</u>

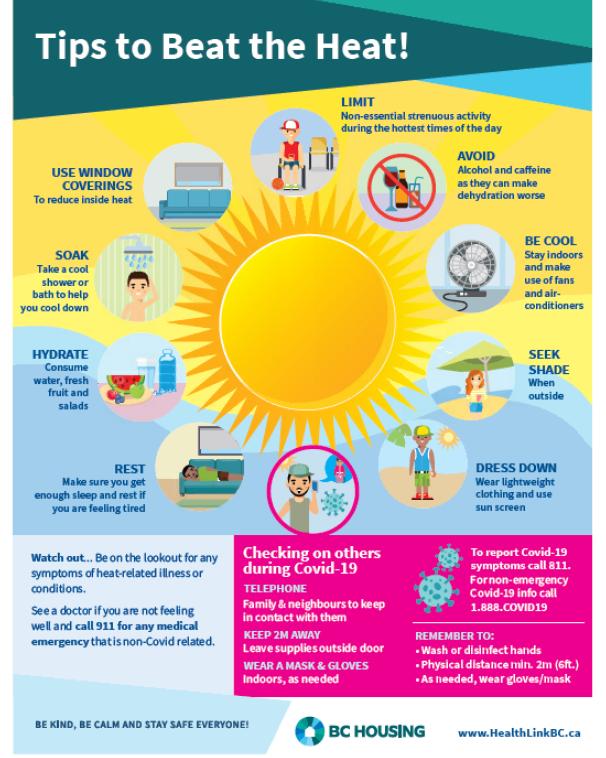
Other on-site communications resources

Consider having the following communications material on site for visitors.

- Designated entrances and exits of outdoor cooling sites
- Designated seating locations for visitors with pets
- Designated seating for individuals with wheelchairs
- Notices for designated smoking areas

In addition, it is important to Identify and address potential language, cultural, and disability barriers associated with communicating COVID-19 and Extreme Heat information to workers, volunteers, and those visiting outdoor cooling centers. For example, Health Link BC has all their extreme heat resources in <u>Chinese, French, Farsi, Korean, Punjabi, Spanish and Vietnamese</u>. In addition, the CDC has more information to learn more about <u>reaching people of diverse languages and cultures</u>

Appendix A: Tips to Beat the Heat Poster



BC Housing Tips to beat the heat poster. For more tenant resources about extreme heat visit: https://www.bchousing.org/projects-partners/extreme-heat/

Appendix B: Heat related Illness Table: What to Look for & What to Do

HEAT-RELAT	ED ILLNESSES
WHAT TO LOOK FOR	WHAT TO DO
HEAT	STROKE
 High body temperature (103°F or higher) Hot, red, dry, or damp skin Fast, strong pulse Headache Dizziness Nausea Confusion Losing consciousness (passing out) 	 Call 911 right away-heat stroke is a medical emergency Move the person to a cooler place Help lower the person's temperature with cool cloths or a cool bath Do not give the person anything to drink
HEAT EX	HAUSTION
 Heavy sweating Cold, pale, and clammy skin Fast, weak pulse Nausea or vomiting Muscle cramps Tiredness or weakness Dizziness Headache Fainting (passing out) 	 Move to a cool place Loosen your clothes Put cool, wet cloths on your body or take a cool bath Sip water Get medical help right away if: You are throwing up Your symptoms get worse Your symptoms last longer than 1 hour
HEAT	CRAMPS
 Heavy sweating during intense exercise Muscle pain or spasms 	 Stop physical activity and move to a cool place Drink water or a sports drink Wait for cramps to go away before you do any more physical activity Get medical help right away if: Cramps last longer than 1 hour You're on a low-sodium diet You have heart problems
SUN	BURN
 Painful, red, and warm skin Bilsters on the skin 	 Stay out of the sun until your sunburn heals Put cool cloths on sunburned areas or take a cool bath Put moisturizing lotion on sunburned areas Do not break blisters
HEAT	RASH
Red clusters of small blisters that look like pimples on the skin (usually on the neck, chest, groin, or in elbow creases)	 Stay in a cool, dry place Keep the rash dry Use powder (like baby powder) to soothe the rash

CDC Heat related Illness table. Source: <u>https://www.cdc.gov/disasters/extremeheat/warning.html</u>

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