South East Health Unit

formerly

HASTINGS PRINCE EDWARD Public Health

KFL&A Public Health

Leeds, Grenville & Lanark District HEALTH UNIT

BOARD OF HEALTH MEETING

INFORMATION ITEMS

Wednesday, June 25, 2025

Hastings Prince Edward Public Health
179 North Park St.
Belleville, Ontario K8P 4P1
613-966-5500 | 1-800-267-2803
Fax: 613-966-9418

Kingston, Frontenac and Lennox & Addington Public Health
221 Portsmouth Ave.
Kingston, Ontario K7M 1V5
613-549-1232 | 1-800-267-7875
Fax: 613-549-7896

Leeds, Grenville & Lanark District Health Unit
458 Laurier Blvd.
Brockville, Ontario K6V 7A3
613-345-5685 | 1-800-660-5853
Fax: 613-345-2879

South East Health Unit

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Listing of Information Items
Board of Health Meeting – June 25, 2025

1. South East Health Unit – Memorandum to the Board of Health re Climate Change Health Vulnerability and Adaptation Assessment Executive Summary Report dated June 10, 2025

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MEMORANDUM

TO: Board of Health Members

FROM: Dr. Piotr Oglaza, Medical Officer of Health & Chief Executive Officer

DATE: Wednesday, June 25, 2025

SUBJECT: Climate Change Health Vulnerability and Adaptation Assessment

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Issue:

Climate change is the greatest public health threat of the twenty-first century (1). The effects are already being felt today, and future projections indicate an unacceptably high and potentially catastrophic risk to human health (1). Climate change impacts health through temperature-related morbidity and mortality, extreme weather events, poor air quality, food and water contamination, altered exposure to ultraviolet radiation (UVR) and increased risk of vector-borne infectious diseases (2). A comprehensive understanding of local climate hazards is essential for developing targeted interventions and adaptation strategies that mitigate climate change impacts.

Background:

The Ontario Public Health Standards (OPHS) require all public health units to assess the health impacts of climate change and consider the vulnerabilities of the population served, while the Healthy Environments and Climate Change Guideline recommends public health units monitor the impacts of climate change within their jurisdiction to inform local vulnerability plans, engage in multisectoral collaboration and communicate identified health risks.

Recently, the South East Health Unit (SEHU) completed a Climate Change Health Vulnerability and Adaptation Assessment (CCHVAA) for the region. This was a collaborative project between the three legacy agencies that began in 2023.

Guided by the Ministry of Health's Ontario CCHVAA Guidelines Technical Document and Workbook, the project aimed to identify local mitigation and adaptation strategies, raise awareness about the health hazards of climate change, and reduce public health's vulnerability to climate change. The assessment enhances agency understanding of climate impacts specific to the SEHU region and identifies public health's role in addressing those impacts.

The CCHVAA process consisted of three main methods:

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1. Environmental scan: Reviewed evidence and data from other public health units' CCHVAA reports and analyzed local climate data for trends.
2. Staff engagement survey: Surveyed staff from legacy health units to identify current programs and policies affecting climate-sensitive health outcomes.
3. Key informant interviews: Interviewed community partners to gather insights on climate-related work, policies, and partnership opportunities.

Key Findings & Next Steps:

Findings from the CCHVAA indicate that climate change is increasing the frequency, intensity, and duration of extreme weather events (see Appendix A). These events pose significant health risks, from respiratory and skin irritation to hospitalization, cancer, and death. Although the SEHU region has experienced fewer extreme weather events, it is projected to face more frequent occurrences of extreme heat, wildfires, and flooding. Additionally, Lyme disease and skin cancer are of great concerns in the SEHU region, where incidence rates exceed the provincial average and are expected to worsen as the climate continues to change.

The results of the CCHVAA will inform the development of a comprehensive action plan to integrate climate change strategies into public health programming. This initiative will be guided by three key pillars: population health assessment and surveillance, health promotion, and health protection. The action plan will include a climate change monitoring and evaluation component aimed at strengthening capacity and resilience through education, knowledge sharing and collaboration–guiding responses to future climate change trends and risks while prioritizing health equity.

This memo is for the information of the Board of Health.

References:

1. Canadian Public Health Association. Climate Change and Human Health [Internet]. 2019. Available from: https://www.cpha.ca/climate-change-and-human-health

2. Association of Local Public Health Agencies. 2019 alPHa Resolutions - Climate Change [Internet]. 2019. Available from: https://cdn.ymaws.com/www.alphaweb.org/resource/collection/FA7C5E7FBA8C-4D15-9650-39628888027E/alPHa_Letter_A19-1-2_Climate_Change_230719.pdf

Appendix A: CHVAA EXECUTIVE SUMMARY

Climate Change and Health Vulnerability and Adaptation Assessment (CCHVAA) in the South East Health Unit

Executive Summary

Produced in collaboration between legacy agencies:
Hastings Prince Edward Public Health
Kingston, Frontenac and Lennox & Addington Public Health
Leeds, Grenville and Lanark District Health Unit

June 10, 2025

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Disclaimer

Effective Jan. 1, 2025, Hastings, Prince Edward Public Health, Kingston, Frontenac and Lennox & Addington Public Health, and Leeds, Grenville and Lanark District Health Unit merged to form the South East Health Unit (SEHU). Please note that the data presented in this report was collected and analyzed prior to this amalgamation. As such, references to the individual health units—Kingston, Frontenac and Lennox & Addington Public Health (KFLAPH), Hastings Prince Edward Public Health (HPEPH), and Leeds, Grenville and Lanark District Health Unit (LGLDHU)—reflect the organizational structure in place at the time of data collection. References to individual health units will appear as KFLAPH, HPEPH, and LGLDHU, while references to the geographic regions will be abbreviated as KFLA, HPE, and LGL respectively.

Introduction

Climate change is described as shifts in weather conditions such as temperature, precipitation and wind over a long period of time (1). There is scientific consensus that climate change is caused by human activities such as the burning of fossil fuels and deforestation, which is releasing carbon dioxide into the environment and warming the planet (1). Climate change is responsible for serious health risks such as heat-related illnesses and deaths, extreme weather events, polluted air, unsafe food and water, cancers from sun exposure, and the spread of diseases carried by insects such as mosquitos and ticks (1). Health experts and climate scientists agree that climate change is the greatest threat to public health and that these risks will continue to worsen should global temperatures continue to rise (1). While climate change affects everyone, vulnerable groups such as Indigenous Peoples, children, older adults, those with chronic illnesses, and many others may experience its impacts more often and more severely due to the unfair distribution of resources, supports and power in society (2). It is important that swift action is taken to protect the environment and health of all people from the harms caused by climate change (3).

In Ontario, public health units (PHUs) are asked by the Ministry of Health (MOH) to assess how climate change affects people's health and identify who might be at most risk. To do so, PHUs may use a Climate Change and Health Vulnerability and Adaptation Assessment (CCHVAA) to understand how public health can create or support policies and programs to protect communities from climate change impacts, improve community knowledge of climate change related hazards, and strengthen communities against climate related challenges (4). The SEHU completed this CCHVAA to understand the roles and priorities for public health programming in climate change and health, to collate climate change data to improve public health programming related to the links between climate change and health, and to make adaptation and mitigation recommendations that are within the scope of public health.

Overview

This report was created by a diverse team of SEHU staff representing various public health programs. To inform this work, the team utilized the Ministry of Health's CCHVAA Guidelines technical document and workbook, along with an analysis of completed CCHVAAs from other PHUs. The primary components of this report include a comprehensive review of the scientific understanding of the current and anticipated health impacts of climate change, an examination of health and climate data related to climate change, findings from a public health staff survey, insights from key informant (KI) interviews with community partners, and recommendations for climate change action within public health.

Key findings

Overall, current data shows that climate change will create more frequent, intense, and longer-lasting weather events. Weather-related health risks, such as drought and poor air quality, can cause health issues ranging from minor skin and respiratory irritation, to hospitalization, cancer and death. While the SEHU region has not been affected by extreme weather as much as other parts of the world, it is expected that more severe events, such as extreme heat, wildfires and flooding will happen more often in the future. Exposure to Lyme disease and skin cancer are of great concern within the SEHU region as the number of new cases are much higher than the provincial average and are expected to continue rising with climate change.

Climate change mitigation refers to actions that can help to reduce new greenhouse gas (GHG) emissions that are added to the Earth's atmosphere through human activity.

Climate change adaptation refers to the actions that will help us manage and reduce the negative impacts of climate change now and into the future.

Climate change hazards

Extreme temperatures

Extreme heat events (EHE), or heat waves, are long periods of high temperature and humidity, including high temperatures overnight, that may last several days to weeks (5). EHE in the SEHU region are becoming hotter, lasting longer and will happen more often in the future. By the end of the century, the number of days with temperatures above 30°C, a humidex greater than 40°C, and nighttime lows of 20°C will increase. Most of the summer season will also have temperatures at heat warning levels.

While the SEHU region has not had any severe EHE, data shows that the rate of serious health impacts, including death, will rise over time and happen more often (6). Furthermore, exposure to more EHE may increase the risk of serious heat-related illnesses, including pregnancy complications, worsen chronic diseases such as cardiovascular and respiratory conditions, diabetes and increase emergency department visits (7,8).

Opposite to EHE is extreme cold, which is caused by the Arctic polar vortex; a group of westerly winds which captures and carries a large volume of extremely cold air over great distances every winter (9). Changes in the polar vortex, caused by changes to weather patterns due to warming temperatures, can bring extreme cold conditions to more southerly regions than previously seen, and increase the risk of hypothermia and injury. Extreme cold can cause more illness and death in the SEHU region compared to EHE due to more intense winter storms, hypothermia, frequent freeze-thaw cycles, injuries from slips, trips, falls, and motor vehicle accidents due to icy surfaces (10). However, the intensity of SEHU region winters is expected to decline, as the number of days with temperatures colder than -35°C with or without windchill has decreased over the past 10 years, with the most change seen between 2015 and 2019.

Though warmer winters will reduce illness and death related to extreme cold in general, minimum temperatures nearing 0°C have ecological, agricultural, economic and social implications such as changes to wildlife migration and hibernation patterns, challenging crop cycles for farmers, financial struggles for winter-related businesses and a loss of traditional winter activities for communities (11).

Extreme weather

Extreme weather is when unusual or unseasonal extremes in weather happen compared to past seasons (12). Overall, extreme weather events are expected to happen more often and be more intense for longer periods of time due to changing temperatures and precipitation patterns caused by climate change (11).

Rain

It is expected that the average level of rainfall in the SEHU region will rise from approximately 937 millimetres (mm) to 1,129 mm by the end of the century (2071 to 2100) (12). Changes in rainfall patterns are not expected to happen equally throughout the year, with summer rainfall levels expected to stay the same while spring, fall and winter rainfall is expected to rise. The largest increase will happen in the winter months which includes both rain and snowfall.

Floods

Floods are the most common and most dangerous natural disaster in Ontario in terms of damage and death (11). Floods mostly happen during and after thunderstorms in the summer and can cause flooding on roadways, sewer backups, and damage power supplies and buildings (13). Slow-rise flooding occurs when a winter with deep snow and ice cover quickly thaws (14). Flooding can also happen after a drought, as hardened soil is unable to absorb water which causes water levels to remain high when it does finally rain (15). Flooding can lead to illness, injury, and death due to hypothermia, contact with debris such as sharp objects, hazardous materials, contaminated water and drowning. It can also cause mental and social health issues such as post-traumatic stress disorder (PTSD), depression, anxiety, suicidal ideation and a worsened quality of life (11). These issues can lead to increased substance use and stress which can also affect physical health (16).

One of the worst floods in the SEHU region occurred in 2008, when flood waters from the Moira River caused a state of emergency. Approximately 50 homes were flooded, 18 individuals were evacuated, and many residents couldn't safely drink from their wells due to contamination (14). Risk of flooding may increase due to warming temperatures and higher levels of rainfall year-round and cause intense extreme rain events more often (17).

Winter storms

The SEHU region experiences blizzards, ice storms and freezing rain during the winter. The most dangerous type of winter storm is freezing rain which increases the risk of injuries from slips, trips and falls for those walking outdoors, as well as motor vehicle collisions (18). Emergency department visits for falls due to ice and snow by residents in the SEHU region have ranged from 1,446 to 3,527 cases per year between 2012 and 2022. Freezing rain can also cause power outages which impacts food safety and increases the risk of carbon monoxide poisoning.

The SEHU region is expected to receive greater levels of rainfall instead of snow during the winter season. While the number of winter storms is expected to decrease due to rising temperatures, extreme snowfall events that are stronger and longer lasting can still seriously impact health and social service delivery (19).

Tornadoes

The SEHU region may experience severe windstorms and tornadoes more frequently in the future, though the impact of climate change on these events is more uncertain than other aspects of extreme weather (11). Tornadoes usually develop during intense thunderstorms and are one of the most damaging types of weather event (13). The sudden creation of tornadoes often leaves little time for warning or chance for people to seek shelter (13). Tornadoes can directly impact health by causing injury, trauma, and death, or indirectly by decreasing access to services, and causing power outages and infections (20).

From 2017 to 2024, 347 tornados touched down in Ontario, 16 of which were in the SEHU region (21). All local tornados were considered weak events and did not cause any recorded injuries or deaths (21). It is uncertain if the SEHU region will experience more dangerous and/or frequent windstorms and tornadoes in the future (11).

Drought

A drought is a shortage of precipitation over a long period of time, resulting in a lack of water for vegetation and crops, animals and people (22). Droughts can be caused by lack of rain, warmer temperatures, increased evaporation and increased human water use (23). Droughts can affect water quality, increase the risk of wildfires and floods, and cause an increase in infectious diseases and spread of diseases carried by water-borne pathogens (24). Individuals who get their drinking water from private wells may be at a higher risk for drought-related infectious diseases (25). Historically, the SEHU region experienced an average of 15 consecutive dry days between 1981 and 2010 (12). It is expected that temperature increases and changes in precipitation patterns will lead to more frequent, intense and longer lasting drought conditions in the future (26).

Wildfires

Across Canada, wildfires are the second most reported type of natural disaster after flooding, with most fire activity taking place in the northern regions of Ontario (24). Climate change is increasing the intensity, and frequency of wildfires, while also extending fire seasons by creating more favourable conditions for wildfires to ignite and spread (27,28). In the summer of 2023, Canada had a devastating wildfire season which lasted from mid-April to late October, burning more than seven times the historical average. Experiencing a wildfire can impact mental health, causing depression, anxiety, PTSD and psychological distress among both adults and children (11).

While most of the SEHU region is outside of at-risk fire regions and is considered safe, a portion of Lanark County is within the hazard zone (27). SEHU residents can still be exposed to poor air quality as wildfire smoke can travel great distances depending on how close the fire is and wind direction (29).

Air pollution

Air pollution in the SEHU region is a significant problem that is made worse by climate change. Air pollution is the contamination of the indoor or outdoor environment by chemicals, physical or biological that change the environment (30). Air pollution is caused by combustion processes related to energy production, transportation, industry and agriculture (30). Air pollution also comes from wildfires, which may be caused by human activities, but is largely a natural event, and includes environmental allergens such as pollen and mould (30).

Common air pollutants

The most common air pollutants are particulate matter (PM), nitrogen oxides and volatile organic compounds (VOCs) (30). These air pollutants can cause health risks ranging from skin and respiratory irritation to an increased risk of cardiovascular disease or cancer (30).

PM are small solid particles and liquid droplets that can be inhaled. PMs of concern include $PM_{2.5}$ and PM_{10}; the numbers refer to their diameter, measured in micrometers. In 2019, the estimated global consequence of disease and death due to $PM_{2.5}$ was 4.14 million deaths and 118.2 million disability-adjusted life years (DALYs); primarily affecting ischemic heart disease, stroke, and chronic obstructive pulmonary disease (COPD) (31).

Nitrogen oxides are air pollutants that contribute to air quality, mainly through their impact on ground-level ozone production. Important sources of nitrogen oxides include transportation, industrial processes and power generation (32). Nitrogen oxide emissions have significantly been reduced over the last decade due to increasingly strict vehicle emissions regulations and a decrease in coal-fired power generation (32).

VOCs are released as combustion byproducts (e.g., vehicle emissions), from industrial processes, and from materials such as paints and solvents. In Canada, the oil and gas industry are the largest contributor of VOCs (32).

Ground-level ozone is a harmful-pollutant that forms when a large collection of pollutants, such as nitrogen oxide and VOCs, are exposed to sunlight (30). Ground-level ozone is a major component of smog (30). While ozone is beneficial in the stratosphere for absorbing ultraviolet radiation (UVR), it is harmful to inhale. Air pollution poses the greatest health risk near its source, but it can spread over great distances due to weather, geography and the chemical properties of the pollutants.

Air pollution from natural sources

As previously described, intense wildfires are expected to happen more often due to climate change creating more favourable environments and conditions for wildfires to ignite and spread. A significant health risk created by wildfires is the production of PM (32). During the 2023 wildfires, smoke plumes extended over large parts of North America and exposed hundreds of millions of people, including residents within the SEHU region, to dangerous concentrations of $PM_{2.5}$, ash, carbon dioxide, carbon monoxide and VOCs. Some communities closest to the fires spent more than 60 days with $PM_{2.5}$ concentration far exceeding acceptable guidelines (32). In Canada, exposure to $PM_{2.5}$ and its health risks is expected to rise in the future.

Pollen and mould spores are naturally occurring environmental allergens that contribute to poor air quality. These allergens, which are found in trees, grasses, weeds, and moist environments, can irritate the respiratory system, worsen asthma and cause allergic reactions (33). Allergens are expected to continue to worsen due to longer growing seasons, increased temperatures and rainfall and more carbon dioxide due to climate change (11).

Indoor air quality

Climate change affects indoor air quality by worsening current problems and introducing new challenges. For example, wildfire smoke and poor outdoor air quality can lead to more pollutants and allergens in indoor spaces (11). In addition, high indoor temperatures and higher humidity can create indoor conditions that lead to mould, mildew, dust mites and bacteria. Power outages during extreme weather events can make it more difficult to maintain comfortable indoor temperatures and healthy indoor air quality. Given that most people spend more than 90 percent of their time indoors, the quality of indoor air has a significant impact on health (34).

Air pollution trends and projections

Monitoring stations across Ontario are used to monitor air pollutants and allergens and use the data to calculate the Air Quality Health Index as current values, forecasts and risk to human health. Low-risk conditions accounted for more than 95 percent of 2018 and 2021 in Belleville and Kingston, and more than 97 percent of 2020 and 2021 for both locations (31,32,35). High readings in early June 2023 show the impact of smoke plumes from wildfires in Québec, northern Ontario, and western Canada which exposed residents to hourly $PM_{2.5}$ levels 10 times higher than Health Canada's 24-hour exposure guide (35). In 2016, Public Health Ontario and Cancer Care Ontario estimated that 290 to 900 new cancer cases each year in Ontario are due to exposure to $PM_{2.5}$ in outdoor air pollution (36). Generally, the number of air pollutant related issues such as asthma, COPD, and deaths due to lung cancer is decreasing within the SEHU region. However, it is difficult to determine how responsible air pollution and allergens are for these health outcomes, as major changes in pollutant exposure have not been reported over the last decade.

Ultraviolet radiation

UVR is an invisible form of radiation that can come from natural sources like the sun and artificial sources such as tanning equipment and black lights. Sunlight is the greatest source of UVR (37). With climate change causing longer and warmer summers, people will likely spend more time outdoors and be exposed to more UVR (38). Prolonged exposure to UVR can cause skin cancer (39).

The SEHU region has had the highest rate of melanoma in the province for the past 10 years. The most recent data for skin cancer incidence, which is from 2016 to 2020, indicates that Ontario's overall rate was 24.7 per 100,000, while SEHU's rate was 41.3 per 100,000 (38). The rate of skin cancer is expected to continue rising based on the future heat waves that are expected (38,40).

Vector-borne disease

Vector-borne diseases (VBDs) are diseases that are caused by viruses, bacteria or parasites that are spread to humans by animals or insects (41). Some diseases that originate in animals must be transmitted through a 'vector' (e.g., mosquito, tick) to infect a human. Climate change is causing warmer temperatures, more rain and snowfall, and sea levels to rise which may affect the habitat distribution, geographic range, and reproduction cycle of disease carrying mosquitos and ticks, increasing the risks of exposure to VBDs (24).

Mosquito-borne diseases

Harmful mosquito-borne diseases that are in Ontario include West Nile virus (WNV) and eastern equine encephalitis virus (EEEV). These diseases mostly occur during the summer season when mosquitos are most active in Ontario and people are spending more time outside (42). Both WNV and EEEV are spread when a mosquito feeds upon an infected bird and passes the virus by biting a human (41). While the risk of becoming seriously ill from WNV is low, with only 20 percent of those infected experiencing flu-like symptoms such as fever, head and body aches, and skin rashes, less than one percent may develop neurological syndromes such as encephalitis or Parkinson's disease (43). EEEV is considered the more dangerous

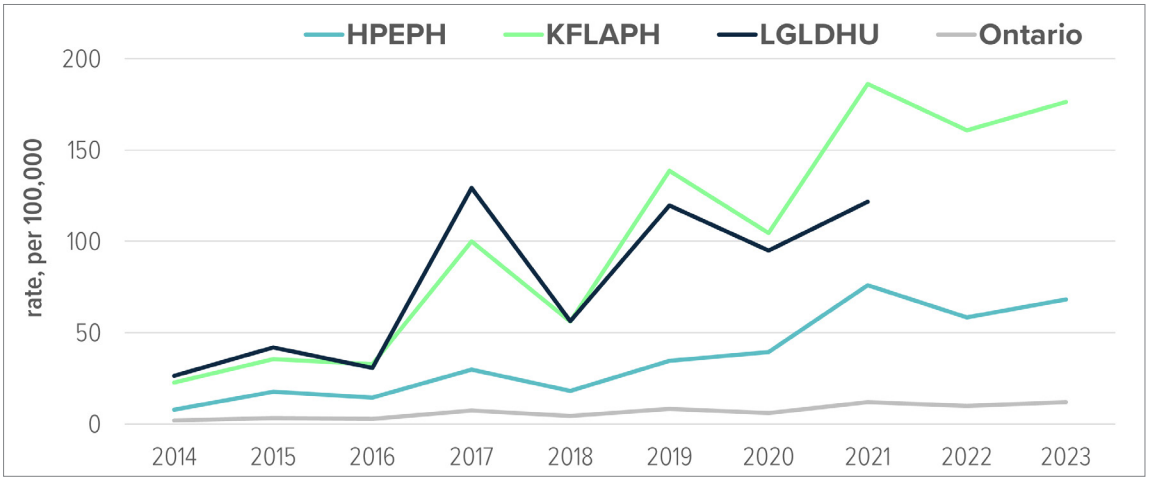
disease, as approximately one third of patients who develop serious symptoms, such as seizures and coma, may die or be left with permanent brain damage (43). From 2013 to 2022, there were 18 confirmed cases of WNV in the SEHU region (HPE: 4, KFLA: 3, LGL: 11), and only three human cases of EEEV have been recorded in Ontario as of 2023—none of which occurred in the SEHU region (44,45).

Tick-borne diseases

Lyme disease is a tick-borne illness that is spread to humans by the bite of an infected black-legged tick. Warming temperatures due to climate change are increasing tick survival and activity, how far hosts travel (e.g., mice and deer), and extending seasons when humans may be in contact with ticks (46). Symptoms of Lyme disease can range from early symptoms such as fever, chills, and fatigue, to more severe symptoms if left untreated including facial paralysis, cardiac and neurological disorders, and arthritis (often in larger joints like the knees) (46). In rare cases, Lyme disease can lead to death due to related complications involving infection of the heart (46). Ticks are a public health concern as Lyme disease cases in Ontario have been increasing since the 2000s (44).

The SEHU region is a high-risk area for the black-legged tick. In 2022, the rate of Lyme disease in Ontario was 9.9 per 100,000, while the SEHU region had a rate of 104.1 per 100,000. In addition to the increased risk for Lyme disease, the spread and establishment of ticks in Ontario poses a significant risk to public health as this species can transmit other pathogens resulting in VBDs such as Anaplasmosis, Babesiosis and Powassan virus—each recognized as a disease of public health significance as of July 1, 2023. Provincial data on rates of Anaplasmosis, Babesiosis and Powassan virus is only available for 2023. All three PHUs that comprise the SEHU region had rates above the Ontario average for Anaplasmosis and Babesiosis, while there were no human cases of Powassan virus reported (44).

Figure 1. Lyme disease rates in the SEHU region and Ontario, 2014 to 2023.



Source: (44)

Data Notes: Infectious Disease Trends in Ontario, PHO. Rates are for all ages and sexes. LGLDHU stopped reporting Lyme Disease cases to the provincial database in 2021, so rates for 2022 and 2023 are not available.

Food- and water-borne illness

Climate change significantly affects the rate and spread of food- and water-borne diseases. Rising temperatures, changes in precipitation patterns, and extreme weather events happening more often create conditions that help harmful algal blooms (HAB) grow, along with other food- and water-borne germs that cause infection.

Harmful algal blooms

Blue-green algae are tiny plant-like organisms that occur naturally in ponds, rivers, lakes and streams. Agricultural activities often contribute significant amounts of nutrients, particularly nitrogen and phosphorus, to nearby water sources (47). When heavy rainfall occurs, these nutrients are washed into lakes and rivers, providing a large food source for blue-green algae which results in an algal bloom (47). HAB produce toxins that contaminate drinking and recreational waters, creating health risks to humans such as digestive and respiratory irritation due to ingesting or inhaling toxins (47). HAB usually appear in late summer and early fall, mostly in shallow, slow moving warm water, but may grow in deeper, cooler water as well (48). The risk of more intense HAB appearing more often is growing due to climate change raising water temperatures and extending HAB growing seasons (49). Direct skin contact with toxic water can also trigger harmful reactions, potentially leading to severe neurological symptoms such as confusion and respiratory paralysis (47). HAB can also deplete oxygen levels in water which may harm pets, livestock, wildlife and aquatic ecosystems (50).

The health risks of HAB are a growing concern in the SEHU region due to the large number of lakes and their use for drinking water, recreation and agriculture. Reports state that the number of warnings related to HAB has tripled over the last 10 years, with climate change being a significant contributing factor (47). There were 15 confirmed HAB in the SEHU region in 2023 and 2024.

Food- and water-borne pathogens

Food- and water-borne pathogens are bacteria and parasites that live within contaminated water, food, dairy products, infected animals and other sources. As temperatures rise and extreme weather events increase in frequency, the seasons when pathogens are active grow longer, resulting in greater growth, wider distribution and higher likelihood of infection (51). Extreme weather events such as heavy rainfall, flooding, and high winds pose significant risk to food and water safety (11). These events can compromise food and water quality by disrupting food storage due to power outages and introducing contaminants through floodwaters, which may carry pollutants like chemicals and raw sewage into homes, restaurants and agricultural fields (51).

While recent trends indicate that rates of food- and water-borne diseases are decreasing or stable in the SEHU region and across Ontario, the burden of gastrointestinal illness caused by food- and water-borne pathogens is expected to rise (52-56). As climate change accelerates, warming temperatures and more frequent extreme weather events will likely increase the risks associated with food and water contamination (51).

Climate impacts on populations most at risk

Vulnerable populations—including those living in rural areas, Indigenous Peoples, infants and young children, older adults, outdoor workers, individuals with chronic illness and those facing social or economic disadvantages—are disproportionately affected by climate change. This is due to heightened exposure, increased susceptibility, and limited capacity to recover from climate-related damages (2). For example, populations relying on well water may be more vulnerable to changing rainfall patterns and extreme weather events which threaten water security, access, availability, and quality of safe drinking water than those who do not use well water (57). Similarly, rising temperatures may affect Indigenous Peoples' access to traditional practices and food sources, which may negatively impact their connection to the land, cultural identity, and holistic well-being (11,58,59).

To address these disparities, climate change strategies must incorporate a health equity lens, ensuring a deeper understanding of how these populations are affected compared to the general population. Strengthening physical, social and economic supports will be key to protecting vulnerable groups from the increasing impacts of climate change.

Engagement findings

Staff engagement survey

Public health staff at HPEPH, KFLAPH and LGLDHU were invited to complete an anonymous survey asking how climate change is tied to their work. The purpose was to identify staff knowledge on the health impacts of climate change, current public health programming that addresses climate change or reduces the impacts of climate change, gather suggestions for further efforts to adapt and reduce the impacts of climate change within each health unit, and identify opportunities for community partnership development.

Overall, the survey results indicated that public health is actively addressing climate change through various programming. This includes communicating extreme weather events, emergencies, and health hazards to the public; the enhancement and creation of new climate change initiatives in waste management, staff education, and active transportation; and by the creation or strengthening of partnerships with local, municipal, provincial, federal and international groups concerned with climate change.

Partner engagement

Community partner engagement is a key part of completing a CCHVAA. A total of 35 interviews were conducted with community partners to understand which programs or policies they are using to address climate change, and where they saw opportunities for partnership with public health. Interviews were conducted with individuals working in municipalities, conservation authorities or organizations, educational institutions/school boards, health services, organizations that work with vulnerable populations, and local climate action groups/task forces servicing the HPE, KFLA, and/or LGL regions.

Although the partner engagement group attempted to initiate climate change discussions with Indigenous representatives within HPE, KFLA, and LGL communities, limited engagement was possible within the timeframe of the CCHVAA. As a result, it is acknowledged that Indigenous perspectives and value systems are not reflected in these interviews or in this report, representing a gap in partner engagement and its results. It is extremely important that Indigenous perspectives and value systems be considered in how public health addresses climate change and health.

KI interviews revealed that many community partners are involved in projects aimed at addressing climate change, ranging from educating the public and youth on the importance of the environment and the effects of climate change, to advocating for climate change to be considered in internal decision-making and planning, and to acting on climate change through community work. While some partners are not directly working on climate change-related items, they mention that it is increasingly impacting their services, programs and clients. Examples include tornadoes, heavy rain and freezing conditions that disrupt facility operations, shift road maintenance practices, and lead to increased school closures; all of which have considerably impacted education and public services. When partners were asked about collaborating with public health, several ideas were suggested such as improving communication and engagement with municipalities and the public about climate change; working with local committees to integrate a health perspective into climate initiatives; engaging with municipal staff and government on climate change planning; supporting schools and school boards with climate change curriculum; and more.

By fostering strong partnerships and collaboration with community partners across the SEHU region, public health can play a key role in supporting a comprehensive approach to climate change adaptation, mitigation and resilience.

Recommendations

The SEHU will use the findings from the literature, data, staff survey and KI interviews to create a comprehensive action plan to integrate climate change strategies into public health programming. The action plan will have the following pillars at its core: assessing and monitoring population health; health promotion; and health protection. These pillars will serve as the foundation for SEHU's climate change action plan which will include developing a climate change monitoring and evaluation plan, prioritizing health equity and local knowledge to inform climate action, strengthening community capacity and resiliency through education, knowledge sharing and collaboration, and developing plans to identify when and how to respond to future climate change trends and risks.

Conclusion and next steps

Climate change is a global issue that will progressively impact the health and wellness of our communities, the ecosystem, and those that live, work, and play in the SEHU region. It is important that we prioritize adaptation and mitigation efforts in public health programs and services, by building a system that anticipates, addresses, and mitigates the emerging risks and impact of climate change. We intend for this CCHVAA to inform and support an adaptive, resilient public health system for the SEHU region.

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From: Lisa Munday
To: Shelly Brown; Eric Serwotka
Cc: Daphne Mayer
Subject: FW: Heartfelt Thanks for Your Participation in the Climate Summit
Date: June 6, 2025 4:12:13 PM
Attachments: image001.png
image002.png
image003.png
image004.png

Hi Shelly & Eric,
I have a small update for you regarding the Local Climate Partnership for Kingston.
The Kingston Climate Summit (June 4 & 5) was a great success. I participated on two separate panels, one to launch and discuss the Kingston Climate Partnership (KCP) and the other to discuss the Kingston Climate Change Adaptation Plan. Angela MacMillan, Dietitian on the Healthy Communities Team, also participated in a workshop and panel discussion on food systems (featuring the new Food System Framework for the City of Kingston). Amie Krasnozon, Public Health Nurse, participated in an evening panel following a lecture on traffic, mobility and city planning. Public health's municipal health promotion work was featured well throughout the activities.
The City of Kingston and ICLEI have expressed gratitude for the support provided by the South East Health Unit for the summit and the partnership several times, but I also received the email below.

I will be attending a KCP steering committee meeting on June 11th to discuss the partnership (e.g. governance structure, working groups, TOR, etc.). I will provide updates as the partnership becomes finalized.
Have a great weekend.
Lisa

Lisa Munday, RD, BASc, MAN
Manager, Healthy Communities
Community Health & Well-Being Portfolio
Phone: 613-549-1232, ext. 1109
Toll-Free: 1-800-267-7875
Fax: 613-549-7896
Lisa.Munday@kflaph.ca
South East Health Unit
(formerly KFL&A Public Health)
221 Portsmouth Avenue
Kingston, Ontario K7M 1V5
www.kflaph.ca
Connect with us on Facebook | Twitter | YouTube
Let us know how we did today. Take our client experience survey.

South East Health Unit (formerly KFL&A Public Health) is situated on the traditional territories of the Anishinaabe and Haudenosaunee.

From: Salter-Keane,Julie
Sent: Friday, June 6, 2025 9:48 AM
To: Lisa Munday
Subject: Heartfelt Thanks for Your Participation in the Climate Summit

Good Morning Lisa
We want to extend our deepest gratitude to you for your invaluable contribution to the Kingston Climate Summit. Your passion, dedication, and commitment to climate action and environmental advocacy made the event truly impactful.
Your insights, discussions, and engagement helped create a meaningful dialogue around climate action, inspiring change and fostering collaboration across our community. It is through collective efforts like yours that we can work towards a more sustainable and resilient future.
Thank you for being an essential part of this movement. We look forward to continuing this journey together and creating lasting change.
Regards
Julie

Julie Salter-Keane (she/her/hers)
Manager, Climate Leadership
Growth & Development Services
City of Kingston
British Whig Building
216 Ontario Street Kingston, ON K7L 2Z3
613-546-4291, extension 1163
Jsalter-keane@cityofkingston.ca

The City of Kingston acknowledges that we are on the traditional homeland of the Anishinaabe, Haudenosaunee and the Huron-Wendat, and thanks these nations for their care and stewardship over this shared land.