

Student View on Climate Change and Community Engagement in the Glebe and Centretown

Bailey Tait - Second year student at Carleton University

By the middle of the century or possibly sooner, Ottawa will look and feel like it's a different place; summers will be extremely hot (with 4 times more extreme heat days each summer by 2050) and the severity of storms will also continue to increase. The Glebe community is far from prepared for the resulting power brownouts and blackouts, damage to wildlife and buildings as well as other risks from more heat, precipitation, ice and overland flooding. Some people are more at risk than others, and it's important they take necessary precautions. Installing air conditioning, managing rainwater, making tree canopies, as well as other green solutions and referring to heat island maps are all ways the Glebe community can prepare itself.

This fall, a group of students from Carleton University's Foundations in Community Engagement course worked together with the Glebe Community Association and Centretown Community Association on a project to better prepare the community for these changes. The students were excited to start working together to build their community engagement skills and benefit the community in the process. Their work focused on promoting a virtual community event on climate resilience hosted by Centretown Community Association and Glebe Community Association on November 17 from 7-9 PM.

At the event, residents and communities were presented with proven and practical information to help them become climate resilient from 4 local experts: Martha Robinson from the Ottawa Public Health group, Dr. Andy Kenney, Professor Emeritus from the University of Toronto Faculty of Forestry, Mary Stewart, Landscape Designer with Living Green Landscaping, and Toon Dreessen, a well-known Ottawa Architect. Participants learned that extreme heat is the top climate risk in Ontario for public health concerns; those most vulnerable are infants and young children, older adults, recent immigrants and tourists, pregnant people, people with chronic illnesses including mental health conditions, people with physical impairments and disabilities, those who have outdoor occupations, people who don't have air conditioning or who don't use it, people who are physically active outdoors, and those that are homeless or don't have adequate shelter to get away from the heat. Extreme heat can cause dehydration, heatstroke, kidney injury, adverse pregnancy outcomes, worsening sleep patterns and mental health, worsening of underlying cardiovascular disease and respiratory disease. To avoid extreme heat, it's important to have blackout curtains indoors, use air-conditioning or fans, as well as take cold showers. Outdoors you can dress in light and loose-fitting clothing, wear a hat and drink lots of water, you can plant trees to shade your house, and also use the Ottawa Urban Heat Island Maps to look for cool places.

In terms of rainwater management, droughts and flooding become more common, therefore learning to manage rainwater can help with both of these. Permeable pavements are interlocked stones or steppingstones which can be part of your driveway or walkway, designed to let water run directly down your property as opposed to sending it to a gutter or sewer. Other ways to keep water on your property are installing a rain barrel under your downspout, moving your downspout to drain into an adjacent garden, building a rain garden, or building an infiltration trench or soakaway pit which collects water through gravel covered with lawn and distributed to the subsoil. Groundcovers, including creeping plants or mulches, protect your soil from completely drying out. These are placed on top of the soil to keep the water in and help during droughts.

Workshop participants also learned about heat impacts and green solutions. Heat-related health problems are rising especially where the Urban Heat Island Effect increases heat waves. The Urban Heat Island Effect is caused when condensed concentrations of paved surfaces and buildings trap and retain heat. Temperatures can be reduced by placing trees which provide shade, water retention, and livability. Landscaping is also designed to diminish heating and cooling load in a building and reduce energy requirements. However, green landscaping, gardens, small parks, and small greenery can significantly reduce unwanted heat gain. Another way to mitigate the heat is by having a green roof: a vegetative layer that grows on a rooftop. These provide shade, remove heat from the air, and lower surface and surrounding air temperatures. Heat maps, created by the Carleton University students were shown to represent hot spots in Centretown and the Glebe. Centretown is almost completely covered by orange areas indicating heat islands. Hot spot areas in the Glebe include parking lots, and Lansdowne. Artificial turf is a huge factor increasing urban heat islands which is maybe why Lansdowne is such a hotspot considering the football field.

This event was all in hopes of better preparing the Glebe and Centretown communities for a climate crisis. The project gave Carleton University Students an opportunity to learn how to work better in a group. This tested the students on communication, reliability, task and time management. It also taught the students what community engagement really is and the steps required to do this effectively, in addition to learning about climate change resilience, meaning working through challenging circumstances that could arise. We want to thank the CAs of the Glebe Community Association and Centretown Community Association for their continuous efforts with the students throughout the term. We hope these preventive tactics help the community and that they share this knowledge with other people around them to keep everyone safe.