

Climate Change Action Plan

A community initiative to donate money in support of the City's Climate Change Action Plan generated almost \$9,600 from 22 donations in a little more than a week since City Council supported creating the fund and issuing tax receipts for donations.

People who want to donate to support actions that reduce our environmental footprint and improve our environmental sustainability as a community can donate by cash, debit, credit card or cheque at the Corporate and Legislative Services desk, by the tax office, on the main floor of City Hall, 500 George St. N. Please indicate that the donation is for the Climate Change Action Plan or CCAP.

To receive a charitable tax receipt for your donation, please make sure to give your name and address with the donation.

For information on the Climate Change Action Plan and the City's sustainability efforts, please visit peterborough.ca/living/sustainability.

The City adopted the Greater Peterborough Area Community Sustainability Plan in April 2012. And it adopted the Greater Peterborough Area Climate Change Action Plan in December 2016, committing to reduce both Corporate and Community greenhouse gases by 30% by 2031.

The City has a dedicated Sustainability Manager position and the 2019 Budget includes funding to support a Climate Change Coordinator position under Sustainable Peterborough. We are a partner in Sustainable Peterborough with community groups, residents, businesses, local governments and First Nations. And we joined the Federation of Canadian Municipalities Partners for Climate Protection program.

City staff will be looking more thoroughly at our actions to address climate change in the coming year.

Addressing climate change is incorporated throughout the City's annual budget. Here are some of the activities that we've undertaken or are undertaking related to climate change and environmental sustainability:

Active Transportation

- The City is continuing to invest in active transportation infrastructure (walking and cycling infrastructure) and 2016 data shows that this is increasing the share of daily trips made by non auto modes (from 5.9% in 2011 to 10.2% in 2016).
- 70 kilometres of cycling lanes and multi-use trails in 2018 up from 55 kilometres in 2011.
- Peterborough Moves - Shifting Gears, a highly successful program in partnership with GreenUP, Bike Community Bike Shop and Peterborough Public Health to encourage active transportation.

Transit

- Transit ridership increased significantly in 2017 (+ 8.6%) and again in 2018 (+18%). While much of the increase has come from increased service and new ridership on the Fleming and Trent Express routes, this increase represents avoided auto trips that contributes to GHG emissions avoided. It is estimated that just over 11 million vehicle-kilometres of travel has been avoided resulting in just over 2,000 tonnes of GHG emissions avoided.
- Transit continues to purchase low emission diesel buses that require less fuel use than previous vehicles in our fleet
- Transit is monitoring various ongoing trials of alternative fuel buses being undertaken by larger transit agencies (electric, Compressed natural gas, etc) to determine feasibility and considerations for Peterborough
- Transit has initiated a Transit Route Review and Long Term Growth strategy to revise and improve our current transit route structure and system to increase ridership and establish a longer term vision for transit in the community include future transit targets for future ridership.

Long-term Planning

- Over the next two years the City is proposing to create a Watershed Plan, in collaboration with our neighbouring municipalities, First Nations and Otonabee Conservation. Among other things, a Watershed Plan will improve our approach to climate change adaptation and reduce climate risk by helping to shape future development and City infrastructure priorities in a way that is environmentally sustainable. This approach will ensure climate adaptation priorities and climate risks related to watershed management are realized, validated and refined; creating a more resilient community.
- The City continues to advance its Low Impact Development (LID) and Green Infrastructure (GI) initiatives in both new development and infrastructure retrofits. LID and GI is an important adaptation strategy that will help reduce flood risk, improve water quality and increase our drought tolerance, all of which are impacted in a changing climate.
- We continue to improve and refine our Asset Management Plan to incorporate the need to account for Climate Change in our decision making processes.
- The City also approved subsidy programs allowing residents to prepare for severe events where individual owners can improve their property to prepare for large storms and help prevent basement/property flooding.
- The City street light retrofit to LED that is ongoing proposes to reduce GHG footprint by 145 metric tonnes annually.
- Installation of larger storm pipes/conduits to move water more effectively away from sensitive areas. Attempting to widen watercourse banks to collect and move water more effectively.
- Completed several flood reduction master plans and a sanitary system master plan identifying sensitive areas during major storm events and potential solutions. We are now in the implementation stages.

- Working with Province/Federal government funding programs and the conservation authority to protect areas that are at risk.
- The Urban Forest Strategic Plan, Emerald Ash Borer Management Plan and the Tree and Woodland Conservation by-laws all provide CO2 removal from the air and sequestering carbon in the above and below ground parts of trees. The initiatives within the plans all help with reduced energy use by cooling or sheltering buildings, providing shade thereby reducing "heat islands", reducing UV-B that is a cause of skin cancer, improving the air quality during hot days as well as intercepting and moderating storm water flows and slowing soil evaporation.

Design Changes

- Within the area of Stormwater Management, more specifically under stormwater quantity control, we have updated our Engineering Design Standard to the latest published Environment and Climate Change Canada Intensity Duration Frequency parameters. The latest data set has significantly increased rainfall depths in the longer design storms.
- Further to that, our design standards also specify a very aggressive shorter duration rainfall event which tends to provide a worst case or near worst case scenario when assessing stormwater management and flood reduction storage volume requirements. The implementation of these particular criteria has potentially accounted for more intense rainfall events in the future as opposed to previous more conventional design storms.

Monitoring and Maintenance

- With climate change leading to more intense rain events causing an increased chance of flooding to basements, roads and other infrastructure, the City has installed and upgraded equipment to view almost live data throughout the City monitoring rain fall amounts during a storm event as well as sanitary sewer flow monitors that gives the City almost live sanitary sewage levels in selected pipes. The equipment also contains alarms set to trigger alerts if thresholds are exceeded.
- Internal forces and contractors combined have attempted to achieve unimpeded flows in our sewers through routine maintenance ensuring full capacity availability. This is completed via yearly flushing, cleaning and camera inspections allowing pipe conditions to be recorded and to better prepare the City for a severe storm due to climate change.

Waste management

- Diversion programs resulted in a residential diversion rate of 56% in 2017. New, more challenging diversion opportunities continue to be investigated, including organics, reuse, bulky plastics, and textiles.
- The City launched a mattress recycling program in 2014.
- The City started a battery collection program through the Blue Box in 2015.
- The Reuse Facility opened at the Peterborough County/City Waste Management Facility.
- Free tire recycling.
- Free electronic waste and equipment recycling.

Rooftop solar

- The Kinsmen rooftop solar has been generating energy since August 2016. The City's share is 8% of the gross revenue. For 2017, this renewable energy project generated 526,315.65 kWh of energy and \$13,852 in royalties for the City, slightly more than the estimated annual amount of \$12,000.

Some other actions

- A meeting with the top 10 community organization employers and top 10 business employers in the City and the County to discuss climate change issues and local advancements in 2015.
- Through Sustainable Peterborough, sponsored a series of columns in local media to raise awareness about businesses, organizations and individuals who are taking action to address climate change.
- Participated in Evergreen's Mid-Sized Cities Program. The Lab is intended to advance the City of Peterborough as a central hub for the Greater Peterborough Area by collecting, evaluating and developing actions to support the advancement of Peterborough as a Green economy and sustainable community.
- Partner in the creation of the Peterborough & the Kawartha Economic Development Corporation Clean Technology advisory committee in 2017.
- Through the Greater Peterborough Area Climate Change Action Plan, a comprehensive baseline inventory of energy consumption was conducted for the City, the County, the eight townships, Curve Lake First Nation and Hiawatha First Nation for both the corporate and the community sectors. Through the Climate Change Action Plan, a greenhouse gas emissions reduction target and local action plan was completed for each of the 12 partners.
- The Ministry of Transportation through the Electric Vehicle Chargers Ontario Program awarded a \$291,480 grant to Peterborough Utilities to install 9 electric vehicle charging stations in 6 locations across the greater Peterborough area.
- The City provides a Climate Change interactive, online education program through Planet Protector Academy for Grades 2-6 across the City and County. The Keep Cool program teaches kids how to reduce their energy and water use and change their transportation habit.
- The City installed a De-Ox Ice System at Kinsmen Arena in August 2017 to reduce natural gas consumption from hot water heating for ice resurfacing and to reduce electricity consumption by the refrigeration unit.
- The City and County, through Peterborough Utilities, developed a 1.6 megawatt landfill gas generation project at the County/City Waste Management Facility in 2013.
- The City added a Biogas Generation Facility at the City's Waste Water Treatment Plant in 2016 to utilize the methane gas produced by the facility to create electricity and heat.
- The new Operations Centre incorporates the collection of all rain water from the surface and roofs, which will then be filtered and used to wash service vehicles and buses.
- The new Operations Centre incorporates all LED lighting and smart lighting controls to reduce energy use, a building automation system to control all HVAC equipment to assist with energy savings, and high efficiency boilers (97%) for the floor heating system that saves energy by putting heat at the floor level, reducing heat loss and saving energy use.

- The City is looking at replacing lighting at the parking garages with LED and looking at the cost and benefits of changing all outdoor field and baseball diamond lighting to LED with smart controls, which could potentially reduce those energy uses by 40%.

The City's Building Division has been in the midst of an aggressive technical training program involving its Plans Examiners and Building Inspectors on the newer aspects of the Ontario Building Code (OBC) Energy Efficient design and construction guidelines. These staff have been working to ensure their competence in the technically complex administration of Energy Standards SB 10 (Large Buildings) and SB 12 (Small and Residential Buildings). They also have been working with the local construction and development Industry to ensure everyone is aware of and able to meet the standards that have been set in the aim of Climate Change prevention and reduction. It is conservatively estimated that energy efficiency initiatives in the OBC, led by the National Energy Code for Buildings, have increased the workload associated with permit review and inspection by 20% in the last 3 years. The Building Division is committed to ensuring that construction and development in the City of Peterborough meets these provincial standards.