

Area of Focus 10 - Measuring, Monitoring and Providing Feedback

Area of Focus 10	Measuring, Monitoring and Providing Feedback Workplan
Purpose of this Workplan	The Measuring, Monitoring and Providing Feedback Workplan has been developed based on details: • provided during the community engagement, • compiled or recommended from other municipalities, organizations, committees and others specializing in climate change actions, • approved by Council, and/or • recommended by City staff. The purpose of this workplan is to set an initial direction for collaborative discussion, action and measuring progress. It has been designed to increase collaborative data collection and reporting from key stakeholders that are involved with city-wide data. How the workplan is operationalized will be determined in early 2022.
Climate Change Expected Results	This workplan has been designed to measure and report on progress towards all expected results: Walkable, Complete Neighbourhoods Increased Active Transportation and Transit More Zero Emission Vehicles More Net-zero Buildings Lower Carbon Construction More Resilient Buildings and Infrastructure More Carbon Capture Move Towards a Circular Economy Increased Community Resilience Increased Engagement on Climate Action
Why Does this Matter?	Data-driven decision-making is transparent, grounded in the latest science and defensible. Achievement of any meaningful goals can only be realized if desired outcomes and progress are defined by key performance indicators and supported by data. There is significant potential for connection to Internet of Things (IoT), business intelligence (BI) solutions and artificial intelligence forecasting. Reporting on progress with meaningful and understandable indicators and metrics demonstrates accountability and transparency to the community, partners and stakeholders. Accountability and transparency

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	are important to ensure collaborations and partnerships are functional and strong. Providing feedback, having reminders associated with progress, celebrating successes, encouraging actions, are all important parts of raising awareness and leading to further climate action.
Background – How did we get here?	The City of London has information on community-wide energy use and GHG emissions going back as far as 1990, with annual estimates provided from 2004 onwards. London was one of the first Canadian cities to include community-wide energy costs with this information, starting in 2010. The City of London has information on corporate energy use, cost, and GHG emissions going back to 2007. A detailed breakdown of energy use by subsectors, along with marginal cost abatement (\$ cost/benefit per tonne GHG reduced) estimates, was carried out for London in 2011. The City of London has been reporting community and corporate energy use and GHG emissions data at both the national and global level through participation in the Federation of Canadian Municipalities' Partners for Climate Protection program, CDP Cities, and the Global Covenant of Mayors. The City of London used energy maps throughout the 2010s to illustrate residential energy use and efficiency at the neighbourhood scale. The City of London estimated carbon sequestration from London's urban forest through the UFORE tree inventory in the early 2010s. City Forestry staff have assembled a comprehensive database of tree type, age, location and health to provide baseline information for effective management (e.g., invasive pests and diseases). Water quality has been assessed (including temperature and chemistry) throughout the Thames River in London for over 40 years providing a long-term record to assist City staff and partners in wise management of the health of the river ecosystem. Routine infrastructure assessments (e.g., culverts, bridges) have been conducted for several years determining the condition, any weaknesses, and areas for remediation. Within London, many organizations and businesses currently report climate change and sustainability indicators.

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What has been done recently?	Some of the recent reports, initiatives and projects related to measuring, monitoring and reporting on climate and environmental aspects include: • 2020 Community Energy Use and Greenhouse Gas Emissions Inventory report; • 2020 Corporate Energy Consumption and Activities Report; • ClimateSmart's Business Energy and Emissions Profile (BEEP) tool for small to medium-sized businesses was developed for use by Green Economy London; • London was amongst the first group of Canadian cities included within Google's Environmental Insights Explorer tool; • Additional stream flow gauges have been added to 3 tributary streams to better assess local flood prediction and impacts; • Additional rain gauges have been installed as an enterprise-wide system covering the entire city to ensure accurate rain amounts are captured in neighbourhoods to assist in implementation and improvements to the basement flooding program; and • Upper Thames Region Conservation Authority staff conducted an assessment of all tributary creeks and their hydrologic condition (e.g., eroding banks) to establish a baseline for ongoing management and future remediation.
Responsible City Service Area(s)	• Led by Environment and Infrastructure, Enterprise Supports • Supported by City Manager's Office, Planning and Economic Development, Neighbourhood and Community-Wide Services, Finance Supports
Key Community Partners and Stakeholders	• Federal and Provincial Government • Energy Utilities (Enbridge Gas, London Hydro, Enwave, Hydro One, Independent Electricity System Operator) • Business Associations and other organizations (e.g., London Chamber of Commerce, London Economic Development Corporation, Green Economy London, London Community Foundation) • Local First Nations and Urban Indigenous communities • Conservation Authorities • Middlesex London Health Unit

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	• Businesses, Institutions and Other Employers • Community Groups (e.g., Pillar Non-profit Network, London Environmental Network, Climate Action London, Urban League of London) • Other Organizations (e.g., Middlesex-London Food Policy Council, London Community Foundation) • Western University • Fanshawe College • London Transit Commission
Key Actions (and Milestones)	Many of the actions below are tied to and/or contained in other workplans 1. Climate Change Mitigation (Timeline: 2022 onward) a. Continue to provide Londoners with the latest information on local greenhouse gas emissions and the expected impacts of climate change b. Develop an updated detailed assessment of the economic cost and benefits of climate change mitigation actions (e.g., marginal abatement costs) needed to reach net-zero emissions by 2050. c. Create and regularly update estimates for global GHG emissions from the local consumption of goods and services (i.e., Scope 3 emissions) for inclusion in the community GHG emissions inventory d. Create and regularly update estimates for the climate impacts of land use, land use change, and urban forestry (e.g., carbon sequestration rates from trees, environmentally significant areas and other natural areas, and agricultural land) for inclusion in the community GHG emissions inventory e. Work with London Hydro (Lead) to review London's electricity distribution system to identify the capacity for additional renewable electricity generation f. Work with London Hydro (Lead) as they continue to facilitate the connection of low carbon and renewable distributed energy sources such as solar, biogas, hydro generation, batteries and microgrids.

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	g. Work with London Hydro (Lead) as they continue to provide applications and tools like the Green Button, Commerce (formerly IDC), Property Management Portal, and MyLondonHydro for customers to review and manage their energy usage. h. Work with Enbridge Gas (Lead) to review London's gas distribution system to identify the capacity for additional "green gas" (i.e., renewable natural gas and/or hydrogen) gas injection i. Work with the London Economic Development Corporation (Lead) and the London Chamber of Commerce (Lead) to define and encourage the growth of employment in the green products and services sector in London j. Work with the London Chamber of Commerce, London Economic Development Corporation and Green Economy London to encourage London's business community to set GHG reduction targets for their business and track progress towards these targets k. Work with the Pillar Non-profit Network to determine how the United Nations Sustainable Development Goals can be addressed as part of public reporting with respect to climate action 2. Climate Change Adaptation (Timeline: 2022 onward) a. On an annual basis, compile a summary of extreme weather events impacting London and list the actions taken or required to address the impacts to Londoners, as per the 'Building an Adaptive and Resilient Community' process and our partnership with ICLEI b. Assess through measurement the connectivity, ecosystem health, and area of the natural heritage system c. Work with the Middlesex London Health Unit to review and update the migration patterns and tracking of applicable human health impacts of climate change (e.g., lyme disease carried by ticks)

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	d. Assess, track, and report on the change in permeability of urban lands through Low Impact Development (LID) and de-paving (removal of hard surfaces) initiatives e. Work with the Conservation Authorities and other emergency preparation and response partners to assess damage and remediation actions needed to address flooding impacts and recovery 3. Progress Reporting (Timeline: 2022 onward) a. Confirm or establish the baseline data and 2030 objective for each Expected Result b. Provide Municipal Council with a report on Climate Emergency Action Plan implementation progress and performance on an annual basis c. Provide Municipal Council with a report on community-wide and corporate GHG emissions on an annual basis d. Provide the public with an easy-to-find and easy-to-use platform(s) and visuals for presenting information on Climate Emergency Action Plan implementation progress, community-wide GHG emissions, corporate GHG emissions, and progress on adaptation measures being undertaken e. Continue to report community and corporate energy use and GHG emissions data at both the national and global level through the Federation of Canadian Municipalities' Partners for Climate Protection program, CDP Cities, and the Global Covenant of Mayors f. Report on municipal adaptation efforts through ICLEI Sustainable Cities - Building Adapting and Resilient Communities (BARC), CDP Cities, and the Global Covenant of Mayors g. Make community and corporate energy use and GHG emissions data accessible via the open data portal

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Examples of Measuring Progress	Increased Engagement on Climate Action • Website view statistics by action • Social media statistics by action • Number of downloads by document • Number of new data collection exercises implemented • Number of Top 100 City Employers (by number of employees) reporting sustainability indicators These measures are intended to evolve through the consultation and implementation process to ensure they are adding value to the progress of the CEAP.
Resources	• CEAP Supporting Documents • London's Business Energy and Emissions Profile (BEEP) • Google's Environmental Insights Explorer • UN Sustainable Development Goals