

APPENDIX A: FINAL UPDATE TO KEY ACTIONS IN OUR COMMUNITY CLIMATE ACTION PLAN

Action Owners

Action Owners are organizations that are implementing or investigating actions that reduce community greenhouse gas emissions. ClimateActionWR monitors and supports the progress of actions through regular communication and meetings with action owners.

ITERATIVE ASSESSMENT MODEL

ClimateActionWR monitors local initiatives and uses an iterative assessment model to determine where support is required. Initiatives are identified as either:

- not implemented;
- further development required;
- under consideration;
- in progress; or
- Complete

Initiatives that fall within the “in progress” category are further classified based on the level of support they require from ClimateActionWR. Actions that are self-sustaining and require no to minimal support are considered to be “in progress – thriving”. Actions that require additional support to reach their estimated GHG reduction potential are “in progress – support required”.

STATUS OF ACTIONS

The following table (Appendix A) provides an update on the progress and status of several key actions, opportunities and further considerations originally identified in our 2013 community CAP.

Iterative Assessment Status	Action Name & Description	Partners Involved	Financing Mechanisms	Updated Status	Updated Impacts & Benefits
Complete	<p>Regional Electric Vehicle Charging Network Planning: Support consumer adoption of 1,000 electric vehicles across the region (e.g. through the installation of public charging stations, education & awareness, etc.).</p>	Various public, private and not-for-profit organizations as well as informal community groups	<p>EVs: support for purchases through Ontario's EV Incentive programs.</p> <p>Charging infrastructure: Public and private sector organizations, EVCO program</p> <p>Region of Waterloo: Provided approx. \$70k in funding between 2010 and 2015 for EV charging infrastructure through its Sustainability and Energy budgets</p>	<p>1000 electric vehicles locally, which was exceeded in 2018 (according to Sustainable Waterloo Region's 2020 annual report). By 2020, SWR reports there were 2,741 local EVs in 2020.</p> <p>More broadly, the work to support the transition to EVs across the community is ongoing.</p> <p>As a municipality, the Region of Waterloo has partnered with several townships and cities, as well as Natural Resources Canada, to install publicly available Level 2 charging stations serving 46 parking spaces at municipally-owned facilities across Waterloo Region.</p> <p>Other actors are working on this as well. In particular, some cities have also included EV charging station requirements in their zoning bylaws. ChargeWR (now DriveZero) at Sustainable Waterloo Region continues to promote this work. The Waterloo Region Electric Vehicle Owners' Association (WREVA) has been very active in public education, and runs test drive events for community members to try out EVs.</p>	No Update Available

Complete	Regional Transportation Master Plan (RTMP): Projected shifts in transportation modes (i.e. decrease in SOV trips) as a result of the Regional Transportation Master Plan and associated policy, programming, and infrastructure (e.g. education outreach, expanded bus service, rapid transit, more bike lanes and connected communities designed for alternative transportation modes, etc.)	Region of Waterloo - Grand River Transit	Region of Waterloo: Approx. \$300 M including LRT construction, increasing transit use in Cambridge and Active Transportation Master Planning (improving trails bike lanes, pedestrian charter etc.) funded through property tax revenues, development charges, and other mechanisms	<p>Development and release of the 2018 TMP is 100% complete, including policy improvements and updated plans for active transportation and high-order transit improvements.</p> <ul style="list-style-type: none"> • Recommendations of the 2018 Transportation Master Plan (Moving Forward) were approved by Regional Council on June 27, 2018. • All TMP reports were finalized in late 2018 / early 2019 and published for public viewing in August 2019. • An education campaign was launched to the general public and Regional staff to raise awareness of the key recommendations of the final TMP. <p>Since adoption of the TMP, many of the action items have been completed including a number of active transportation upgrades (e.g. bike lanes, multi-use pathways, sidewalks, etc.) and transit planning initiatives (e.g. ION Stage 2 planning; Cambridge GO Study).</p>	No Update Available
In Progress- Support Required	Region-wide Anti-Idling Campaign/Bylaw: Projected impacts from a region-wide anti-idling campaign or by-	Region of Waterloo, area municipalities	N/A	Since 2015 there have been bylaws established and expanded in many of the area municipalities but not standardized Region-wide	No Update Available

	law. Goal: to reduce average idling time from 7 minutes to 3 minutes per day.				
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<p>In Progress- Thriving</p>	<p>Community Bike Share System: Community Access Bikeshare is building on a successful pilot program in 2011, The Working Centre aims to further expand and test a bike share program with 100 bikes and 10 distribution stations. It's estimated that the program will engage 200 members in the first year.</p>	<p>The Working Centre, Community Access Bikeshare (CAB)</p>	<p>Membership fees and corporate sponsorship fees. In-kind donations of storage space.</p> <p>Region of Waterloo provided CAB with \$15k for expansion through the Community Sustainability Fund.</p>	<p>In 2017 14 stations were in operation with approximately 80 bikes and a total of 105 members.</p> <p>The Working Centre announced in January 2018 that they would no longer be operating Community Access Bikeshare. To not have a break in bike share service, the municipalities and the Region worked together with Dropbike, a private bike share provider to launch a free pilot. The pilot was intended to start during the 2018 riding season, but was postponed to 2019.</p> <p>The Region and municipalities received funding through the Federation of Canadian Municipalities' Green Municipal Fund to retain the services of a consultant to determine the minimum requirements for an expanded system to ensure that bike sharing is integrated with transit and adequately serves residents of the Waterloo Region.</p> <p>Consultants from Alta Planning + Design completed the Shared Micro Mobility Feasibility Study in spring 2020.</p>	<p>No Update Available</p>
<p>In Progress- Thriving</p>	<p>LED Streetlight Retrofit: Conversion of streetlights to energy-</p>	<p>Region of Waterloo, City</p>	<p>Capital funding through Municipal</p>	<p>The Region of Waterloo upgraded 7,689 fixtures by the year 2017.</p>	<p>The Region of Waterloo: The Region upgraded</p>

	<p>efficient LED fixtures.</p>	<p>of Cambridge, City of Kitchener, City of Waterloo</p>	<p>debentures, with the support of LDC incentives to lower total cost</p>	<p>The City of Cambridge retrofitted 10,000 fixtures.</p> <p>In 2017 The City of Kitchener's 15,636 cobra head street lights were converted from HPS to LED, along with the build-out of the City's adaptive smart network. Converting the City's 2,700 decorative post-top streetlights to new LED lights, and incorporating them into the adaptive network was approved by Council in 2020, with project planning and procurement in 2021.</p> <p>In late 2019–2020 the City of Waterloo replaced 120 high-pressure sodium (HPS) post-top street light fixtures and poles with new green LED cobra head luminaires and poles and updated the associated streetlight wiring.</p>	<p>7,689 street lighting fixtures resulting in electricity and cost savings at 2.7million kwh and \$605,000 annually. Based on Ontario's electricity emissions factor, this is expected to save 81t CO₂e in electricity emissions annually on regional roads.</p> <p>City of Cambridge: The City Cambridge's 10,000 HPS street lights comprised 11% of total GHG emissions in 2009. In 2019, the City's LED street lights comprise 2% of the City's GHG emissions. The 828 tonnes associated with street lights in 2009 have been reduced to 134 tonnes in 2019 (i.e. 84% reduction). This significant reduction also results in continued substantial cost-savings.</p> <p>City of Kitchener: It is estimated that 887,343 annual kilowatts will be saved through</p>
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					<p>converting the existing ornamental post-top lighting portfolio to LED representing a 62% energy reduction. This results in approximately \$177,468 in annual energy savings. Greenhouse Gas emissions from the City's outdoor lighting decreased 60% between 2016 and 2018. This is primarily the result of a \$6.6 million project to convert 15,000 streetlights to LED, with additional capacity for a smart grid, controls and dimmers. With consumption reduced by 5,300,000 kWh and annual cost savings of \$1.2 million, a payback period of 5 years and annual GHG reduction of 160 tCO₂e can be achieved.</p>
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<p>In Progress- Thriving</p>	<p>Local Car Share System:</p> <p>Expand privately-operated shared vehicle systems, such as Community CarShare, in order to provide alternatives/ supplements to personal vehicle ownership. Expansion could be facilitated by integrating car share-specific parking into the development review process, developing "Car share anywhere agreements", and providing car share parking in public facilities and on-street.</p>	<p>Community CarShare, various private MUSH sector stakeholders GM's Maven</p>	<p>Co-operative membership structure with membership fees Region of Waterloo provided \$15k through the former Community Sustainability Fund towards the purchase of an EV for their fleet.</p>	<p>No Update Available</p>	<p>No Update Available</p>
<p>In Progress- Thriving</p>	<p>Employer Commuting Outreach: Recognizing the significant influence that employers play in shaping employee travel patterns, TravelWise was established as a long-term program with</p>	<p>Region of Waterloo & Sustainable Waterloo Region's TravelWise Program</p>	<p>Membership fees, grant funding and operating funding from the Region of Waterloo</p>	<p>Permanence/Security</p> <ul style="list-style-type: none"> Sustainable Waterloo Region's contract with the Region of Waterloo to run the TravelWise program was renewed until the end of Q1 2022 <p>Changes in Services:</p> <ul style="list-style-type: none"> Cambridge Pilot project to offer free two-year 	<p>Membership (Before the pandemic):</p> <ul style="list-style-type: none"> 50 Member Organizations 36,000 employees in the Waterloo Region access the TravelWise program (12% of

	<p>measurable impact across member organizations to reduce SOV commuting.</p>			<p>membership through Region's Transit Supportive Strategy</p> <ul style="list-style-type: none"> • Corporate Transit Pass was integrated into the EasyGO fare card program and modernized • Launch of the ION LRT in 2019 (Corporate Transit Pass works on the entire GRT system which includes the LRT) • Introduction of Transit Showcase – hosted Corporate Transit Pass Photo Days so employees could request their fare card on demand with TravelWise staff • Reinvented carpool month and created WinterWise, a campaign to reach more commuters focused on various sustainable modes of winter commuting <p>Accomplishments:</p> <ul style="list-style-type: none"> • Internationally recognized with the Outstanding TMA Award from the Association for Commuter Transportation at the ACT National Awards. 	<p>the local workforce)</p> <p>(As of October 2021):</p> <ul style="list-style-type: none"> • 36 Member Organizations • 30,000+ employees in the Waterloo Region access the TravelWise program (10% of the local workforce) <p>GoTravelWise.ca: As of October 2021*:</p> <ul style="list-style-type: none"> • 6,948 users • 25,232 trip searches • 2,420 carpool messages • 106,266 trips logged • 100,000 alternative trips logged • 844,974 km of alternative trips logged • 140.4 tonnes of CO2 reduced • 11 million calories burned • \$0.3 million saved
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					*Note: Carpool Matching Platform suspended during COVID-19 pandemic.
In Progress- Thriving	<p>Maximum Vehicle Parking & Minimum Bicycle Parking Requirements in Zoning By-laws: Revise zoning standards to include maximum parking requirements in areas that are well serviced by transit, to prevent over-supply of parking in transit oriented areas. Amend zoning by-laws to address minimum bicycle parking requirements, including short-term visitor, and longer-term, secure resident and employee bicycle parking infrastructure.</p>	<p>City of Cambridge, City of Kitchener, City of Waterloo</p>	N/A	<p>City of Cambridge: As of 2021, the City of Cambridge has completed the final draft of the Zoning by-law 150-85.</p> <p>The draft by-law includes special core area parking standards:</p> <ul style="list-style-type: none"> the number of parking spaces may be reduced by 25% of what is required – number of parking spaces may not exceed the minimum requirement by more than 10% (to minimize surface parking & encourage intensification) <p>Bicycle parking requirements and standards have been revised, and allow a reduction of vehicle spaces if replaced by bicycle spaces (1 vehicle space = 5 bicycle spaces).</p> <p>City of Kitchener:</p> <p>In Progress – Thriving on 3,500 properties.</p> <p>Further Development Required – on 50,000 residential properties.</p>	No Update Available

				<p>Stage 1 was approved in April 2019 and applies to about 3,500 non-residential properties (commercial, industrial, institutional, etc).</p> <p>City of Waterloo:</p> <p>New zoning by-law, which came into effect in September 2018, now incorporates:</p> <ul style="list-style-type: none"> • minimum bike parking requirements for all types of land uses, including public and private schools; and • minimum dimensions and aisle widths for horizontal and vertical bike parking stalls. <p>For residential uses, bike parking requirements are typically 0.6 spaces per unit. The type of spaces provided depends on the number of units in the building.</p> <p>For non-residential uses, bicycle parking requirements range from 10% to 50% of the required vehicular parking spaces, depending on which “Parking Area” the property falls within.</p>	
In progress- Thriving	Union Gas Commercial and Industrial Conservation & Demand Management (CDM) initiatives: Reductions in energy	Union Gas	No Update Available	Union Gas has since merged with Enbridge, and is now Enbridge Gas Inc.	<p><u>Total for the Regional Municipality of Waterloo</u></p> <p>Total gross annual natural gas savings (m3)</p>

	consumption through initiatives targeting the commercial and industrial sectors.				<p>for commercial:</p> <p>2016: 1,261,295 m3 2017: 1,847,011 m3 2018: 2,872,796 m3 2019: 2,966,449 m3 2020: 794,397 m3</p> <p>Total gross annual natural gas savings (m3) for industrial:</p> <p>2016: 2,655,901 m3 2017: 4,595,991 m3 2018: 1,511,061 m3 2019: 2,496,791 m3 2020: 1,191,890 m3</p> <p>* 2020 results are draft audit results and may still change slightly</p>
In Progress- Thriving	Union Gas Residential Conservation & Demand Management (CDM) initiatives: Reductions in energy consumption through CDM initiatives targeting the residential sector.	Union Gas	No Update Available	Union Gas has since merged with Enbridge, and is now Enbridge Gas Inc.	<p><u>Total for the Regional Municipality of Waterloo</u></p> <p>Total gross annual natural gas savings (m3) - DSM Claim for the Home Efficiency Rebate (formerly Home Reno Rebate):</p> <p>2016: 376,662 m3 2017: 680,370 m3 2018: 679,404 m3</p>

					<p>2019: 426,825 m3 2020: 374,775 m3</p> <p>* 2020 results are draft audit results and may still change slightly</p>
Complete	<p>Kitchener Utilities Residential CDM Initiatives: Reductions in natural gas consumption through Kitchener Utilities Residential Conservation & Demand Management Initiatives.</p>	Kitchener Utilities	Unknown	<p>With the government rebate program that ended in late 2018, KU launched a \$250 on-bill credit furnace rebate program in 2019. The program was in effect from January 1 – April 30, 2019 and again from November 1, 2019 to present. This applies to furnace replacements to a higher efficiency model.</p> <p>Promoted a shower head rebate program (\$15 instant in-store rebate) at various retail locations in Kitchener for the month of April 2019</p> <p>Ongoing tankless water heater \$200 on-bill credit. Applies to retrofit projects only, not new construction.</p> <p>Working with ICI customers on a continuous basis to promote equipment upgrades within facilities. Majority of upgrades include boiler replacements, water heaters, ERVs, RTU/MUA units</p> <p>Marketing campaigns - currently promoting the furnace rebate programs through bill inserts and the HVAC contractor network</p>	<p>2019 Residential gas savings – 136,174 m3 / 259.50 tonnes CO2e</p> <p>This data is tracked from customers who opted into the KU rebate program. Gas savings are based on OEB assumptions</p>

<p>Complete</p>	<p>Kitchener Utilities Commercial and Industrial DSM Initiatives: Reductions in natural gas consumption through Kitchener Utilities Commercial Conservation & Demand Management Initiatives.</p>	<p>Kitchener Utilities</p>		<p>The furnace rebate program ended in early 2021 due to limited funding and the funding was exhausted. The program was highly successful with lots of inquiries after the program ended.</p> <p>KU continued with the \$250 on-bill credit furnace rebate program in 2020. Program ran the entire year and there was significant uptake in the program. This applies to furnace replacements to a higher efficiency model.</p> <p>Subsidize energy audits through Reep Green Solutions and this has been ongoing. The subsidy entails \$60 for the initial and \$40 for the follow up audit.</p> <p>Tankless water heater \$200 on-bill credit. Applies to retrofit projects only, not new construction.</p> <p>Working with ICI customers on a continuous basis to promote equipment upgrades within facilities. Majority of upgrades include boiler replacements, water heaters, ERVs, RTU/MUA units.</p>	<p>2020 gas savings – 565,613 m3 (residential and commercial programs)</p> <p>*This data is tracked from customers who opted into the KU rebate program. Gas savings are based on OEB assumptions.</p>
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Complete	Local Electricity Distributor Energy Conservation & Demand Management (CDM) Initiatives: Reductions in electricity consumption and demand through the 'Save on Energy' energy conservation programs targeting the residential, commercial, institutional and industrial sectors, delivered by local electricity distribution companies (LDCs).	Energy+, Kitchener-Wilmot Hydro, Waterloo North Hydro	LDC's provided \$10.5M in between 2011-2014 which attracted another \$36M in private investment from proponents implementing energy-efficiency or conservation projects	As a directive from the Minister of Energy, in March 2019, all residential and the majority of business programs were canceled and moved to a central delivery model with the Independent Electricity System Operator (IESO). Local Distribution Companies continued to wind down existing projects and no longer promoted energy efficiency programs for the most part.	<p><u>Kitchener Wilmot Hydro:</u> 2015 to 2020 Energy Savings ICI:</p> <ul style="list-style-type: none"> • 2015: 25,900,000 kWh • 2016: 22,400,000 kWh • 2017: 42,500,000 kWh • 2018: 13,500,000 kWh • 2019: 7,900,000 kWh • 2020: 2,300,000 kWh <p>2015 to 2020 Energy Savings Residential:</p> <ul style="list-style-type: none"> • 2015: 4,129,298 kWh • 2016: 9,140,481 kWh • 2017 to May: 3,185,486 kWh
In progress - thriving	Corporate (commercial/busines) Sector Reduction Commitments: The Impact Network (formerly the Waterloo Regional Sustainability	Region of Waterloo	Membership fees, corporate sponsorship for events, OTF funding Between 2016-2017 of	As of 2021: <ul style="list-style-type: none"> • Program has continued to evolve with the development of leaderboard, new idea book, virtual events, and online resources. • Water and waste targets have 	As of 2021: # of members: 89 Member GHG emissions reductions to date: 2009: 104 tons 2010: 65 tons 2013: 29,990 tons

	Initiative) enables organizations to make ambitious yet realistic GHG emission reduction targets.		approx. \$200k	<p>been re-designed so they align with the GHG targets.</p> <ul style="list-style-type: none"> • E-score has been updated to an SDG tracker to better. • Membership is growing rapidly despite the pandemic. 	<p>2014: 28,574 tons 2015: 18,721 tons 2016: 42,444 tons 2017: 41,348 tons 2018: 62,884 tons 2019: 69,471 tons 2020: 81,514 tons</p> <p>About an 800% growth rate in membership from 2009 to 2020</p>
Implemented	Installation of CHP/cogeneration units at three Waste Waterloo Treatment Plants (WWTPs): Installation of new biogas combined heat and power units at three of the Region's WWTPs.	Region of Waterloo	N/A/Unknown	<p>As of November 2021, all three of the units (Waterloo with a 600 kW system), Galt with a 600 kW system, and Kitchener with an 800 kW system) Wastewater Treatment Plants have been commissioned, and are running most of the time.</p> <p>Previously the gas generated by wastewater treatment at these three facilities was flared, i.e. burned to reduce the GHG and other effects of methane gas. The co-generation facilities mean that those benefits are maintained while also producing electricity and making the gas burn more cleanly.</p>	Overall, this reduces total annual electricity use by approximately 8,000 mWh per year, and reduces emission from electricity by approximately 240 tCO2E per year.

<p>In Progress- Thriving</p>	<p>Water Efficiency Target:</p> <p>There is now a new master plan covering 2015-2025 in place, targeting cumulative water savings of 1.37 million m3/year by 2025.</p>	<p>Region of Waterloo, Reep Green Solutions</p>	<p>Related actions funded through user rates</p>	<p>The 2006 Water Efficiency Master Plan Update was set out to achieve a cumulative water savings target of 8,146 m3 per day (1.8 million gallons per day) by 2015. This previous master plan with a 2015 target has been since completed.</p> <p>The current master plan is in progress.</p> <p>Residential sector was supported through the WET Home Review program conducted by Reep Green Solutions to encourage behavioural changes and install water efficiency measures in high-use homes.</p> <p>The Region of Waterloo launched the Water Softener Plumbing Rebate Program in the summer of 2020 to incentivize residential households to switch plumbing to soften hot water only with the objective to reduce water and salt consumption.</p>	<p>Residential WET Home Review KPIs:</p> <p>2020:</p> <ul style="list-style-type: none"> • Reviews completed: 198 • Water efficient fixtures installed: 179 <p>2019:</p> <ul style="list-style-type: none"> • Reviews completed: 330 • Water efficient fixtures installed: 346 <p>2018:</p> <ul style="list-style-type: none"> • Reviews completed: 219 • Water efficient fixtures installed: 296 <p>2017:</p> <ul style="list-style-type: none"> • Reviews completed: 258 • Water efficient fixtures installed: 296 <p>Water Softener Plumbing Rebate Program KPIs:</p> <p>861 people expressed interest in the program and of those 861 people, 685 water hardness test kits were mailed out and 124 people submitted their results and registered in the program. Eight residents</p>
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					<p>completed the plumbing change.</p> <p>Compared to 2015, in 2018 Waterloo Region had a cumulative water savings of nearly 400,000 m³/year across the ICI and residential programs.</p> <p>Compared to 2010, Waterloo Region saved approximately 1.48 million m³ of treated water in 2020. This saved approximately 1,155 mWh of electricity used to treat the water, and prevented 34.7 tCO₂E in GHG emissions from electricity usage, compared to the 2010 community baseline inventory.</p>
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Complete	City of Cambridge Corporate (municipal) GHG Reduction Initiatives: Corporate GHG Reductions undertaken by the City of Cambridge.	City of Cambridge		<p>The (2009-2019) corporate GHG plan and its associated actions have been completed. The 6% reduction target was exceeded (i.e. 17% reduction achieved as per 2019 regulatory reporting). City Council approved the new corporate Energy Conservation Demand Strategy update December 2020 (the ECDM Plan).</p> <p>Since the last update the following have been achieved:</p> <ul style="list-style-type: none"> • Transportation Master Plan approved May 2019 • Two curbside EV charging stations installed in June 2019 • Cycling Master Plan approved October 2020 • City-wide installation of smart water meters initiated • DropBike pilot program launched • EVs provided for Building Inspection Staff • Climate Adaptation Plan approved by Council 	Significant reductions were observed in street lighting when the change to LED streetlights was accomplished (i.e. 84% reduction), sewage pumping during an era of development growth (52% reduction), and City buildings (21% reduction). However, increases occurred with the emissions associated with fleet vehicles (9%), small engines (397%), and waste (73%)
In Progress- Thriving	City of Kitchener Corporate (municipal) GHG Reduction Initiatives: Corporate GHG reductions undertaken by the City of Kitchener.	City of Kitchener		<p>In 2019, council approved the Corporate Climate Action plan of an 8% absolute GHG reduction by 2026 from 2016 levels.</p> <p>Since the last update the following have been achieved: In 2019:</p> <ul style="list-style-type: none"> • Established an Energy 	The corporate greenhouse gas baseline emissions is 10,397 tCO ₂ e (2016). In 2020, the corporate emissions reduced 20% from the 2016 level.

				<p>Efficiency Reserve Fund, a revolving fund for capital projects, with the operating savings being reinvested for future efficiency projects. Kitchener Council approved the fund in 2019 with the purpose of providing funds to finance projects that result in energy (including water and waste) savings. Projects will be designed for a two-to-seven-year payback period.</p> <ul style="list-style-type: none"> Updated the corporate green building design for new buildings greater than 500 m² in size from LEED-Gold to an energy intensity-based target of 25% energy improvement above Ontario Building Code Regulation 388/18 or Net Zero Ready/Net Zero energy (where site conditions allow). <p>In 2020:</p> <ul style="list-style-type: none"> Completed energy audits. 	
In Progress- Support Required	City of Waterloo Corporate (municipal) GHG Reduction Initiatives: Corporate GHG reductions undertaken by the City of Waterloo.	City of Waterloo		<p>In Q4 2020 Council approved the proposed terms of reference for the Corporate Climate Action Plan (CorCAP).</p> <p>Corporate target of 80% reduction in corporate GHG emissions from the 2011 baseline through the Environmental Conservation Demand Management (ECDM) Plan (2019).</p>	<p>The City continues to be involved as part of a pilot program for ISO 37120 Sustainable Cities and Communities with Infrastructure Canada and the World Council on City Data (WCCD). The City received Platinum Certification for 2019 and</p>

					2020.
In Progress- Thriving	Green Bin Organics Diversion: GHG reductions achieved as a result of expanding Green Bin/organics diversion 2010-2020 which helps reduce methane production within the Region's landfill.	Region of Waterloo	Funded through Property tax revenues	New collection contract in 2017 to continue with weekly green bin collection and bi-weekly garbage collection. Since this time there has been an increase in green bin participation.	No Update Available
In Progress- Thriving	Landfill Gas Flaring: Portable flaring of methane at landfill before it reaches concentrations suitable for energy generation.	Region of Waterloo	N/A	<p>At both the Cambridge and Waterloo Waste Management Centers, the landfill gas in both the closed and operating portion of the two landfills are collected and utilized.</p> <p>In Waterloo the landfill gas is collected and utilized through a partnership with Toromont Energy to generate electricity. In Cambridge the landfill gas is collected and utilized by neighbouring steel manufacturing company Gerdau AmeriSteel in their steel furnaces. When the utilization facilities are unable to take gas for a period of time (usually related to maintenance activities required) the landfill gas is still collected from the landfill and flared accordingly. There is minimal down time for the landfill gas collection systems at both sites.</p>	Currently, between 4,000 and 6,000 houses are provided with electricity from the Waterloo landfill gas utilization system.

				<p>Portable faring, specifically, has been discontinued.</p> <p>The passive methane oxidation biosystems (PMOB) research project was constructed in 2020 and is functioning at the closed Kitchener Landfill and data is being collected.</p> <p>One of the next steps in the PMOB research is to construct a PMOB at the Waterloo landfill and investigate and test other local biofilter mediums from potential waste streams.</p> <p>The value of the portable unit needs to be reassessed once the effect of other upgrades to the gas system have been evaluated.</p>	
Complete	<p>Net-Positive Demonstration Building: A net-positive Demonstration building that showcases sustainable building technologies.</p>	<p>The Cora Group, EY, David Johnston Research + Technology Park, Sustainable Waterloo Region, City of Waterloo</p>	<p>Feasibility study completed with \$175k in funding from FCM GMF through the City of Waterloo Private investment of \$35M from the Cora Group</p>	<p>evol1, which has been built, owned, and is managed by The Cora Group, is Canada's first LEED platinum, net-positive energy multi-tenant building. With the support of a publically available feasibility study, the model is designed to be replicable and financially viable for developers and tenants. The grand opening for the evol1 building was in 2018.</p>	No Update Available

<p>In progress- Support required</p>	<p>Clean Economy Innovation Hub Similar in concept to the Accelerator Centre and Communitech Hub/Tannery model, this space would become a sustainable business catalyst that would provide an opportunity for networking and collaboration to spur Economic development across Waterloo Region's emerging sustainability cluster and in the area of clean tech.</p>	<p>Accelerator Centre, Laurier, University of Waterloo, Sustainable Waterloo Region, City of Waterloo, Region, Waterloo EDC</p>	<p>Unknown – seeking local commitments, provincial and federal funds</p>	<p>Building construction of evolV1 is complete and almost completely leased.</p> <p>evolVGREEN is established, and agreements are being finalized.</p> <p>The culture of sustainability program began in 2018/19 with tenant workshops and is ongoing with a more formalized program delivery (with research ongoing within the building).</p>	<p>No Update Available</p>
<p>In progress- Thriving</p>	<p>Home Energy Evaluations Delivery of EnerGuide Energy Evaluations to support energy efficiency retrofits in the existing home stock.</p>	<p>Reep Green Solutions, various other private service providers</p>	<p>Fee for service</p>	<p>Home energy efficiency incentives:</p> <ul style="list-style-type: none"> • Rebate available through the Enbridge Gas Home Efficiency Rebate program. • Announcement made by the federal government on Dec 1, 2020 regarding the launch of the Greener Homes Grant through Natural Resources Canada (NRCan) in the spring of 2021. 	<p>2020 data:</p> <ul style="list-style-type: none"> • Initial evaluations: 65/Follow-up: 51 • Estimated 54 tonnes of CO2 reduced by homeowners • \$38,250 in energy savings • 27,189 m3 gas savings/yr <p>2019 data:</p> <ul style="list-style-type: none"> • Initial:

					<ul style="list-style-type: none"> • 117/Follow-up: 107 • 126.49 tonnes of CO2 reduced • \$80 250 in energy savings • 57 142 m3 gas savings/yr <p>2018 data:</p> <ul style="list-style-type: none"> • Initial: 394/Follow-up: 356 • 428.22 tonnes of CO2 reduced • \$267 000 in energy savings • 200 033 m3 gas savings/yr <p>2017 data:</p> <ul style="list-style-type: none"> • Initial: 431/Follow-up: 325 • 604.44 tonnes of CO2 reduced • \$243 750 in energy savings • 249 187 m3 gas savings/yr
Not Implemented	Low Emission or Hybrid Taxis & Limousines Develop a program to shift all taxis and limousines operating in the region to low emission or hybrid electric models.	Several private companies	Private financing, support by provincial incentive program	No Update Available	No Update Available
	Renewable Energy	LIFE Co-Op,	Private	No Update Available	No Update Available

	<p>Generation: Support and monitor the development of local renewable energy generation.</p>	<p>Vigor Clean Tech, CED Co- Op, Cities of Cambridge, Kitchener, Waterloo, Region of Waterloo</p>	<p>financing, FIT Contracts and co-operative model financing</p>		
<p>Complete</p>	<p>Community Energy Investment Strategy: Develop a plan that Identifies opportunities to cost-effectively and reliably meet local energy needs, enhance economic prosperity, and promote sustainable development</p>	<p>Region of Waterloo, Cities of Cambridge, Kitchener and Waterloo, Energy+, Kitchener Utilities, Kitchener-Wilmot Hydro, Waterloo North Hydro, Union Gas</p>	<p>funded by 9 local partners leveraged with 50% funding through Provincial Ministry of Energy</p>	<p>In 2018 the development of a Community Energy Investment Strategy (CEIS) was completed by the Region of Waterloo. This strategy identifies opportunities to cost-effectively and reliably meet local energy needs, enhance economic prosperity, and promote sustainable development. The strategy was developed and approved by local councils and was published in February 2018. WR Community Energy (WRCE) was established in 2019 to implement this strategy.</p> <p>The CEIS documents 22 Energy Opportunities evaluated within the CEIS and the 20 Recommended Actions that aim to support and facilitate implementation of the opportunities towards achieving the CEIS goals and objectives. The need for dedicated staff to lead further action on CEIS is identified in the report; this recommendation resulted in the creation of WR Community</p>	<p>No Update Available</p>

				<p>Energy.</p> <p>WR Community Energy's first initiative in 2020 was identifying potential district energy sites in Waterloo Region. Due to its density, demand and capacity for renewable energy, downtown Kitchener was selected for a pre-feasibility study. The results of the study showed how a district energy system could reduce GHG emissions by 5,000 tonnes a year with a financial payback of 6%.</p>	
In progress- Thriving	<p>Local Innovative Financing for Energy Retrofits: Develop local financing tools that support homeowners with the upfront costs of deep retrofits and renewable energy installations.</p>	<p>Reep Green Solutions, Region of Waterloo, WR Community Energy</p>	<p>Federation of Canadian Municipalities</p>	<p><u>Progress Towards Local Innovative Financing for Energy Retrofits</u></p> <p>The newly developed collaboration – now led by Reep – secured funding from the Federation of Canadian Municipalities to design an energy efficiency financing program for Waterloo Region that would support homeowners in upgrading their homes to reduce carbon. Results of this work will provide a thorough understanding of the financing options and appropriateness for homeowners in Waterloo Region. An additional report by Reep Green Solutions, titled, “Considerations of Equity in an Efficiency Financing Program” outlines how to build equity into a financing program.</p> <p>Read the complete report here.</p>	To be determined

<p>In Progress- Thriving</p>	<p>Neighbourhood Carbon Footprint Campaign: Develop a campaign that provides homeowners information about their carbon footprint and energy usage.</p>	<p>Project Neutral, Reep Green Solutions</p>	<p>Region of Waterloo; RBC Tech for Nature</p>	<p>The Project Neutral online tool is available for community members in Waterloo Region to measure their carbon impact and learn about ways to take action to reduce their carbon footprints. https://app.projectneutral.org/reep</p> <p>Reep Green Solutions participates in online community events and facilitates occasional online workshops for community groups and businesses to learn more about their household carbon footprints with Project Neutral.</p> <p>Project Neutral and Reep Green Solutions developed a student engagement campaign, Kids Cutting Carbon, in partnership with the local public and Catholic school boards (WRDSB & WCDSB). This program, supported by RBC Tech for Nature and Region of Waterloo, facilitated group sessions involving measuring carbon footprints, taking climate action, and connecting at school and at home to work towards our community greenhouse gas emissions target.</p>	<p>As of 2021:</p> <ul style="list-style-type: none"> • Number of households in Waterloo Region who have used Project Neutral = 2,200+ • Number of participants in community events and workshops = 725+ • Number of reported actions taken by Project Neutral users in Waterloo Region = 110+
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