

Air Quality and Climate Change Management Plan (AQCCMP)

Five-Year Review and Update

August 26, 2019

Agenda

1. Climate Change and Resiliency Unit
2. Climate change legislative agenda and timelines
3. Council Sponsors Group
4. Overview of the review and update of the AQCCMP report
5. Wrap up and next steps

Climate change legislative agenda

Task	Date
Preliminary Official Plan Policy Directions to ARAC and PC	August 22
Climate Change Report to Ottawa Public Board of Health	September 16
Section 26 Meeting – Joint ARAC and PC	December 12 (TBC)
AQCCMP Report to SCEPWWM	December 17 (TBC)
Energy Evolution Report to SCEPWWM	December 17 (TBC)
Climate Change Projections to SCEPWWM	Q1 2020

Climate Change and Resiliency Unit Mandate

- Develops and coordinates strategic policies, programs, projects, and partnerships to reduce greenhouse gas emissions and build resiliency to climate change in Ottawa
- Center of expertise for climate change and resiliency
- Provides technical expertise on corporate projects and supports community initiatives

Climate Change and Resiliency Unit

Andrea
Flowers

Team Lead,
Senior Project Mgr

Mike Fletcher

Project Mgr, Env
Programs

Julia
Robinson

Project Mgr, Env
Programs

Jen Brown

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Melissa Jort –
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Planner

Birgit
Isernhagen

50% OPH Planner

Janice
Ashworth

Project Mgr, Env
Programs

Rebecca
Hagen

Project Mgr, Env
Programs

NEW

Comms / Outreach

NEW

Comms / Outreach

Climate Change Sponsors Group

Member	Representing
Chair, Scott Moffatt	Standing Committee on Environmental Protection, Water and Waste Management
Councillor Laura Dudas	Planning Committee
Councillor Mathieu Fleury	Transportation Committee
Councillor Jenna Sudds	Transit Commission
Councillor Theresa Kavanagh	Ottawa Board of Health
Councillor Shawn Menard	Councillor Liaison of the Environmental Stewardship Advisory Committee

Role of the Sponsors Group

- Provide guidance to staff on matters related to the City of Ottawa's Declaration of a Climate Emergency
- Advise on how climate change issues will intersect with Committee and Departmental priorities and considerations
- Advise on how the municipality will work with senior levels of government on climate change issues
- Immediate scope work related to GHG emission reduction targets, private action and governance

2014 AQCCMP

- Framework for how Ottawa will mitigate and adapt to climate change over coming years
- Set:
 - Goals and objectives
 - GHG reduction targets
 - Performance measures
- No actions approved as part of plan
- Review required after five years



Photo courtesy of NASA and Chris Hadfield; a view from space of earth and its atmosphere

City of Ottawa
Environmental Services Department
May 2014



This plan is a review and update of the City of Ottawa's 2005 Air Quality and Climate Change Management Plan and builds on recent work with the ville de Gatineau and National Capital Commission on the 2012 Energy & Emissions Plan for Canada's Capital Region. It sets goals, objectives, and a new target, and recommends a variety of actions. This is a 20-year plan, with actions recommended for the first 5-year period. Not all objectives will be achieved within this timeframe, and it is anticipated that the plan will be updated at regular intervals.

Since 2014, the science has progressed

- Impacts will be worse at 2°C than previously projected
- Limiting warming to 1.5°C will avoid much of the risk
- Meeting a 1.5 °C target is possible with "rapid, far-reaching and unprecedented changes in all aspects of society."
- Canada is warming two times faster than the rest of the world



Declaration of a Climate Emergency

- Over 900+ cities and jurisdictions have declared a climate emergency
- Ottawa declared a climate emergency on April 24, 2019 directing staff to include in the review and update of the AQCCMP:
 - a) An analysis of how the AQCCMP's long term target to reduce GHG emissions 80% below 2012 levels by 2050 compares to the IPCC's targets for limiting global warming to 1.5 °C*
 - b) Midterm (2030) corporate and community GHG emission reduction targets*
 - c) Climate Change mitigation and adaptation priorities for next five years*

Review and Update of AQCCMP Report

- Will include:
 - New name and new vision
 - Slightly revised goals
 - Community and corporate (GHG) emissions inventory results
 - New short, mid and long term community and corporate GHG reduction targets proposed
 - Proposed 2020-2025 priority actions

New Name – Climate Change Master Plan

- Recommend changing name from the Air Quality and Climate Change Management Plan to the Climate Change Master Plan
- Reasoning:
 - More accurately reflects new priorities
 - Remains consistent with other major Master Plans (e.g. Transportation Master Plan, Solid Waste Master Plan)
 - Air quality is no longer a focus of plan
 - Regional AQ monitoring to be carried out by federal and provincial authorities in Ontario.

Vision

The vision of the Climate Change Master Plan is to take unprecedented, collective action to transition Ottawa to a clean, renewable, and resilient city by 2050.

Climate Change Master Plan

Mitigation

Reducing greenhouse gas emissions

*GHG
Inventory*

*GHG
Reduction
Targets*

*Energy
Evolution*

Adaptation

Building climate resilience

*Climate
Projections*

*Vulnerability
Assessment*

*Climate
Resiliency
Strategy*

Guiding Principles

Responsibility

Collaboration

Leadership

Coordination

Equity and
Inclusion

Goals

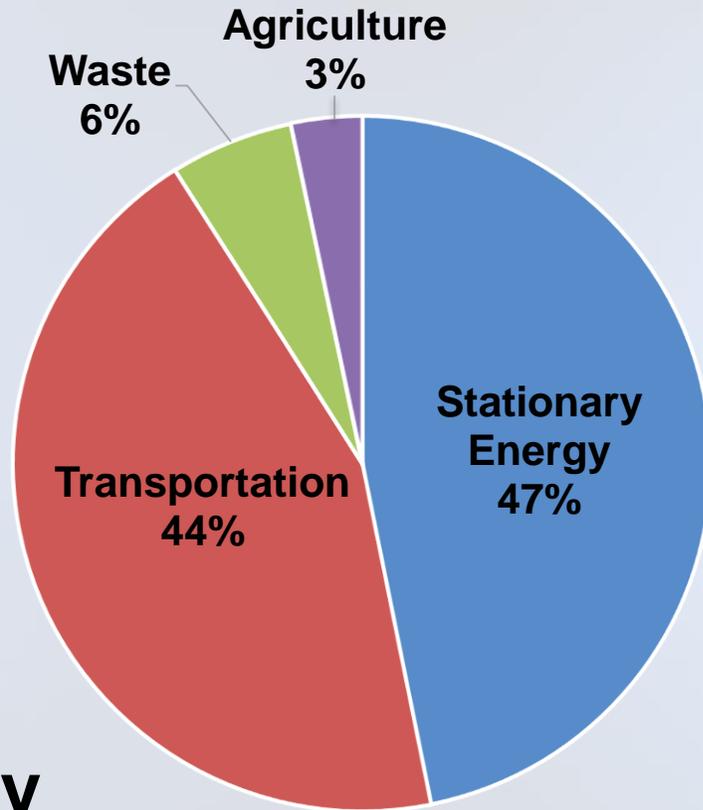
Mitigate climate change by:

1. Making a sustained transition away from a dependence on fossil fuels
2. Reducing energy use through conservation and efficiency
3. Increasing the supply of renewable energy through local and regional production
4. Reducing greenhouse gas emissions from non-fossil fuel sources
5. Improving carbon capture storage and sequestration

Adapt to climate change and protect people and property by:

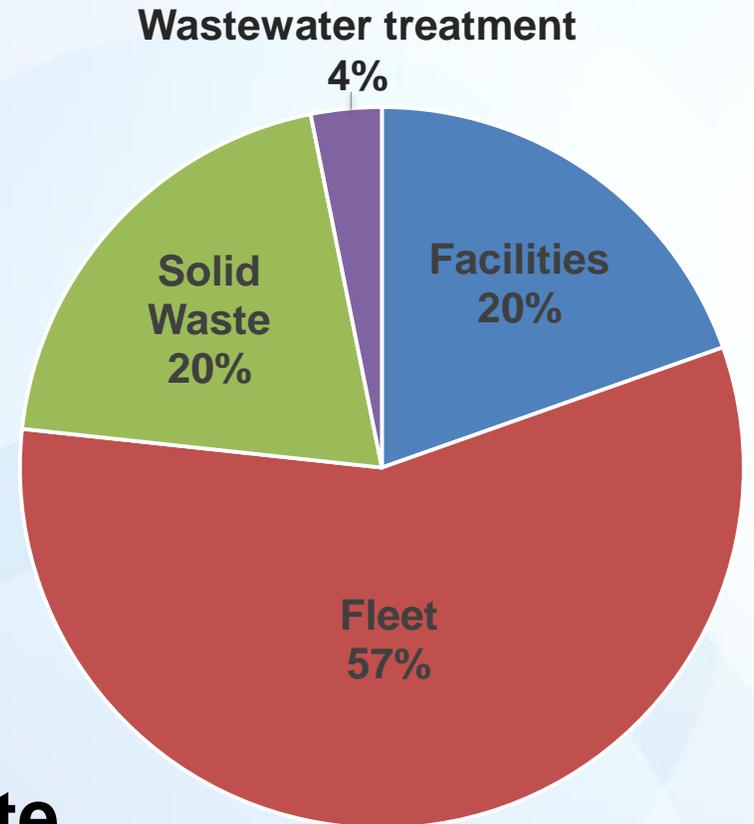
1. Reducing the risks to public health and ensuring public safety, especially for our most vulnerable populations
2. Increasing infrastructure resiliency
3. Increasing resiliency of buildings
4. Protecting and enhancing the natural environment
5. Ensuring effective emergency management

GHG Emissions (2016)



Community

Total emissions: 6,221 kt CO₂e



Corporate

Total emissions: 276 kt CO₂e

GHG Reduction Targets (Current)

Community Targets

Using 2012 baseline levels

2024

• 12%

11%

2050

• 80%

Corporate Targets

Using 2012 baseline levels

2024

• 20%

25%

GHG Reduction Targets (Proposed)

Community Targets (80%)

Using 2012 baseline levels

2025

• 30%

2030

• 50%

2040

• 70%

2050

• 80%

Community Targets (IPCC)

Using 2012 baseline levels

2025

• 30%

2030

• 50%

2040

• 90%

2050

• 100%

Proposed Priorities for 2020-2025



Implement Energy Evolution: Ottawa's Community Energy Transition Strategy



Undertake a climate vulnerability assessment and develop a Climate Resiliency Strategy

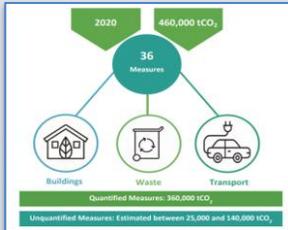


Apply a climate lens to the Official Plan and supporting documents



Apply a climate lens to asset management and capital projects

Proposed Priorities for 2020-2025



Establish a community and corporate carbon budget



Explore options for carbon sequestration and the role of green infrastructure



Encourage private action through education, incentives, and municipal support



Develop a governance framework to build corporate and community capacity to tackle climate change

Next Steps

- Ongoing internal meetings
- Schedule next Council Sponsors Group meeting on Energy Evolution
- Briefings on the Climate Change Master Plan for SCEPWWM members
- Presentation on Energy Evolution, if interested

For more information

Overall Climate Change Issues

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Implement Energy Evolution: Ottawa's Community Energy Transition Strategy

The Final Report to SCEPWWM will include:

- Business As Planned
- Two integrated scenario models (80% or 100% by 2050)
- Technical Paper with:
 - Pathway studies (buildings, transportation, waste, etc)
 - Co-benefits paper
 - Carbon budget
- Action plan and capital budget pressures



Undertake a climate vulnerability assessment and develop a Climate Resiliency Strategy

- Climate projections for National Capital Region (Q1 2020)
 - In partnership with NCC
 - Successful first workshop held July 9
 - Second workshop scheduled for November 7
- Vulnerability assessment – expected climate impacts, risks and adaptive capacity (start in 2020)
- Climate Resiliency Strategy – identify priorities and integrate into existing business processes (start in 2020)

Climate Atlas of Canada recently released latest data showing climate impacts to Ottawa

RCP 8.5: High Carbon climate future

GHG emissions continue to increase at current rates

Variable	Period	1976-2005	2021-2050			2051-2080		
		Mean	Low	Mean	High	Low	Mean	High
Precipitation (mm)	annual	886	788	945	1116	811	979	1166
Precipitation (mm)	spring	207	152	228	311	163	243	327
Precipitation (mm)	summer	239	155	243	337	150	238	333
Precipitation (mm)	fall	241	171	252	338	173	259	360
Precipitation (mm)	winter	199	153	221	298	169	238	318
Mean Temperature (°C)	annual	6.4	7.2	8.5	9.9	9.3	10.8	12.6
Mean Temperature (°C)	spring	5.6	5.2	7.5	10.2	7.1	9.6	12.6
Mean Temperature (°C)	summer	19.7	20.3	21.8	23.2	22	24	26.1
Mean Temperature (°C)	fall	8.5	9	10.6	12.4	10.9	12.7	14.5
Mean Temperature (°C)	winter	-8.5	-8.9	-6.1	-3.1	-6.2	-3.4	-0.6
Tropical Nights	annual	5	6	15	27	18	35	55
Very hot days (+30°C)	annual	14	15	31	49	33	57	81
Very cold days (-30°C)	annual	1	0	0	1	0	0	0
Date of Last Spring Frost	annual	April 30	April 1	April 19	May 7	March 20	April 10	April 30
Date of First Fall Frost	annual	Oct. 10	Oct. 3	Oct. 22	Nov. 8	Oct. 15	Nov. 2	Nov. 25
Frost-Free Season (days)	annual	160	156	183	211	173	203	235



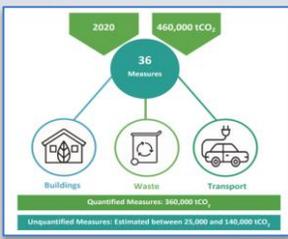
Apply a climate lens to the Official Plan and supporting documents

- Developing energy and climate resiliency policies for OP and master plans (Transportation, Infrastructure, etc)
- Aug 22 – Preliminary Policy Directions presented at joint PC/ARAC meeting
- Oct 24 – Reviewing new Provincial Policy Statement for climate change considerations
- Dec 12 – Statutory Section 26 meeting at joint PC/ARAC meeting



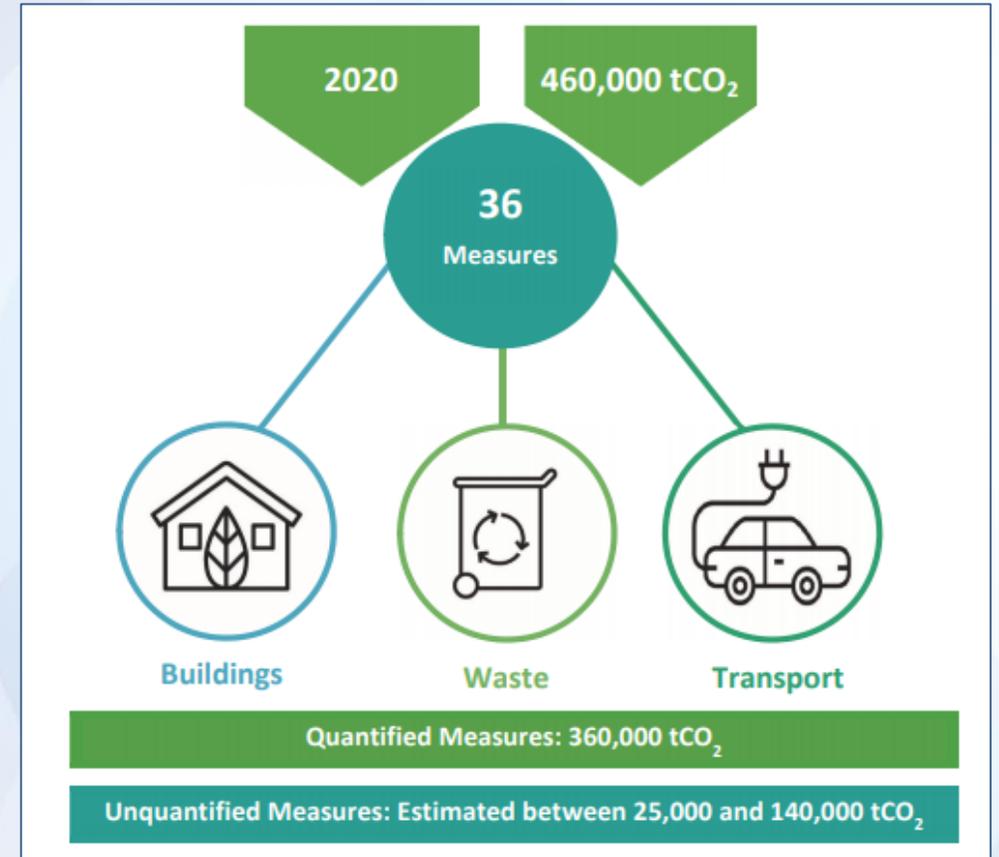
Apply a climate lens to asset management and capital projects

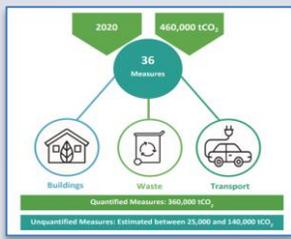
- Embed climate change considerations into:
 - Management of existing assets
 - Projects, policies and practices
- Responds to new provincial regulations
- Budget pressure identified for consultancy support to advise on tools to integrate climate lens in asset management plans
- Update of Comprehensive Asset Management Policy



Establish a community and corporate carbon budget

- Carbon budget sets upper limit for how much GHG emissions can be released
- Shows measures to be implemented to reach the City's GHG targets
- Could be presented alongside the municipal budget and managed by Finance





Establish a community and corporate carbon budget

- 2019
 - Present proposed Carbon Budget as part of the Energy Evolution Technical Report
- 2020
 - Develop corporate implementation framework, initiate community discussions
 - Identify future staffing and budget pressures to implement the carbon budget



Explore options for carbon sequestration and the role of green infrastructure

- Builds on work already being undertaken through:
 - Urban Forest Management Plan
 - Significant Woodlands Policy
- Supports active management of City's forest and wetlands
- Budget pressures have been identified to complete a Natural Areas Inventory (forest, wetland and agricultural lands) in 2020



Encourage private action through education, incentives, and municipal support

To mobilize action across all sectors, the City of Ottawa can play a leadership and coordinating role in:

- Setting policies and procedures to shift us to low carbon and resilient future
- Communicating and leveraging available resources
- Recommending, advocating for and promoting incentives to catalyze action
- Climate education



Encourage private action through education, incentives, and municipal support

- June 27 - ESAC directed staff to develop a Communications, Outreach and Education Strategy raising the profile of the Climate Emergency
- Staff recommend that capital budget be used to fund a temporary 2 year comms and outreach position and hire a consultant to develop core material



Develop a governance framework to build corporate and community capacity to tackle climate change

- Consultants are developing options for community governance, depending on the focus and purpose
- Regardless of which model is pursued, an internal governance structure will be required to feed into a community governance model
- Champions and project leads within their respective departments to advance priorities and corporate and community targets