

Subject: Climate Change Action Program Update

Report to: Budget Review Committee of the Whole

Report date: Thursday, December 9, 2021

Recommendations

1. That Report CAO 21-2021 **BE RECEIVED** for information.

Key Facts

- The purpose of this report is to provide Council with an update on climate change activities and a proposal to support 2022 Budget considerations.
- At its meeting on September 23, 2021, Council approved the minutes of the Planning and Economic Development Committee (September 15, 2021) which included a motion to declare a climate change emergency in Niagara (Appendix 1).
- Discussion with Council on climate change to date has been predominantly in the context of community and the Official Plan. This file requires an enterprise approach that cuts across all departments and includes coordination of climate change action and initiatives with the local area municipalities.
- As of December 2021, responsibility for this file has been assigned to the Strategy
 and Innovation Division in the Office of the CAO to accelerate actions being taken to
 address climate change by the Region and to provide enterprise level coordination.
- The Operating Business Case (Appendix 2) attached to this report is included in the proposed 2022 Levy Budget for Council consideration. It outlines the financial considerations for a proposed 2-year climate change action project.

Financial Considerations

The Operating Business Case (Appendix 2) attached to this report is included in the 2022 Levy Budget for consideration by Council. The business case outlines the financial considerations (staff and operations) for a proposed 2-year climate change action project to successfully meet the objectives of the Council approved climate emergency motion.

The proposal recommends the creation of a 2-year temporary specialist position to advance a number of activities including the compilation of a corporate inventory of Regional climate change initiatives and plans, the development of projects and initiatives in collaboration with local area municipalities and other key stakeholders, and the execution of a 2022 Climate Summit. A description of each of the climate action project outcomes (2022-2024) is provided in the Analysis section of this report.

The 2022 budgetary impacts are estimated at \$250,000, which includes salary compensation as well as program funding. It is anticipated that the program funding can be utilized to leverage additional federal and provincial grant dollars related to climate change initiatives (i.e. Municipal GHG Challenge Fund, Climate Action Incentive Fund).

Analysis

Climate Change and Municipalities

Climate change is a local, national and global issue affecting individuals and systems around the world. Although the responsibility to act is collective, municipalities in particular play a significant role in minimizing their carbon footprint and making their communities more resilient.

Currently, over half of the world's population resides in municipalities and this number is forecasted to increase in the years to come. In Canada, over 80% of the population lives in urban areas. Municipalities are major contributors to the production of greenhouse gas emissions. They consume large amounts of energy to heat and cool homes and buildings and experience larger traffic volumes than their rural counterparts. While municipalities are directly responsible for 5-10% of greenhouse gas emissions as a result of municipal operations, they indirectly control over 40% of greenhouse gas emissions in the community.

Urban populations are 'ground zero' for the impacts of climate change such as temperature changes, extreme weather events, and precipitation. The systems, infrastructure, and population characteristics that contribute to a functioning Region are dynamic and often interconnected; failure of one system can have a cascading effect on the failure of other systems. For example, localized flooding can saturate and exceed the capacity of local stormwater infrastructure leading to disruptions in the road network - such as road closures, washout conditions, road blockages (e.g. downed trees), and slippery road conditions – which in turn can impact local emergency services. These

impacts, if not mitigated or planned for in advance, can have substantial economic, environmental, and social consequences.

Municipalities can also educate and empower residents to take action and can implement a wide range of measures to directly and indirectly influence behaviours and decision-making. Niagara is a growing and prosperous and is a prime example of a Region with the potential to lead the way in creating a more resilient future.

Climate Change Action at the Region (2009-2021)

A high-level timeline of climate change actions at the Region is provided in Appendix 3. The summary of plans and actions demonstrate the Region's commitment to climate change and environmental improvements in the organization's operations and services. The overview is not a full inventory of actions, but a compilation of existing plans, strategies and some key actions related to climate change. A full inventory of climate change initiatives and outcomes will be completed at the end of Q1 2022.

Climate Change Action Project (2022-2024)

The Climate Change Action Project represents an opportunity to bring together existing plans, programs and projects implemented over the last 10 years, to identify gaps and develop future initiatives to advance progress in the Region's climate and greenhouse gas emission goals.

The table below provides an overview of project activities and outcomes.

Climate Change Action Project Key Outcomes (2022-2024)

Plans, Policies & Partnerships	Activities	Timing
Hire Climate Change	 The position will lead the development of 	Q1 2022
Specialist Position	key climate action plans, projects and	
	initiatives in collaboration with Regional	
	departments, local area municipalities, the	
	Niagara Peninsula Conservation Authority,	
	and other stakeholders	
	Organize and implement a 2022 Climate	
	Summit for the Region	

Plans, Policies & Partnerships	Activities	Timing
	 Identify and secure funding from other levels of government and agencies to support the project and its implementation 	
Conduct Corporate Climate Change Action Inventory and Establish a Corporate Climate Change Action Team	 Inventory climate actions implemented to date at the Region Form a Corporate Climate Change Action Team, with the goal to accelerate climate change programs, policies and initiatives at the Region. As well, to guide and support the development of a Corporate Climate Action Plan Develop a corporate climate action leadership brand to support engagement and education Research and leverage available grant funding opportunities (i.e. Federation of Canadian Municipalities) 	Q1 2022
Establish a Regional Climate Change Working Group	 Develop of a Working Group that includes the local municipalities (LAMs), NPCA and other stakeholders (i.e. Brock U., Niagara College) Coordinate climate change goals and strategies for the Region and its LAMs Participation in the 2022 Climate Summit 	Q2 2022
Review Corporate Climate Change Policies	 Review of corporate policies related to climate change action and greenhouse gas mitigation Identify gaps and opportunities for new or updated policies and procedures Create a culture of corporate leadership on climate change 	Q2 2022

Plans, Policies & Partnerships	•	Activities	Timing
Plan and Host a 2022 Climate Action Summit		Organize and host a Climate Summit for the purpose of community engagement, evaluating best practices, coordinating climate action and ensuring all of Niagara is committed to climate change adaptation and mitigation Planning for the Summit to commence in Q1 2022. The Summit will take place end of Q2 2022 Develop a communications and event strategy for the summit Investigate partnership opportunities and funding	End of Q2 2022
Corporate Climate Action Plan Update	-	Refresh the Partners for Climate Protection (PCP) program participation and plans Update PCP Milestones #1-3. Update GHG emission inventory, corporate GHG emission target and Corporate Action Plan Integrate existing actions from Region Master Plans, strategies, corporate planned actions and Energy Conservation Demand Management Plan into updated Plan Identify gaps, opportunities and propose funding business cases for the 2023 Region budget	Q1 2023

Plans, Policies & Partnerships	•	Activities	Timing
Community Partnerships and Action Planning		Inventory and coordination of current community climate change action plans (i.e. Local municipalities, NPCA, Brock University, School boards) Community participation in 2022 Climate Summit Develop relationships and identify partnership opportunities with community organizations Support update to the Community Climate and Energy Action Plan	2022
Community Climate and Energy Action Plan		Apply for Provincial Municipal Energy Plan funding Create a community Energy Task Force to guide development and implementation of the plan Scan for best practices in community energy planning. (i.e. Markham, Oakville, Burlington, Guelph, Waterloo Region) Develop a Region Community Climate and Energy Plan	2023- 2025

Alternatives Reviewed

This report and attached business case have been prepared for information to support the 2022 budget process.

Relationship to Council Strategic Priorities

This report and proposed climate change program contribute to and support all of Council's 2019-2022 Strategic Priorities:

- Supporting Businesses and Economic Growth
- Healthy and Vibrant Community

- Responsible Growth and Infrastructure Planning
- Sustainable and Engaging Government

Other Pertinent Reports

PDS 6-2021	Climate Change Work Program Update, January 13, 2021.
CSD 29-2019	Niagara Region Conservation and Demand Management Plan Update 2019-2023
ICP 22-2014	Climate Change Action Plans – Year One Update
CSD 77-2013	Energy Reporting and Conservation Demand Management Plans
ICP 7- 2013	Climate Change Action Plans
ICP 68-2013	Sustainable Niagara Plan One Year Update
ICP 15-2010	2006 Corporate Greenhouse Gas Emissions Inventory

Prepared by:

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Submitted by:

Ron Tripp, P.Eng. Chief Administrative Officer

This report was prepared in consultation with Erik Acs, Manager of Community Planning, and Michelle Sergi, Commissioner of Planning and Development Services.

Appendices

Appendix 1 - PDS-C 50-2021 Climate Change Emergency Motion

Appendix 2 - Operating Business Case

Appendix 3 - Climate Change Action at the Region

5.2 PDS-C 50-2021 Climate Change Motion

Moved by Regional Chair Bradley Seconded by Councillor Darte

WHEREAS Regional Council recognizes that climate change is a real and significant threat to both Niagara's natural environment and economy;

WHEREAS Niagara Region has already been impacted by climate change through shoreline and escarpment destruction, millions of dollars of infrastructure damages caused by extreme storm events and increase freeze—thaw cycles destroying our roads and subsurface infrastructure;

WHEREAS Niagara Region's agriculture sector struggles with irrigation challenges that are linked to drought-like conditions caused by climate change;

WHEREAS Niagara Region recognizes all the existing, albeit fragmented, climate change work that has occurred across all Regional departments;

WHEREAS Niagara Region recognizes that all levels of government, including municipalities, have a crucial role to play in the mitigation and adaption of climate change;

WHEREAS many municipalities across Ontario have formal strategies to manage climate change, investing resources to help combat the effects of extreme weather in their communities:

WHEREAS Niagara Region recognizes that addressing climate action and transitioning to lower-carbon options represents an important opportunity for economic stimulation and job growth;

WHEREAS a 2020 study conducted by the Federation of Canadian Municipalities (FCM) and the Insurance Bureau of Canada (IBC) found that climate adaptation costs Canadian municipalities an estimated \$5.3 billion annually, including significant increases in insurance premiums related to the impacts of extreme weather;

WHEREAS the same FCM report found that investments in resilient infrastructure have a return on investment of \$6 in future averted losses for every \$1 spent proactively;

WHEREAS a report from the Intergovernmental Panel on Climate Change has indicated a need for a massive reduction in carbon emissions by 45%, reaching net zero carbon emissions by 2050, in order to have a reasonable chance of keeping global warming to 1.5C and maintaining a climate compatible with human civilization; and

WHEREAS a recent United Nations (UN) report on climate change found that while human behaviour has unequivocally warmed the planet and climate changes are happening more rapidly, there is still a window in which human can alter their path.

NOW THEREFORE BE IT RESOLVED:

- 1. That Regional Council **DIRECT** staff to conduct a fulsome review of all current and former Regional initiatives, including strategic plans, related to the management, mitigation and adaptation of climate change in Niagara;
- That Regional Council **DIRECT** staff to research municipal best practices across Ontario related to community and corporate mitigation and adaptation of climate change;
- 3. That Regional Council **DIRECT** staff to provide a report outlining their findings and develop a program proposal, including the immediate 2022 budgetary impacts, to address corporate and community climate mitigation and adaptation to a future Planning & Economic Development Committee meeting; and
- 4. That Niagara Region **DIRECT** staff to organize and host a climate summit for the purpose of evaluating best practices, coordinating climate action and ensuring all of Niagara is committed to climate change adaptation and mitigation, by the end of Q2 2022.

The following friendly **amendment** was accepted by the Committee Chair and the mover and seconder of the motion, so clause 1 reads as follows:

1. That Regional Council **DIRECT** staff to conduct a fulsome review of all current and former Regional initiatives, including strategic plans, related to the management, mitigation and adaptation of climate change in Niagara **and Regional Council DECLARE a climate emergency**;

The following friendly **amendment** was accepted by the Committee Chair and the mover and seconder of the motion, so clause 4 reads as follows:

4. That Niagara Region **DIRECT** staff to organize and host a climate summit for the purpose of evaluating best practices, coordinating climate action and ensuring all of Niagara is committed to climate change adaptation and mitigation, by the end of Q2 2022 and that the Provincial and Federal governments be informed and influenced by these best practices.

The Committee Chair called the vote on the motion as amended, as follows:

NOW THEREFORE BE IT RESOLVED:

1. That Regional Council **DIRECT** staff to conduct a fulsome review of all current and former Regional initiatives, including strategic plans, related to the

- management, mitigation and adaptation of climate change in Niagara and Regional Council DECLARE a climate emergency;
- That Regional Council **DIRECT** staff to research municipal best practices across Ontario related to community and corporate mitigation and adaptation of climate change;
- 3. That Regional Council **DIRECT** staff to provide a report outlining their findings and develop a program proposal, including the immediate 2022 budgetary impacts, to address corporate and community climate mitigation and adaptation to a future Planning & Economic Development Committee meeting; and
- 4. That Niagara Region DIRECT staff to organize and host a climate summit for the purpose of evaluating best practices, coordinating climate action and ensuring all of Niagara is committed to climate change adaptation and mitigation, by the end of Q2 2022 and that the Provincial and Federal governments be informed and influenced by these best practices.

Carried

CAO-10 Climate Change

FTE

Department: Corporate Administration

Committee Report: | PDS-C 50-2021

Start Date: January 1, 2022

Description of FTE:

This business case is to support the creation of a temporary position of Sustainability Specialist as well as consulting dollars to develop corporate and community climate mitigation and adaptation related strategies. The initial ask is for a two-year temporary position to assess existing research & efforts, leverage funding opportunities and identify a path forward.

This role will lead the development of key projects and initiatives, in collaboration with local area municipalities, the Niagara Peninsula Conservation Authority, and other stakeholders, ensuring the Niagara Region is leasing with best practices and supporting a long-range climate action plan. This position will also organize and host a climate summit for the purpose of evaluating best practices, coordinating climate action and ensuring all of Niagara is committed to climate change adaptation and mitigation. Finally, this role will be required to identify and secure funding from other levels of government and agencies to support the program and its implementation.

Business Reasons for FTE:

As directed by council through a motion, PDS-C 50-2021, staff have been directed to:

- conduct a fulsome review of all current and former Regional initiatives, including strategic plans, related to the management, mitigation and adaptation of climate change in Niagara
- research municipal best practices across Ontario related to community and corporate mitigation and adaptation of climate change;
- provide a report outlining their findings and develop a program proposal, including the immediate 2022 budgetary impacts, to address corporate and community climate mitigation and adaptation to a future Planning & Economic Development Committee meeting; and
- organize and host a climate summit for the purpose of evaluating best practices, coordinating climate action and ensuring all of Niagara is committed to climate change adaptation and mitigation.



CAO-10 Climate Change

Through the motion, Council declared a climate change emergency. Climate change work is critical as it has been demonstrated to be a significant threat to both Niagara's natural environment and economy. Niagara Region has already been impacted by extreme weather events, drought, intense heat and increased freeze—thaw cycles. Future challenges associated with climate change will include impacts on agriculture, infrastructure, shorelines, and livability.

A 2020 study conducted by the Federation of Canadian Municipalities and the Insurance Bureau of Canada report found that investments in resilient infrastructure have a return on investment of \$6 in future averted losses for every \$1 spent proactively.

Alignment to Council's Strategic Priorities:

This program aligns with council's strategic priority of Responsible Growth and Infrastructure Planning and particularly the objective of Environmental Sustainability and Stewardship.

Risk Assessment: Urgent

Through the council motion of PDS-C 50-2021 Niagara Region Council declared a climate emergency. This emphasizes the urgency of the Niagara Region dedicating resources to ensure a comprehensive and informed climate mitigation and adaptation plan is achieved.

Financial and Staffing Impacts:

Financial and Staining Impacts.			
Line	2022	Future Years*	Duration
Compensation	\$ 126,494	\$131, 646	End of 2023
Administrative	\$ 123,506	\$123, 000	
Operational & Supply			
Occupancy & Infrastructure			
Equipment, Vehicles, Technology			
Community Assistance			
Partnership, Rebate, Exemption			
Financial Expenditures			
Gross Expenditure	\$ 250,000	\$ 254,646	End of 2023
Taxation			
Federal & Provincial Grants			
By-Law Charges & Sales			
Other Revenue			
Gross Revenue			
Net Impact	\$ 250,000	\$ 254,646	End of 2023
Permanent FTEs			
Temporary FTEs	1	1	End of 2023
*total annual budget impact			



CAO-10 Climate Change

The business case includes costs for a non-union Sustainability Specialist and
consulting dollars to fund the climate summit and required studies to support the
development of climate mitigation and adaptation plan

Prepared by:

Erik Acs Manager Community Planning Reviewed by:

Lyndsey Ferrell Program Financial Specialist

Approved by:

Ron Tripp Chief Administrative Officer

Region Climate Change Action (2008-2021)

The Region introduced its first climate change policies into the Regional Official Plan in 2008. This policy direction helped set the course for climate change work at the Region. These policies were foundational in creating climate change awareness and building momentum for the Region's growing body of climate change planning.

The timeline below is a high-level inventory of Region projects and actions, key plans and policies that have been implemented to support climate change action at the Region.

<u>Timeline of Niagara Region Climate Change Initiatives</u>

2008 - Regional Official Plan

The Niagara Regional Official Plan ('OP') contains 'Air Quality and Climate Change' polices in Chapter 7 – Natural Environment, as well as other polices throughout the OP that support climate change mitigation and adaptation objectives. The Natural Environment polices were introduced through Amendment 187 to the OP, which was approved by the Ontario Municipal Board on April 16, 2008.

2009 – 2013 Partners for Climate Protection (PCP)

The Region joined Partners for Climate Protection (PCP) in 2009. The Partners for Climate Protection program is managed and delivered through the Federation of Canadian Municipalities and ICLEI Canada and helps municipalities act on climate change. It consists of a five-step Milestone Framework that guides municipalities in methods to take action on climate change by reducing emissions in the municipality.

The Five Milestones of the PCP are:

- Milestone One: Emissions Inventory and Forecast.
- Milestone Two: Set a Reduction Target.
- Milestone Three: Develop a Local Action Plan.
- Milestone Four: Implement the Local Action Plan.
- Milestone Five: Measure Progress and Report Results.

To date, milestones one, two, and three have been completed, with the monitoring and reporting incomplete at this time due to restructuring at Niagara Region and the lack of dedicated staff resources.

2013 - Corporate Climate Change Action Plan and Community Climate Change Action Plan

The Region achieved Milestone Three with the development of the Corporate and Community Climate Change Action Plans. These plans require updating and review to align with best practices and leading global greenhouse gas emission reduction targets.

2012- Sustainable Niagara Action Plan

The Sustainable Niagara Action Plan is an overarching framework to guide and facilitate integration of ongoing work at the Region and in the community for the next 50 years.

The Sustainable Niagara Action Plan describes the community's vision for what Niagara could look like in 2060, the goals to work towards, and the actions that will support the goals. The Plan serves as a guide for making decisions around this common vision and provides a framework for measuring progress. It provides a framework for aligning activities with Niagara's sustainability goals.

Stakeholders (community organizations, businesses, municipalities, and residents) across the region were engaged in a collaborative discussion on, "What does a sustainable Niagara look like in 2060?" These conversations created the vision for a sustainable Niagara, and the eight long-range goals that will help to reach it.

Sustainable Niagara is as a community partnership and is to be implemented by all stakeholders. This initiative has lost momentum and leadership for moving the plan forward. The Regions role and commitment to the partnership will be reviewed.

2014 - Energy Conservation and Demand Management Plan

Ontario Electricity Act Ontario Regulation 507/18 (formerly within Green Energy Act O.Reg. 397/11) requires public agencies – including municipalities, municipal service boards (water/sewage treatment operations), colleges and universities, hospitals and school boards – to report annually to the Ministry of Energy on their energy use and GHG emissions and publish the reports on their websites beginning in 2013.

In addition, starting in July 2014, public agencies were required to develop five-year Energy Conservation and Demand Management (CDM) plan.

The 2014-2018 Niagara Region Energy Conservation and Demand Management Plan was a corporate-based approach to climate change mitigation by reducing the amount of energy consumed at Regional facilities. The Plan met the goal to reduce overall energy consumption by 5% of 2011 levels by 2018 and the 2013 Corporate Climate Change Action Plan (CCCAP) goal to reduce overall GHG emissions to 2006 levels by 2016.

In 2019, the Region updated the CDM plan with the goal to reduce electricity consumption by 8% and Natural gas consumption by 4.4%. If the Plan is implemented in its entirety, the proposed energy cost avoidance and savings will be \$1M by 2023.

2014-2019 - Niagara Region's Asset Management Plan and Strategic Asset Management Policy

Niagara Region's Asset Management Plan (AMP) was updated in 2016 and approved by Regional Council in March 2017. The Asset Management Plan addresses management of the Region's approximately \$7.4B worth of assets, including water/wastewater, transportation, waste management, police services and Regional facilities including housing managed by Niagara Regional Housing (NRH), long term care homes, and the Region's administrative offices. In the AMP, climate change is recognized as an external factor that will affect level of service, and performance of assets.

Niagara Region completed a Strategic Asset Management Policy that was approved by Regional Council in May 2019 that commits the Region to consider actions that may be required to address municipal infrastructure vulnerabilities caused by climate change.

Asset management plans will be updated again in 2021, corresponding with deadlines under the regulation and will more specifically address how the Region will manage the risks from climate change.

2016 - 2021 – Water and Waste Water Master Servicing Plan and Upgrades

Climate change is considered a priority area within the Master Servicing Plan Update, the Region commits to be aware and consider the potential impacts of climate change on the planning and sizing of infrastructure. The update includes a Wet Weather Management Strategy for wastewater servicing as Niagara has a mix of separated and combined sewer systems, which can be impacted by wet weather conditions and climate change.

In 2021, combined sewer overflow tank upgrades at Chippawa Low-Lift were completed in partnership with City of Niagara Falls. This has reduced the overflow events to zero.

2018 – Niagara Region Hazard Identification and Risk Assessment (HIRA)

The HIRA assesses risk through an examination of the frequency and the potential consequences that could arise should a hazard impact Niagara Region at a magnitude that is severe enough to result in a potential emergency. It also includes the variable of 'changing risk' which accounts for changes in vulnerability and frequency due to factors such as population demographic shifts and climate change.

Within the Niagara Region high risk impacts were identified from potential extreme temperatures, flooding, snow storms/blizzards, tornados, freezing rain and ice storm events.

2018 - Official Plan Update

The Planning Act identifies climate change as a matter of provincial interest and requires climate change mitigation and adaptation policies in municipal Official Plans. The Province released a new provincial land use planning policy framework for climate change. As such, the new Official Plan is required to contain climate change policies that align with the new provincial policy framework.

The Official Plan update is under development, and climate change policies are moving through the review process.

2017-2021 Public Transportation Initiatives

2017 - Transportation Master Plan (TMP)

The TMP is a long-term strategy to guide the planning, development, renewal, and maintenance of a multi-modal transportation system in a manner that is consistent with projected needs, and aligned with the region's growth and vision for a sustainable Niagara.

2019 - Go Train Implementation

Niagara is working collaboratively with local area municipal partners, Metrolinx (MX), CN Rail, VIA Rail and the St. Lawrence Seaway Management Corp (SLSMC) to lead, manage and coordinate the implementation of weekday GO train service.

2021 - Niagara Region Council Approved Region-wide transit

In November 2021, Niagara Region Council voted to approve the Moving Transit Forward proposal. The proposal brings together independently operating local transit systems in Fort Erie, St. Catharines, Welland, and Niagara Falls, as well as Niagara Region Transit and NRT OnDemand, to offer consistent operating hours and fares, new digital payment technology, and better connections for riders across Niagara.

2020- Waste Management collection

After successful implementation of the Region organics diversion program, the Region approved every-other week garbage collection in October 2020.

2021 - Niagara Region Declares a Climate Change Emergency

On September 15, 2021, the Planning and Economic Development Committee moved a motion to declare a Climate Change Emergency in Niagara. The minutes and approved recommendations were passed at the September 23, 2021 Regional Council meeting.

2021- Climate Modelling Exercise (2021-2080)

The Region is undergoing an assessment to understand Niagara's changing climate and impacts over the next 60 years. This climate data will provide critical information about Niagara's changing climate over the long-term and will help to inform the future policy decisions at the Region, local municipal partners, and the Niagara Peninsula Conservation Authority. For example, climate data can be instrumental in informing climate adaptation plans, vulnerability assessments, as well as watershed and subwatershed plans.