



OAKVILLE

REPORT

COMMUNITY SERVICES COMMITTEE

MEETING DATE: JANUARY 22, 2018

FROM: Environmental Policy Department

DATE: December 22, 2017

SUBJECT: Climate Change Strategy - 2017 Implementation Report

LOCATION: Town wide

WARD: Town wide

Page 1

RECOMMENDATION:

1. That the *Climate Change Strategy – 2017 Implementation Report* from the Environmental Policy Department, dated December 22, 2017 be received;
2. That the recommendations within the Strategy to improve the town's climate change readiness in the applicable departmental work plans and budgets brought forward for consideration within each budget year continue to be supported.

KEY FACTS:

The following are key points for consideration with respect to this report:

- Council endorsed the town's Climate Change Strategy in September 2014.
- The Climate Change Strategy – Technical Report has enabled integration of climate change considerations across town operations and programs with all strategy objectives being met.
- Seventy-one (71) per cent of the 295 actions are underway within three years of implementation. A positive shift was noticed in action items advancing from medium term to short term implementation schedules.
- The public education document, [Oakville's Climate Change Primer](#), updated [website](#), use of gamification and the *Keep Calm and Adapt – Emergency and Extreme Weather Preparedness* event are helping to build awareness, preparedness and resiliency amongst town residents.
- The Town of Oakville was selected by the Suzuki Foundation as one of five Canadian municipalities to conduct a natural asset assessment as part of a national pilot project. A key objective is to explore whether and how natural assets in a pilot area of Oakville can provide the same or better stormwater services to the community as engineered assets, but with lower capital and operating costs and additional potential community benefits.

- Oakville joined the Global Covenant of Mayors for Climate and Energy, formerly known as the [Compact of Mayors](#) in November 2015 prior to the Convention on Climate Change held in Paris in December 2015. The town submitted its greenhouse gas emission data at the end of 2016 and has since received 3 of the 4 badges, Commitment, Inventory and Plan within this program. This includes Oakville as one of only six Canadian municipalities achieving this high level of progress.
- Staff are leveraging partnerships and funding to take action on climate change mitigation and adaptation. These partnerships are in various stages of the funding process.
- Staff are leveraging the work of partner organizations through in-kind resources, research and expertise. These partner organizations include Credit Valley Conservation Authority, University of Waterloo's Partners for Action/FloodSmart Canada, Conservation Halton, Oakvillegreen, the Halton Environment Network, Institute of Catastrophic Loss Reduction, ICLEI Canada, GTA Clean Air Council, and others.

BACKGROUND:

Corporate Action

ICLEI – Local Governments for Sustainability is an international association of government organizations committed to sustainable development. The town has been an active member since 2004 participating in the joint ICLEI / FCM Partners for Climate Protection (PCP) program to develop and implement the town's greenhouse gas emissions reduction strategy.

Similar to the PCP program, the framework for ICLEI Canada's *Building Adaptive and Resilient Communities* (BARC) program, formerly known as *Changing Climates, Changing Communities* municipal climate change adaptation program, involves a five step milestone approach to improve a community's readiness. There are currently 21 Canadian municipalities working through ICLEI's BARC program. The town was one of the first of 12 early adopting BARC municipalities.

ICLEI awarded the town Milestone 5 of its five Milestone BARC program for implementation of the Strategy and community education program. The Town of Oakville and the City of Windsor were the first two of the 21 participating municipalities that reached Milestone 5, placing the town at the forefront of municipalities in Canada working to address climate change. There are currently 5 of 21 municipalities/regions at Milestone 5 of the BARC program.

Community Action

Through the development of the town's corporate climate change plan it was realized that a companion community education program was needed to help

residents understand and prepare for climate change impacts. Town staff developed *Keep Calm and Adapt*, a community climate change awareness program which is comprised of a variety of resources including an interactive website, social media and public outreach campaigns, community partnerships and an annual event to coincide with Safe Boating Week, National Safe Building Month, Earth Week and Emergency Preparedness Week.

The town was recognized by the Office of the Fire Marshall and the Insurance Bureau of Canada for enhancing emergency preparedness in Ontario, at its inaugural Keep Calm and Adapt – Emergency and Extreme Weather Preparedness event on May 9, 2015.

Demonstrating the town's environmental leadership nationally, staff were invited to present the development and implementation of the town's Climate Change Strategy and accompanying Keep Calm and Adapt community education program at four national conferences in 2016.

Related Provincial Action

The Province released its Five Year Climate Change Action Plan 2016-2020 in June of 2016 referencing the release of a companion plan for adapting and becoming more resilient to climate change in 2017. This new adaptation plan was released in November 2017 as Ontario's Climate Change Adaptation Approach. The approach involves:

- creating an external organization
 - o providing climate change projection data and analysis, while delivering adaptation services
- conducting a provincial vulnerability and risk assessment
 - o determining Ontario's most vulnerable areas and how best to protect them
- establishing a governance framework
 - o ensuring all ministries and levels of government are coordinating efforts to identify and implement climate change adaptation actions
- building public awareness
 - o alerting the public to impacts and actions to make them more resilient to our changing climate.

Before updating the town's climate change strategy in-house in 2018/2019, staff will review the provincial adaptation approach when more details are available and make revisions to align initiatives and recognize incentives and funding that may become available.

COMMENT/OPTIONS:

Key steps supporting Oakville’s climate change adaptation planning define Objectives and Next Steps to guide the implementation of, and require continuous improvements to, this strategy. This framework of Objectives and Next Steps are used to report on the Strategy’s implementation progress annually.

Implementation by Objectives:

The following table outlines actions undertaken since the last [Climate Change Strategy implementation report](#) dated November 14, 2016, organized by strategy objectives. Some of these initiatives are actually new to the Strategy, i.e. not included in the original strategy, and will be integrated into the recommendations going forward. These new initiatives demonstrate the need to respect the Strategy as a ‘living’ document revised regularly to incorporate emerging issues and the town’s innovative initiatives.

Objective 1: To increase the town’s capacity to protect against and respond to projected climate change impacts.	
Comply with current legislation	<p>Energy Conservation and Demand Management Plan – most recent Energy Management Initiatives report received by CSC on November 7, 2016.</p> <p>To satisfy Ontario Regulation 102/94, town waste audits are conducted annually at all facilities with greater than 10,000 square feet of office space including Oakville Transit, Town Hall and Central Operations.</p> <p>Staff attended the November 16, 2017 webinar on Ontario’s Climate Change Adaptation Approach. This approach includes the formation of an external organization to provide climate change projection data and analysis while delivering adaptation services.</p> <p>Staff are awaiting the release of the Ministry of the Environment and Climate Change’s (MOECC) Low Impact Development - Stormwater Management Guidance Manual. Once released staff will work to integrate this development into current practices.</p> <p>The Official Plan Review will need to consider new provincial legislation and initiatives contained with the Province’s Climate</p>

	<p>Change Action Plan. The province is amending the Planning Act to require climate change policies be included in official plans.</p> <p>The town's Community Emergency Management Coordinator and staff have reviewed the town's Emergency Management Plan as required annually by the Emergency Management Ontario. As part of this review, the town's Hazardous Identification and Risk Assessment was also reviewed and is updated annually.</p>
<p>Provide input on proposed and existing legislation</p>	<p>Staff attended the provincial webinar on the proposed <i>Ontario's Approach to Climate Change Adaptation</i>. This Approach is currently listed on the EBR for comments. Staff will comment through the Greater Toronto Area- Clean Air Council (GTA-CAC) who will compile member municipality comments and submit one comprehensive list of recommendations.</p> <p>Through the GTA-CAC staff provided comments on the proposed Ontario Building Code (OBC) requirements. The September 2017 GTA-CAC OBC Submission is a collaborative effort of all member GTA municipalities. Comments were also provided by the Building Services department through the Chief Building Officials. These comments were provided to Council in the mid-December Council information package.</p> <p>Staff attended Green Infrastructure Ontario Coalition's and Green Communities Canada's webinar on the draft Ontario's Runoff Volume Control Targets which included a review of their comments to the Environmental Registry. The town prepared and submitted comments to the Province that were provided to Council in the July 28, 2017 Council information package.</p> <p>Staff commented on the Ministry of the Environment and Climate Change's (MOECC) Low Impact Development - Stormwater Management Guidance Manual. Once this document is released staff will work to integrate this guidance into town practices.</p> <p>Participation in Greater Golden Horseshoe Ad Hoc Steering Committee for Invasive Species. This is a partnership of Greater</p>

From: Environmental Policy Department
 Date: December 22, 2017
 Subject: Climate Change Strategy - 2017 Implementation Report

	<p>Golden Horseshoe municipalities and conservation authorities organized by Credit Valley Conservation Authority and POWER. Internal partnership with Parks and Open Space – Forestry.</p> <p>Staff provided comments to the EBR and directly to Ministry staff by invitation, on the recommended improvements to the Environmental Bills Registry. These comments were provided in the November, 2016 Council information package.</p> <p>On November 13, 2017, town staff attended AMO’s information session on Stewardship Ontario’s proposed amendments to the Provincial Blue Box program.</p> <p>Staff are monitoring the provincial proposal to incorporate climate change considerations into the environmental assessment process.</p>
<p>Build mitigation and adaptation considerations into existing and new plans, policies and projects</p>	<p><u>Plans</u></p> <p>2017 Active Transportation Master Plan references the 2016 Provincial Climate Change Action Plan</p> <p>Official Plan Review will need to consider the new provincial legislation and initiatives contained with the provincial Climate Change Action Plan. The province is amending the Planning Act to require climate change policies be included in official plans.</p> <p>The 2016 Growing Livability – A Comprehensive Study of Oakville’s Urban Forest includes information on forest species identification, invasive species, carbon sequestration and the impacts of climate change on urban forestry.</p> <p>The town’s Tree Protection Policy was updated in November 2016 to provide more stringent regulations regarding tree removal within the town limits.</p> <p>Community Energy Plan (CEP) – Initiated end December 2017, completion 2019.</p> <p>Environmental Strategic Plan (ESP) – 2017 update, report Q1</p>

	<p>2018.</p> <p>Staff attended the GTA-CAC, October 2016 Workshop on Implementing the Growth Plan and Increasing Alignment with Climate Action Plans</p> <p><u>Projects</u> Municipal Natural Asset Initiative - ongoing Asset Management - ongoing</p> <p><u>Programs</u> To promote safe boating, wearing of PFDs, checking forecasts, improving emergency preparedness and promoting navigation and marine radio courses, the town strengthened its relationship with the Canadian Power and Sail Squadron and has helped host a series of lifesaving courses.</p>
<p>Embed climate change considerations in staff reports and purchasing processes</p>	<p>Opportunities are being explored to integrate climate change considerations into asset management.</p>

<p>Objective 2: To educate through effective and efficient means of communication.</p>	
<p>Be timely and proactive using a multi-media approach</p>	<p>Updated the town's climate change webpages relaying information on the town's community and corporate resiliency programs.</p> <p>Social media was used to promote and educate residents on events, emergency preparedness and heat and health alerts.</p> <p>Increased use of gamification to engage and educate residents on what they can do to build their personal resilience to our changing climate. Town staff created the following climate resiliency games to be used at public outreach events.</p> <p>In 2017, the town launched the <u>Prepare to Be Prepared Challenge</u></p>

	<p>encouraging residents to implement actions they learned at the Keep Calm and Adapt event to make their properties and their homes more resilient. The over 50 challenges included protecting valuables in basements, duplicating important documents, checking insurance policies, pruning trees, checking eavestroughs, keeping a 72 hour preparedness kit and many more.</p> <p><u>Riddle Me Ready</u> involves participants answering a series of over 25 riddles to discover the contents of a 72 hour preparedness kit.</p> <p>Town staff sat on the Cooperator’s and ICLEI’s Gamification Collaborator Committee to help test and launch Get Ready!, the game of home hazard preparedness. This game was launched at the ICLEI Livable Cities Forum in September 2017.</p>
<p>Participate in internal and external outreach and educational events</p>	<p>Hosted successful 3rd annual Keep Calm and Adapt (KCAA) – Emergency and Extreme Weather Preparedness event in partnership with community groups, local utility service providers, regional and town departments, TOWARF, Insurance Bureau of Canada, the Canadian Red Cross and others.</p> <p>Town staff promoted the new Prepare to be Prepared Challenge on its website, on social media, and at the KCAA event. Staff specifically approached Canadian Guide and Scout Leaders to participate which resulted in:</p> <ul style="list-style-type: none"> - 20 households registered, 14 submitted scorecards = 22 people - 2 Sparks/Brownie groups registered, 2 submitted scorecards = 20 people - Total of 42 people participated, 16 properties challenged and 175 challenges completed. <p>One guide leader brought ten Guides to the KCAA event to visit exhibitors, listen to guest speakers, play a series of extreme weather preparedness activities and games and receive their Emergency Preparedness badges. Town staff presented 52 emergency preparedness badges to the Guides that took part in the Prepare to be Prepared Challenge and the KCAA event.</p> <p>Environmental Policy staff attend Midnight Madness, Oakville’s Children’s Festival and Fire Prevention event annually to educate residents on environmental initiatives including climate change preparedness.</p>

	<p><u>Speaking Engagements</u> Staff were invited to present on aspects of the development and implementation of the town’s Climate Change Strategy at:</p> <ul style="list-style-type: none"> • Livable Cities Forum, Victoria – September 18-20, 2017 • Collaborative Implementation Group Workshop – November 23, 2017 • The upcoming Sustainable Communities Conference, Ottawa, February 7-9, 2018.
<p>Encourage training and continuous education through webinars, conferences and courses</p>	<p>Numerous conferences and webinars attended by various staff across several departments on topics of climate change data and impacts (stormwater management, flooding, health impacts, urban forestry, and electrical distribution system disturbances among others), technologies, best management practices, and the Cap and Trade program. Upcoming webinars will be attended focused on the new provincial Climate Change Adaptation Approach.</p> <p>Town staff are supporting Conservation Halton’s (CH) Federation of Canadian Municipalities (FCM) Municipalities for Climate Innovation Program (MCIP) funding application that would allow CH to provide a low impact development 4-day training course to Halton Region and area municipal staff and contractors.</p> <p>All members of the Emergency Control Group have received Incident Management Training from the town’s Community Emergency Management Coordinator, Andy Glynn.</p> <p>Several Emergency Operations Centre (EOC) exercises have considered climate impact events including extreme weather and flooding.</p> <p>Staff attended the November 10, 2017 GTA-CAC Health Vulnerability Assessments and Climate Resilience Opportunities Workshop where Health Canada and the Ministry of Health and Long-Term Care presented Ontario’s Climate Change and Health Toolkit.</p>

Objective 3: To monitor the implementation of adaptation actions and goals in order to make continuous operational improvements.

<p>Identify and use available funding and partnerships to support actions</p>	<p>The Halton Environmental Network (HEN), Faith and the Common Good in partnership with staff from Environmental Policy and Emergency Management have applied for funding to implement Project Lighthouse in Oakville. The premise of this program is to use faith based organizations as resiliency hubs in the case of emergencies.</p> <p>To support extreme weather preparedness and safe boating the town strengthened its partnership with the Canadian Power Boat and Sail Squadron co-hosting three flare recycling days and providing meeting space to host marine navigation and safe boating courses.</p> <p>Town staff have partnered with Conservation Halton to secure funding from Federation of Canadian Municipalities - Municipal Climate Innovation Program to conduct a feasibility study to install a porous/permeable pavement parking lot.</p> <p>The Town of Oakville was approached and agreed to provide municipal in-kind support for the development and implementation of a National Flood Risk Awareness Strategy led by Partners for Action in partnership with the University of Waterloo's Faculty of Environment, multiple agencies of the federal government, NGOs, the insurance industry and municipalities.</p> <p>HEN Executive Director, Lisa Kohler, prepared a comprehensive work plan and was successful in obtaining \$30,000 for first phase Ontario Trillium Foundation (OTF) Collective Impact (CI) funding. OTF CI funds initiatives with goals to bring together like-minded stakeholders to develop a collective strategy to address complex issues through transformative and lasting change. Partnering with HEN and the Town of Oakville as backbone agencies for the Halton Climate Collective are the Town of Halton Hills and Conservation Halton. A memo to Council regarding this initiative was provided on October 13, 2017 in Council's information package.</p> <p>Oakville Transit and Environmental Policy partnered on the Municipal GHG Challenge Fund application to the province in</p>
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	<p>September 2017 for electric buses. A report to Council was approved at the October 11 2017, Council meeting.</p> <p>Funded by the Fifty Million Tree Project town staff partnered with Conservation Halton to remove invasive Buckthorn and replant with a coniferous/deciduous forest in North Oakville to support Oak regeneration. Buckthorn removal has also taken place in other areas of Oakville with help from Oakvillegreen and the town's Forestry department.</p> <p>The partnership between Parks and Open Space (Horticulture) and Conservation Halton initiated an American Chestnut Recovery program that included seed source collection in 2017 with seedlings to be propagated in 2018.</p> <p>Staff have been working to advance the Municipal Natural Asset Initiative in partnership with the David Suzuki Foundation and Greenbelt Foundation. This project is working to provide valuation of natural assets as they deliver stormwater services.</p>
<p>Support innovation and research on best management practices and new technologies</p>	<p>Continued research on electric vehicles (EV), EV charging infrastructure and EV funding is being conducted by staff.</p> <p>Participating as a pilot in the Municipal Natural Asset Initiative (MNAI) is helping staff to understand the value of natural assets within a specific area in Oakville.</p> <p>Staff are monitoring the Burlington - HAAP Halton Adaptation Assessment Program, municipal storm water incentive and fee programs.</p>
<p>Initiate, research and implement best management practices (BMP)</p>	<p>Numerous conference and webinars attended by various staff on the topics of climate change data and impacts (storm water management, flooding, health impacts, urban forestry, natural asset evaluation and electrical distribution system disturbances among others), technologies, best management practices including storm water charges, fleet greening, low impact development, community outreach and the Province's new Cap and Trade program.</p> <p>Oakville joined the Global Covenant of Mayors for Climate and Energy in November 2015 prior to the Convention on Climate Change held in Paris in December 2015. The town submitted its</p>

	greenhouse gas emission data at the end of 2016 and has since received 3 of the 4 badges, Commitment, Inventory and Plan, within this program. This includes Oakville as one of only six Canadian municipalities achieving this high level of progress
Review impacts and vulnerabilities annually	<p>Participation in the Global Covenant of Mayors for Climate and Energy will involve reviewing the town’s risks and vulnerabilities to our changing climate.</p> <p>Impacts and vulnerabilities will continue to be reviewed by impact specific staff teams as they are implemented into departmental plans, programs and operations.</p>

Next Steps:

Through the development of the corporate strategy, five priorities were determined to be critical Next Steps to continue to improve the town’s climate change preparedness. These Next Steps and achievements to date are:

1. *Incorporate climate change considerations, strategies and actions into appropriate policies, procedures, plans and purchasing decisions.*

Objective 1 above outlines the specific actions underway to address this Next Step. As policies and plans, etc. are being updated town staff are taking the opportunity to incorporate climate change considerations into integrated revisions.

With the release of the provincial Climate Change Strategy in 2016 and the announcement of the new provincial adaptation approach town staff will look to further integrate these provincial guidance and programs and requirements in upcoming town plans and policies.

2. *Continue to research and implement climate change mitigation and adaptation actions including, but not limited to those mentioned in Section 6.0 under the heading Adaptation Actions.*

Since Council’s endorsement, town staff has been implementing actions recommended in the Strategy at every opportunity. There are 295 actions recommended in the Strategy. Of these 207 (71%) are recommended for implementation in the short term, 76 (26%) in the medium term and 7 (3%) in the long term. Currently seventy-one (71) per cent of the actions are being implemented to different degrees. Many of these actions are on-going. This shows remarkable town commitment with a shift of numerous actions from implementation in the mid-term to short-term along with improving the percent of actions underway from last year’s sixty-four (64) per cent.

Staff will continue to implement the corporate strategy and will look to align the 2018 town's Climate Change Strategy updating with the federal and provincial adaptation strategies, new guidance documents and policies once released.

3. Develop a tracking and monitoring tool related to climate change adaptation.

Staff are currently tracking the implementation of specific actions within the Strategy. Staff have been monitoring the development of climate change readiness indicators underway by ICLEI and other organizations and will be well positioned to participate once these are available.

4. Conduct a more detailed and integrated risk assessment on all impacts with vulnerability ratings of V4 and V5.

Through the creation of the Strategy staff identified 39 impacts to town operations, 11 of these were high to medium vulnerability and 28 were identified as medium to low vulnerability. Six of the town's 11 highly vulnerable impacts (V4 and V5) are caused by an increase in the severity and frequency of precipitation events.

Town staff have formed climate change working groups with partner organizations including ICLEI, FCM, Halton Environment Network, Conservation Halton, the GTA Clean Air Council, University of Waterloo, Engineers Canada, Water Environment Association of Ontario, The Canadian Institute of Planners, the Institute for Catastrophic Loss Reduction (ICLR), Halton Region and neighbouring municipalities.

5. Based on the more comprehensive integrated risk assessments the phased implementation of actions will continue.

Work on this Next Step is integrated into the work of the impact-specific staff teams.

Summary:

Remarkably the town continues to make positive and measurable progress to address climate change impacts, improve resiliency and prepare for extreme weather events at both corporate and community levels. The town is recognized as a Canadian leader in municipal climate change planning. Staff are often called upon to represent the town's successes and continued progress at professional and community events, as a credit to Council's continued commitment to environmental leadership.

CONSIDERATIONS:**(A) PUBLIC**

Opportunities to engage the public and provide education on Oakville's climate change and actions that can be taken by residents to enhance their preparedness have been integrated into the ongoing Environmental Policy education and outreach initiatives.

(B) FINANCIAL

Further Climate Change Strategy implementation may identify needs to include new projects and budget allocations related to infrastructure and staffing resource requirements to implement climate change adaptation initiatives. These would be brought forward to Council at the appropriate time during budget deliberations.

(C) IMPACT ON OTHER DEPARTMENTS & USERS

Many town departments have been involved in the development of the Climate Change Strategy and will continue to be involved in its implementation and continued review and updating.

(D) CORPORATE AND/OR DEPARTMENT STRATEGIC GOALS

This report addresses the corporate strategic goal to:

- enhance our natural environment
- have environmentally sustainable programs/services
- provide outstanding service to our residents and businesses
- be accountable in everything we do
- be the most livable town in Canada

(E) COMMUNITY SUSTAINABILITY

Climate change adaptation planning addresses all four pillars of sustainability including social, cultural, environmental and economic considerations.

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