



The Corporation
of the County of Huron
Corporate Climate
Change Adaptation Plan

Framework for Consultation and Engagement

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Introduction

This framework outlines the County's process for developing the Corporate Climate Change Adaptation Plan (CCCAP). The purpose of this process was to determine the vulnerability of the County's services, operations, and assets to the future impacts of climate change. From this, the County was able to identify strategies to improve resiliency in these areas. These strategies will ensure that the County, as a corporation, is prepared to reduce, respond to, and recover from the impacts of climate change on the corporation and local communities.

In order to develop the CCCAP, the County completed staff consultation and community engagement. The information gathered in this process was used to inform the County's priorities for climate adaptation.

Our Process

The County used ICLEI’s Building Adaptive and Resilient Communities (BARC) framework (Figure 1) to guide the development of the CCCAP. This 5-milestone framework provides a simple, yet comprehensive strategy to guide municipalities through the development of a climate adaptation plan. Several municipalities across Canada have used this framework, including Waterloo, Thunder Bay, and the City of Kawartha Lakes.

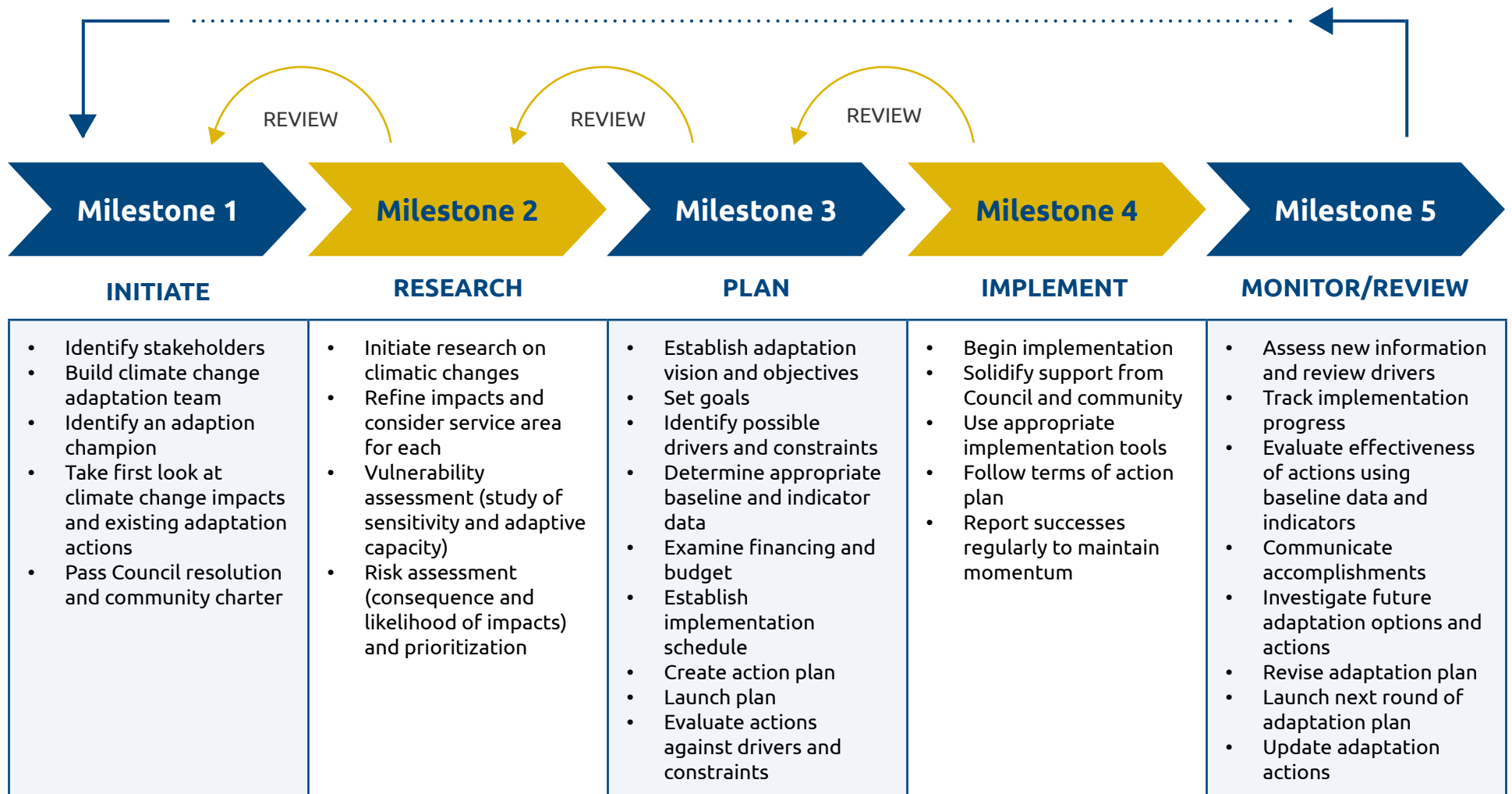


Figure 1. ICLEI’s 5-milestone framework – Building Adaptive and Resilient Communities (BARC).

By working through the milestones of this framework the County was able to identify climate projections for the local area. This information was used to complete vulnerability and risk assessments through workshops with County staff. The input gathered through staff consultation and community engagement was used to identify priority areas for action in the CCCAP (Figure 2).



Figure 2. The County's approach to completing ICLEI's BARC framework.

In addition to ICLEI's approach, which helped guide the overall development of the County's CCCAP, this framework for consultation and engagement was adapted from strategies used by other municipalities. This includes:

- The City of Waterloo's Corporate Climate Change Adaptation Plan,
- Ontario Climate Consortium's Corporate Climate Change Risk Scan Methodologies, which was used to inform climate work in 5 municipalities, including Richmond Hill, York Region, Peel Region, Mississauga, and Clarington, and
- The City of Kitchener's Changing for Good: Corporate Climate Action Plan for Sustainability.

As part of this process, the County also formed a Climate Change Committee, involving members of the Senior Management Team and the County's Climate Change and Energy Specialist. The role of this group was to oversee the development of the CCCAP by providing strategic and financial direction. This group worked to incorporate the input and expertise from other staff and stakeholders to ensure that the priorities identified for adaption aligned with the corporation.

Corporate Consultation

To ensure that the vulnerability of the corporation was effectively captured, the County's Leadership Group was consulted through a series of workshops. The Leadership Group includes approximately 80 staff members from across the corporation. Consulting this group ensured that the results of this assessment aligned with each department and reflected the overall priorities of the corporation.

1) Impact Statements

The first part of this process involved identifying how the County's corporate operations could be impacted by climate change. Staff were presented with a summary of the projected climate trends for Huron County (Appendix 1) and used this information to develop impact statements for the corporation. The impact statements were developed using an "If-Then-So" approach (Table 1). These statements took into account the anticipated effect and resulting consequence of a climate trend. Staff were also asked to consider whether any of the projected trends could result in opportunities for the County.

Table 1. "If-Then-So" methodology explained with an example.

Component	Explanation	Example
'If'	Associated with the climate event/condition	"If lake-effect snow increases, then public safety and transportation will be a concern, so the County may be required to increase winter road maintenance."
'Then'	Associated with the impact(s) resulting from the event/condition	
'So'	Associated with the possible consequence or impact to operations, services, or assets	

2) Vulnerability Assessment




Once it was determined how the corporation could be impacted by future trends, staff assessed each impact based on the anticipated vulnerability. Vulnerability is a function of a system's sensitivity and adaptive capacity to the impacts of climate change. For the County, sensitivity refers to how a department, service, or operation would be affected by an impact, while adaptive capacity refers to the ability of the system to cope with the event, if it were to occur today.

To determine this, staff considered how the County's departments and services would be affected by each impact, including whether the corporation has the existing resources to respond and recover from the event. Staff considered several questions when assessing vulnerability, including:

- How the system (ie. the department, service or operation) may be affected by the impact,
- If the system is exposed to existing stress, and how this may be impacted by the event,
- Whether the system has the capacity and funds to adjust to the impact,
- The resources that may be required to recover the system if impacted, and
- Whether the system has existing procedures or policies that may reduce the severity of the impact.

The vulnerability assessment was complete using a 'dotmocracy' approach, where staff ranked each impact as having a high, medium, or low vulnerability. This allowed staff to associate a colour with the anticipated vulnerability for each impact statement (Table 2).

Table 2. Dotmocracy rankings that will be used to assess the vulnerability of impacts.

Vulnerability	Explanation	Colour
Low Vulnerability	The system is not vulnerable to the effects of the impact.	
Medium Vulnerability	The system is somewhat vulnerable to the effects of the impact.	
High Vulnerability	The system is highly vulnerable to the effects of the impact.	

A weighted average was used to evaluate the results of the dotmocracy. A numerical value was assigned to each category of vulnerability, where high rankings received a value of 3, medium rankings a 2, and low rankings a 1. The results for each impact statement were compiled and averaged, and then assigned a final ranking (Table 3).

Table 3. Rankings of vulnerability based on weighted average.

Vulnerability	Assigned Weight	Range of Average
Low	1	1.0-1.4
Medium/Low	N/A	1.5-1.6
Medium	2	1.7-2.3
Medium/High	N/A	2.4-2.5
High	3	2.6-3.0

3) Risk Assessment

Once complete, the impacts ranked as medium to high vulnerabilities were put through a risk assessment. Risk takes into account the probability that an impact will occur, as well as the damage it may cause. In other words, risk is a function of the likelihood and consequence of an impact.

For the assessment, the likelihood of each impact was ranked on a 1-5 scale, where 1 refers to a rare occurrence and 5 refers to a condition that is almost certain to occur. The ranking was complete by the County’s Climate Change and Energy Specialist, based on the probability of each impact to occur in the present and by mid-century. Staff had an opportunity to incorporate their knowledge of local climate trends and their own operational expertise to suggest changes to these rankings.

To assess the consequence, a set of criteria were developed to understand the effect of each impact on the corporation and local communities (Appendix 2). This included taking into account the effect of an impact on the environment, local economy, and health and safety of County staff and residents. Staff assigned a 1-5 ranking to each category, based on the anticipated level of damage, where 1 refers to an impact that has an insignificant affect and 5 refers to an impact that is catastrophic.

To evaluate the results of the assessment, 2 risk scores were calculated for each impact. Risk scores were calculated for each category of consequence and overall, by adding together the rankings and multiplying them by the likelihood (Equation 1). By calculating category-specific risk scores, it allowed the County to highlight and prioritize impacts that had low overall scores, but had ranked high in a specific category.

Impacts that had higher risk scores (Table 4), indicate areas that the County is working to address through the goals and actions of the CCCAP.

Equation 1. Calculations for category-specific (A) and overall (B) risk scores.

(A) Category-Specific Risk = Likelihood x Sum of Consequences (From All Criteria)

(B) Overall Risk = Likelihood x Sum of Consequences (From All Categories)

Table 4. Risk rankings for category-specific and overall risk scores.

Risk Ranking	Category-Specific	Overall
Very Low	1 to 5	8 to 40
Low	6 to 9	41 to 72
Medium	10 to 13	73 to 104
High	14 to 17	105 to 136
Very High	18 to 21	137 to 168
Extreme	22 to 25	169 to 200

Community Engagement

The County recognized the importance of engaging the community in the development of the CCCAP. The purpose of this was to understand the community's concerns regarding climate adaptation, to ensure that they aligned with the priorities identified by the corporation. This was also an opportunity to raise awareness about the need for climate adaptation at the local level.

The County gathered community feedback through a facilitated session with Sustainable Huron. Sustainable Huron represents a group of local stakeholders that meets regularly to address economic, environmental, and social issues. This group was presented with the goals for the CCCAP and asked to identify any gaps, as well as highlight the goals they felt were most important for adaptation. The results of this session were consistent with the goals County staff had identified.

Additionally, the County intended to complete community surveys to gather further input for the CCCAP. The uncertainties and delays with COVID-19 presented challenges that prevented this. The County intends to continue to prioritize community engagement through the implementation of the CCCAP in order to support local residents and encourage adaptation.

Potential Limitations

While this framework provided an effective and comprehensive process for gathering data to inform the County's CCCAP, it is important to recognize that the results of this process are based on individual's perceptions of climate change. Furthermore, the results are limited to the individuals that participated in the consultation and engagement activities. COVID-19 presented additional challenges that limited the extent of public consultation that the County had planned to complete.

With that said, through the methods outlined in this framework, the County was able to consult with a variety of staff and community stakeholders, to minimize the influence of these limitations. As mentioned in the CCCAP, adapting to climate change is a dynamic process. The County intends to continue to consult internal and external stakeholders throughout the implementation of the CCCAP.