

Climate **READY**

**A CLIMATE CHANGE ADAPTATION
PLAN FOR THE TOWN OF ESSEX
2021 - 2026**

essex

Annual Report **2021**

INTRODUCTION

The evolving climate crisis is at our doorstep. This global warming phenomenon greatly exacerbated by industrial pollution in the form of greenhouse gas production is causing unprecedented seasonal changes in weather patterns, more frequent storm events, extreme heat and cold waves and increasing concerns about a reduced quality of life in our municipality. The projections for these changes worsen as we advance into this century. As a result, municipalities like ours are on the frontlines of responding to extreme climate events, which calls for a comprehensive and unique adaptation strategy.

Working in line with Goal 13 of the *United Nations' Sustainable Development Goals*, and utilizing

the *International Council for Local Environmental Initiatives' Building Adaptive and Resilient Communities (ICLEI-BARC)* framework, the Town of Essex developed *Climate Ready - A Climate Change Adaptation Plan*, adopted by Essex Council in February 2021, to guide its adaptation efforts in building corporate-level and community-level climate resilience. This plan forms the framework for civic and community actions to help address and adapt to the impacts of climate change. It is flexible in its application to recognize that the impacts of climate change are changing over time and the ultimate extent of change is uncertain.

This annual report highlights the progress made by all departments from March 2021 to March 2022.



Town of Essex Legacy Tree Planting Project

TIMELINE

The timeline for the implementation of this document has been set for 2021-2026. Action items identified in this plan are expected to fall into one of the following categories:

2021-2022: Current	Action items that will be initiated/implemented within the first two years of the adoption of <i>Climate Ready</i> .
2023-2024: Short Term	Action items that will be initiated/implemented in the near future
2025-2026: Long Term	Action items that will be initiated/implemented in the longer term
Ongoing	Action items that have already been initiated and will be implemented through the course of <i>Climate Ready</i> term and beyond.

COST

The cost of implementing action items in this document have been estimated in the ranges stated below. These costs are based on supplementary additions to the annual operating or capital budgets, as well as to seek external funding opportunities.

\$	\$0 - \$25K
\$\$	\$25K - \$50K
\$\$\$	>\$50K
----	Cost is incorporated within operating/capital budget

COMMUNITY ENGAGEMENT AND PARTNERSHIP OBJECTIVES

Each action item in this category of objectives is intended for the Town to accomplish by working with stakeholders and community partners; to support, encourage, and promote community resilience. Engagement and advocacy

are important components in the pursuit of community resilience-building, and all the objectives and corresponding action items can be best implemented through the support of the community.

- 1** Support the Enhancement of the Health, Safety, and Quality of Life of the Town of Essex Community
- 2** Encourage the Preservation of the Natural Environment and Support the Adoption of Nature-Based Solutions
- 3** Minimize Risk to Private Buildings and Property
- 4** Support Opportunities for Investment into Adaptation-Based Innovation for Local Business
- 5** Help Advocate for Community Emergency Preparedness
- 6** Promote Community Engagement and Participation in Climate Change Awareness and Adaptation Opportunities

Community Engagement and Partnership Objectives

1 SUPPORT THE ENHANCEMENT OF THE HEALTH, SAFETY, AND QUALITY OF LIFE OF THE TOWN OF ESSEX COMMUNITY

In the face of a changing climate, the Town of Essex is committed to supporting the enhancement of the health, safety, and wellness of the whole community.

#	Action Item	Approx. Cost	Timeline	Lead Department	Implementation Theme	Action Item Status Update
1.1	Integrate climate change messaging into Town's Communication Strategy					No meetings have been initiated by Windsor-Essex County Health Unit at this time.
	• Participate in the climate change communication project developed by WECHU	\$	Short-term	CAO's Office		
	• Enhance Town website to provide resources and best practices for residents and business owners	\$	Current	CAO's Office		Continue to work with Departments and Manager of Communications to develop web content for new initiatives (i.e. rain barrel subsidy program)
	• Include climate change information when providing advisories on Town communications platforms	---	Current	CAO's Office		<ul style="list-style-type: none"> Developed Heat Warning messaging and protocols. Town of Essex was selected as the recipient of the National Environmental Action award from Communities in Bloom National
	• Develop targeted communication campaigns for various <i>Climate Ready</i> related action items (e.g. tree plantings, vulnerable population emergency preparedness)	\$	Short-term	CAO's Office		Promoted Legacy Tree Project and provided emergency preparedness updates.
1.2	Develop a checklist for event organizers and vendors providing flexible and climate adaptive options (e.g. shade tents, water trucks, misters, location and time slot suggestions)	---	Current	Community Services		Draft special event check list created with tentative launch in summer 2022.
1.3	Develop natural and constructed shade, and water filling stations on public property (e.g. parks, CWATS, community centres, splash pads) and encourage the same on private property*	\$	Ongoing	Community Services		<ul style="list-style-type: none"> Shade for Townsview Park included in the 2022 Capital Budget. Water fill stations installed at both arenas and Essex Recreation Complex.

* Based on project-based needs

 Policy  Process  Communication  Physical

OBJECTIVE 1



Community Engagement and Partnership Objectives

2 ENCOURAGE THE PRESERVATION OF THE NATURAL ENVIRONMENT AND SUPPORT THE ADOPTION OF NATURE-BASED SOLUTIONS

By acknowledging the intrinsic value of ecosystems and their contributions to the quality of life in Essex, the Town will help preserve the natural environment and support the adoption of nature-based solutions, with the help of stakeholder groups (e.g. land-managers, Essex Region Conservation Authority), businesses, and residents.

#	Action Item	Approx. Cost	Timeline	Lead Department	Implementation Theme	Action Item Status Update
2.1	Identify opportunities and sites to create, and protect natural assets within the Town, with regional partners.					No action at this time.
	<ul style="list-style-type: none"> Promote conservation land tax incentives to encourage long-term private stewardship of natural areas 	---	Short-term	Development Services		
	<ul style="list-style-type: none"> Acquire and incorporate Heat Island GIS data into Town planning to assess total green spaces, tree canopy, and heat islands in the municipality. 	\$	Short-term	Corporate Services		
2.2	Label and recognize heritage trees on Town property	\$	Short-term	Community Services		
	Explore and engage in regional partnerships to improve various regional environmental quality issues.	---				<ul style="list-style-type: none"> As part of the ongoing County of Essex' adoption of a new County Official Plan, and to augment current policies in the Town's Official Plan (under review), Planning will request enhanced policies regarding storm water management, regional watershed management guidelines and source water protection. Draft tree policy created. Council presentation anticipated in Spring 2022.
	<ul style="list-style-type: none"> Development and implementation of controls the spread of non-native invasive species 	---	Ongoing	All		
<ul style="list-style-type: none"> Participate in regional efforts to develop a Tree-cutting By-Law/ Tree Policy 	---	Ongoing	All			
	<ul style="list-style-type: none"> Participate in the Improvement of Lake Erie water quality issues 	---	Ongoing	All		

 Policy  Process  Communication  Physical



OBJECTIVE 2

Community Engagement and Partnership Objectives

3 MINIMIZE RISK TO PRIVATE BUILDINGS AND PROPERTY

The changing climate will affect the ways in which buildings and landscapes are designed, constructed, managed, and maintained. The Town of Essex is dedicated to minimizing risks from climate change to private buildings and properties in order to protect public health and safety, reduce property loss, and minimize economic damage.

#	Action Item	Approx. Cost	Timeline	Lead Department	Implementation Theme	Action Item Status Update
3.1	Establish Low Impact Development Practices and higher building standards for private property by updating By-Laws, Development Standards Manual , and Zoning regulations (e.g. improving hardscape permeability with permeable pavers)	---	Ongoing	Development Services		The newly adopted Development Standards Manual incorporates policies and mandates for low impact development and for the use of green (rather than grey or in combination with grey) options for storm water management.
3.2	Join in regional collaboration with County of Essex, municipalities, and the City of Windsor on Green Infrastructure Policy development and guidelines (e.g. green roof and white roof policy)	---	Ongoing	All		The Planning Division is participating in the development of the County's new Official Plan, currently under review. One objective is to enhance the County's policies regarding climate impact mitigation and adaptation.
3.3	Advocate to County leadership for incentive programs directed towards climate mitigation and adaptation	---	Ongoing	All		The Planning Division is participating in the development of the County's new Official Plan, currently under review. One objective is to enhance the County's policies regarding climate impact mitigation and adaptation.

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OBJECTIVE 3

Community Engagement and Partnership Objectives

4 SUPPORT OPPORTUNITIES FOR INVESTMENT INTO ADAPTATION-BASED INNOVATION FOR LOCAL BUSINESS

The Town of Essex will help local business and industry (agriculture, tourism etc.) in ensuring their continuity of operations and improving their ability to reduce and manage climate-risk.

#	Action Item	Approx. Cost	Timeline	Lead Department	Implementation Theme	Action Item Status Update
4.1	Help the community gain access to regional, provincial, and federal funding sources to assist with climate resilience in agriculture and business sectors	---	Ongoing	Development Services		No action at this time.
4.2	Participate in regional partnership and investment opportunities for green jobs	---	Ongoing	All		No action at this time.
4.3	Promote local businesses and business owners that have adopted climate-friendly business practices	\$	Current	CAO's Office		No action at this time.
4.4	Augment agri-tourism strategies to promote and support on-farm diversified uses	---	Current	Development Services		Development Services is currently reviewing strategies to augment agri-tourism policies and land use initiatives through amendments to the Zoning By-law and enhancement of the Colchester County Road 50 Community Improvement Plan and the means to communicate these initiatives to farmers and business owners. It is expected that a report with draft recommendations for the initiatives set out above will be presented to Council and the public in Spring 2022.
4.5	Participate in the implementation of a regional best practice network/climate incubator program for businesses to explore climate-friendly innovation ideas	---	Ongoing	Development Services		No action at this time.

 Policy  Process  Communication  Physical



OBJECTIVE 4

Community Engagement and Partnership Objectives

5 HELP ADVOCATE FOR COMMUNITY EMERGENCY PREPAREDNESS

The Town of Essex will take measures to ensure that the emergency resilience needs of the community are met by strengthening partnerships with local and regional stakeholders, businesses, and residents, and supporting social and volunteer groups in building more resilient social infrastructure.

#	Action Item	Approx. Cost	Timeline	Lead Department	Implementation Theme	Action Item Status Update
5.1	Identify opportunities to improve resiliency for vulnerable populations to extreme weather events (e.g. County of Essex's Interdev program applicability)	\$	Ongoing	Community Services		Developed Cooling centre protocols utilizing recreation facilities.
5.2	Promote volunteer programs for assistance of vulnerable populations (e.g. snow angel program)	---	Ongoing	Community Services		This has been completed by other agencies and promoted by the Town of Essex.
5.3	Promote emergency preparedness and self-reliance in the Town of Essex community*	\$	Ongoing	Community Services,		Emergency preparedness continues to be promoted on a regular basis.
5.4	Incorporate climate change service provision information into ongoing cultural programming activities like Seniors' Day, Fire Prevention Week, and Emergency Preparedness Week	---	Current	CAO'S Office		No action at this time.

*Project-based

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OBJECTIVE 5

Community Engagement and Partnership Objectives

6 PROMOTE COMMUNITY ENGAGEMENT AND PARTICIPATION IN CLIMATE CHANGE AWARENESS AND ADAPTATION OPPORTUNITIES

To ensure that the Town of Essex is able to withstand and recover from the impacts of climate change it will be important to encourage the involvement of residents, businesses, and stakeholder groups in climate impact education and engagement opportunities and help build a culture of sustainability.

#	Action Item	Approx. Cost	Timeline	Lead Department	Implementation Theme	Action Item Status Update
6.1	Promote tree planting opportunities within the community: <ul style="list-style-type: none"> Plant 250 trees by 2026, and consider developing a residential tree planting engagement campaign Investigate options to develop a tree distribution/purchase program for residents 	\$ \$	Long-term Short-term	Community Services Community Services	 	The Town of Essex currently has a Memorial Tree program which has been very successful.
6.2	Explore options to utilize surplus public land as community green spaces (e.g. raingardens, edible landscapes, community gardens) and encourage the same on private and institutional lands	\$-\$\$\$	Long-term	Development Services	 	No action at this time.
6.3	Conduct outreach and education campaigns with partners to encourage climate change awareness and sustainable practices (e.g. site level flooding mitigation, invasives, fertilizer use, energy use, biodiversity enhancement) for residents, business owners and housing landlords	\$\$\$	Current	Development Services		No action at this time.
6.4	Advocate for cross-jurisdictional resource sharing and partnerships on climate adaptation and response/ consistent knowledge and policy development	---	Ongoing	All		It is an objective of Planning to have regional watershed management policies incorporated into the new County Official Plan, currently under review, and is a mandate newly instituted by the Province binding regional municipalities.

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OBJECTIVE 6



Town Hall, Essex Centre

CORPORATE OBJECTIVES

These are objectives with respect to services, operations, natural and built assets and systems, administration, policies, and specific utilities that come under the management of The Corporation of the Town of Essex.

- 1** Enhance Staff Health And Safety
- 2** Protect the Town's Natural Assets and Emphasize Nature Based Solutions
- 3** Build and Strengthen the Town's Infrastructure Resilience
- 4** Integrate Climate Change Adaptation into Town Planning and Policy Making
- 5** Build Community Services Tempered to Climate Change Impacts

1 ENHANCE STAFF HEALTH AND SAFETY

The Town of Essex commits to ensuring the health and safety of staff on an ongoing basis to ensure their wellness through changing climate conditions.

#	Action Item	Approx. Cost	Timeline	Lead Department	Implementation Theme	Action Item Status Update
1.1	Provide weather appropriate Personal Protective Equipment to outdoor workers as required*	---	Current	All		Weather-appropriate PPE is provided to employees according to Department needs and on an as-needed basis.
1.2	Include a Green Tips segment on staff newsletter and intranet to encourage staff awareness of climate adaptation best practices	---	Current	CAO's Office		Will work with Manager of Communications to include the information on the Essex Wave (internal intranet).
1.3	Create a staff green team for sustainability and adaptation initiatives	---	Current	CAO's Office		No action due to Covid-19 Pandemic.

* Based on departmental needs

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OBJECTIVE 1

2 PROTECT THE TOWN'S NATURAL ASSETS AND EMPHASIZE NATURE BASED SOLUTIONS

The Town of Essex wants to continue to protect and enhance its natural heritage and green spaces and adopt nature-based solutions to mitigate effects of climate change on Town's grey infrastructure.

#	Action Item	Approx. Cost	Timeline	Lead Department	Implementation Theme	Action Item Status Update
2.1	Ensure tree and plant species established are native, diverse, disease resistant, and have high climate adaptability	---	Ongoing	Development Services Community Services		<ul style="list-style-type: none"> Tree planting for new subdivisions is subject to requirements set out in the related subdivision agreement. A list of suitable trees meeting such criteria is in use to determine what tree species to plant. The requirements set out in future subdivision agreements will be more explicit in the choice, planting and maintenance of trees in new subdivisions. Draft policy created listing approved tree species for region.
2.2	Develop a buffer strip policy to reduce drainage related issues	---	Current	Infrastructure Services		Project currently in the research stage.
2.3	Utilize the ERNHSS as the basis for the Town's natural heritage system, including identification, protection, enhancement and restoration	---	Short-term	Development Services		No action at this time.
2.4	Investigate vegetation-based techniques to mitigate erosion along the shoreline, wherever possible	\$	Long-term	Infrastructure Services		Incorporated into the Town's newly adopted Development Standard's Manual.

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3 BUILD AND STRENGTHEN THE TOWN'S INFRASTRUCTURE RESILIENCE

The Town will incorporate measures to strengthen its existing and new assets and infrastructure and ensure the resilience of Town-owned property that is on the frontline of climate change impacts.

#	Action Item	Approx. Cost	Timeline	Lead Department	Implementation Theme	Action Item Status Update
3.1	Explore implementation of a Storm Sewer Surcharge	---	Long-term	Infrastructure Services		Administration investigates the annual need for Storm Sewers and incorporates them into the Urban Levy as necessary. A separate surcharge isn't believed to be necessary due to the above.
3.2	Investigate the development of a Rain Barrel Subsidy Program	---	Current	Infrastructure Services		Implemented a Rain Barrel Subsidy Program in 2022 that will provide a \$50 subsidy for the purchase of a residential rain barrel. Education campaign will begin in Spring 2022.
3.3	<p>Continue to review and integrate climate projection and green technology considerations into infrastructure and retrofit projects:</p> <ul style="list-style-type: none"> Integrate Low Impact Development considerations in capital projects wherever possible. Review and integrate Regional Stormwater Guidelines into infrastructure decisions Consider green technology options for road development and re-construction projects. Ensure new capital projects and existing hardscapes for public use incorporate thermal comfort (e.g. white roofs, comfort splash pads) and other extreme weather resistance measures 	<p>\$\$\$</p> <p>---</p> <p>\$\$-\$\$\$</p> <p>\$\$-\$\$\$</p>	<p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>	<p>Infrastructure Services</p> <p>Infrastructure Services</p> <p>Infrastructure Services</p> <p>Infrastructure Services</p>		<p>Low Impact Development (LID) opportunities will be considered for each project completed by the Town. In addition, the Town's newly created Development Standards Manual includes provisions for LID and includes examples and alternatives for the development community to consider.</p> <p>Regional stormwater management guidelines have been adopted by Council and integrated into the Town's newly created Development Standards Manual.</p> <p>Infrastructure Services has included a green technology review as part of the annual budget process to assess the feasibility of green alternatives for road construction.</p>
3.4	Include climate vulnerability and risks (e.g. power outages, capacity limitations, health and safety impacts, road drainage, failure) in infrastructure planning and asset management	---	Ongoing	Infrastructure Services		The Town is currently undergoing an update to the Asset Management Plans published in 2015 and it is anticipated that a preliminary application of climate change risks/impacts will be incorporated into condition assessments where possible.

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4 INTEGRATE CLIMATE CHANGE ADAPTATION INTO TOWN PLANNING AND POLICY MAKING

Integrating climate change considerations into municipal policies and policy-making procedures will allow the Town to be strategically and fiscally proactive in protecting its operations, service deliveries, assets, and infrastructure against climate change impacts and associated consequences.

#	Action Item	Approx. Cost	Timeline	Lead Department	Implementation Theme	Action Item Status Update
4.1	Identify a Climate Change Adaptation Champion to represent climate change initiatives at the Town and lead outreach activities	---	Current	CAO's Office		At the time of adoption of the CCAP, the Town's CAO was identified as the Climate Change Adaptation Champion.
4.2	Consider declaring a Town-wide Climate Emergency to be in-line with County and Federal climate action interests.	---	Current	CAO's Office		Declaration occurred in Summer 2021.
4.3	Incorporate climate change considerations into the Town plans, policies, projects and procedures: <ul style="list-style-type: none"> During revisions and amendments of Town policy and procedure documents (e.g. Official Plan, Strategic Plan, budgets, zoning by-laws), include climate change language Consider financial, social, and environmental costs and benefits when making project decisions Consider incorporating sustainable sourcing and low carbon resiliency considerations into tendering documents/scoring matrix Investigate the application of the Climate Lens Assessment 	---	Current	All		Incorporated into the Town's Development Standards Manual is a section titled, "Considerations for Climate Adaptation". This section includes alternatives, examples and opportunities for climate change adaptation initiatives for Municipal, residential and commercial properties.
		---	Current	All		
		---	Current	All		
		---	Current	All		
4.4	Investigate the feasibility and ramifications of having Town insurance policies account for climate change	---	Short-term	CAO's Office		No action at this time.
4.5	Conduct a Vulnerability and Risk Assessment using climate considerations for all Town divisions on a 5 year basis	\$\$	Long-term	CAO's Office		No action at this time.
4.6	Review and revise current green funding strategies to enhance reserve for Town-wide sustainability initiatives	---	Current	Corporate Services		A separate Green Fund reserve does exist which the Town uses for "green" initiatives only. Step two would accompany the reserve management plan and would dedicate contributions to it.

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5 BUILD COMMUNITY SERVICES TEMPERED TO CLIMATE CHANGE IMPACTS

The Town will amend and adapt its community services and service deliveries to changing climate conditions.

#	Action Item	Approx. Cost	Timeline	Lead Department	Implementation Theme	
5.1	Diversify local tourism and recreation in the community: <ul style="list-style-type: none"> Investigate modifying season start, end and duration dates as well as general schedules for recreational programming, where possible, to try to avoid spring flooding and summer heat Introduce more Fall season outdoor programming Continue to develop Virtual Tourism 	---	Ongoing	Community Services		Development Services is currently reviewing land use and zoning policies to expand opportunities for local tourism and other community-serving initiatives and to provide more opportunities for all season low impact activities.
		---	Ongoing	Community Services		Outdoor programming under ongoing review to determine best times to offer programs and locations
		\$	Short-term	Development Services		No action at this time.
5.2	Consider incorporating Complete Street design in providing easy access to green spaces for diverse commuters, where possible	---	Ongoing	Development Services		Complete Street policies have been incorporated into the new Development Standards Manual. Related policies are set out in the Town's Official Plan. New subdivisions will be examined for opportunities for active transportation as part of their draft plan of subdivision approval.
5.3	Explore implementation of the Geese Management Program	\$	Ongoing	Community Services		Occurred in 2021 with consultation on best practice with Canadian Wildlife Service

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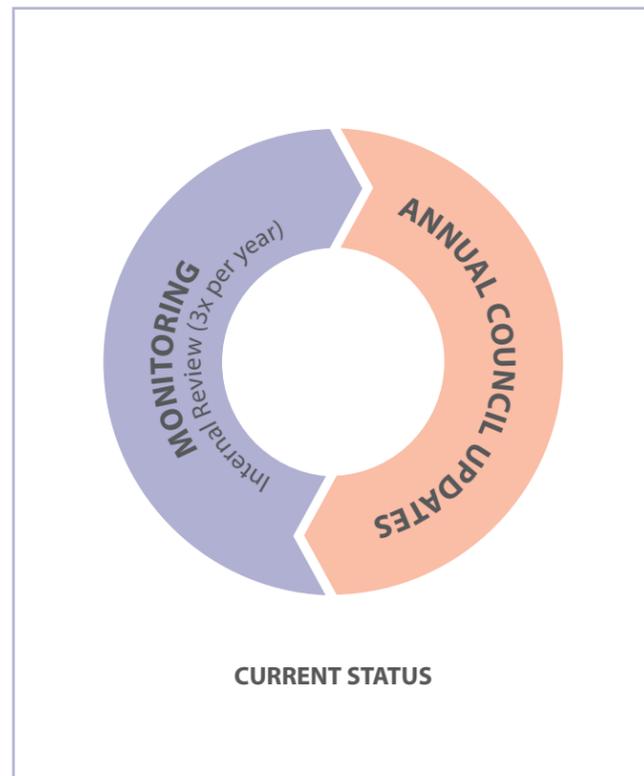


IMPLEMENTATION, MONITORING, AND REVIEW

Implementing the Plan



The Corporation is committed to being prepared and building resilience to the ongoing and worsening effects of climate change, and recognizes the importance of urgent and timely action.



Monitoring Progress

Monitoring progress is vital to the process of climate readiness in the Town. By keeping track of the actions that are being implemented, the Corporation will be able to assess the progress it has made, as well as pave the way forward for future action.

Administration will continue to deliver an annual report to Town Council, which will highlight the actions that have been initiated and implemented across the Corporation and the community, as well as provide an opportunity to discuss any challenges or future improvements. All reports to Town Council on *Climate Ready* will be made available on the Town’s website at www.essex.ca/ClimateReady.



Town of Essex Legacy Tree Planting Project

CONCLUSION

The negative impacts of climate change are both immediate and increasing. Addressing them requires community-wide efforts by adopting short and long-term mitigation and adaptation measures. Mitigation efforts, like the greater adoption of clean energy, reducing energy demands and achieving higher energy efficiency, must be largely national and global in scale. However, adaptation efforts must be taken at all levels: community, regional, provincial and national. At the community level, the challenges are to insure against future risks, reduce the vulnerability of our infrastructure and threats to the health of our population and environment and create economic opportunities where possible.

The Council of the Town of Essex, working with its administration, community partners, the County of Essex and sister municipalities, undertakes to carry out actions to accomplish those goals under the *Climate Ready, Climate Change Adaptation Plan for the Town of Essex 2021-2026*.

It is understood that this is a community-wide effort, as climate induced impacts cross all boundaries, social, physical, economic and addressing these impacts requires a community-wide response. This climate change adaptation plan affects and involves all members of our community. Actions to meet the objectives of the plan require that we all work cooperatively for our mutual benefit.



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