

**Subject:** Climate Change Vulnerability in the Town of Pelham – A Baseline Study**Recommendation:**

**THAT Committee receive Report #2020-0078-Public Works entitled "Climate Change Vulnerability in the Town of Pelham – A Baseline Study" for information purposes.**

**Background:**

In June 2019, the Town of Pelham took the initiative to address climate change by forming an alliance with Brock University's Environmental Sustainability Research Centre (ESRC). Niagara Adapts, a novel partnership between Brock University and seven local municipalities, is committed to building innovative climate solutions right here in Niagara. This partnership aims to support collaborative climate change adaptation assessment, planning, and implementation for the seven local municipalities involved (i.e. Grimsby, Pelham, Lincoln, Niagara Falls, Niagara-on-the-Lake, St. Catharines, and Welland). Climate change adaptation planning enables communities to understand their vulnerabilities, subsequently providing better opportunities for local governments to manage impacts, risks, and opportunities that are posed by a changing climate.

In October 2019, Niagara Adapts launched a community survey to help local municipalities understand climate change vulnerability and adaptive capacity across the region. With the help of municipal representatives and climate science professionals from Brock University, Niagara Adapts completed more than 1,000 residential surveys. Community involvement in adaptation planning is considered a best practice, as studies have shown the results of climate change strategies are much more robust in plans that included community engagement compared to none at all. The data collected from the community survey will be critical for informing the adaptation planning in Year 2 of the partnership.

The purpose therefore of this report is to provide an introduction to climate change and vulnerability assessments in Pelham, describe the methods implemented, and summarize the findings. Potential opportunities to build adaptive capacity are also

highlighted, along with areas of missing data that may be useful to collect in the future. The report concludes by highlighting what this information may mean for the Town of Pelham going forward in their adaptation planning process.

### **Analysis:**

Findings from the report revealed a final vulnerability index value of 0.509 for Pelham, where 0 represents highly vulnerable and 1 represents highly robust. Exposure and sensitivity indicators from the assessment determined that extreme heat and cold temperatures, along with senior residents and/or individuals with pre-existing health conditions within Pelham are highly vulnerable to climate change. Adaptive capacity indicators determined that parks and forest and wetlands ranked high in vulnerability, along with political leadership for climate action, flexibility in institutional decision-making, and the level of community participation in decision-making processes. Further detail of the findings can be found in the "Climate Change Vulnerability in the Town of Pelham – a Baseline Study" report.

### **Financial Considerations:**

There are no financial considerations to be considered at this time.

### **Alternatives Reviewed:**

There are no alternative reviews as this report is to be received for information purposes only.

### **Strategic Plan Relationship: Strong Organization**

Amongst the six strategic priorities defined in the Town's 2019 Strategic Plan, one particularly focuses on "grow[ing] revenue by promoting cultural assets while protecting environmental assets." To successfully accomplish this priority, actions listed in the strategic plan indicate that the Town will "introduce best practices related to climate change and for the protection and preservation of environmental assets" as well as "educate and create community awareness in regards to [the] importance of environmental assets and climate change impacts."

This report confirms the Town's ongoing efforts to fulfill the aforementioned strategic priority by engaging and educating the community in the Town's adaptation planning process. It also exhibits best practices related to climate change based on the data collection methods and findings conducted by Brock University.

**Consultation:**

Consultation with Brock University's Niagara Adapts leads, Dr. Jessica Blythe, and Dr. Ryan Plummer, was completed in the preparation of this report.

**Other Pertinent Reports/Attachments:**

Appendix A - Climate Change Vulnerability in the Town of Pelham: A Baseline Study

Appendix B - Climate Vulnerability Fact Sheet – Pelham – Niagara Adapts

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