DILLON CONSULTING

TOWN OF AJAX

Climate Vulnerability Summary Report

FINAL

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1.0 Introduction

1.1 Background

The Town of Ajax (the Town or Ajax) has been impacted by significant climatic events which, among other things, have caused property damage, disruptions to transportation and energy systems and resulted in economic and social impacts to the community.

The Town identified a need to better understand the threats and risks faced by the community as a result of changing trends associated to the following three climate variables: severe weather, temperature and precipitation. Three main community outlooks were identified of particular concern to the Town and included overland and stormwater flooding, threats to the natural environment, and impacts to emergency preparedness and response services. The purpose of Town of Ajax Community Climate Study is to provide a GIS-based tool for the Town of Ajax to assist in identifying, analyzing, evaluating and ultimately managing climate change based risks as part of an overall Climate Change Adaptation Plan being developed by the Town.

This report summarizes the findings of the Community Climate Study that was completed.

1.2 Study Area

The Town of Ajax is located east of the Greater Toronto Area within Durham Region. The Town is primarily situated between Duffins Creek and Carruthers Creek, with its southern border along the shorelines of Lake Ontario.

The Town covers an area of 67km^2 and is a predominantly suburban area, with greenbelt lands located to the east and north. According to the 2016 Census, Ajax is home to approximately 120,000 residents, the majority of which live within the west and south areas of the town. Due to the presence of the two major creeks noted above that outlet to Lake Ontario, the Toronto Region and Conservation Authority (TRCA), and the Central Lake Ontario Conservation Authority (CLOCA) regulate, and have jurisdiction over development within the lands adjacent to the creeks.

2.0 Natural Capita Report Summary

The Town of Ajax has a number of natural capita resources (urban forests consisting of municipal-owned trees and treed natural areas, wetlands, grasslands, wildlife habitat, etc.) that provide valuable functions and benefits to ecosystems and urban areas. The Ecosystem and social services provided to the Town through these resources include, among others, shading, pollution reduction, recreational opportunities, and community spaces. Maintaining the functional integrity of these resources is critical to continue to receive these benefits and services; it is therefore important to monitor the risks that could devalue the Town's natural capita. Some of these predicted risks are related to climate change projections for the Town.

The natural capita assessment study performed for the Town identified and evaluated potential vulnerabilities of these natural capita assets in response to the bioclimatic condition predicted in the 2049 Durham Region climate model (SENES 2013, 2014). The study aimed to:

- Determine potential risks to urban trees and treed natural areas;
- Identify areas susceptible to heat island effect;
- Identify conflicts between trees with electrical and communication infrastructure;
- Identify potential impacts of climate change to species at risk (SAR) and wildlife habitat;
- Determine the susceptibility of drought of wetlands and other natural areas; and
- Determine responses of major diseases, pests and invasive species to climate change. .

A review of these study components are provided below.

2.1 Threats to Urban Forests

A key component of the study included an assessment of threats to urban forests related to various climate change scenarios predicted by the Regional Climate Model. Since the majority of the natural features within the Town are treed and trees have been extensively studied in the past, the natural capita assessment focused primarily on identifying vulnerabilities to individual trees and treed vegetation communities. The effects of climate change predicted by the model were tested against the typical ranges of environmental temperature and plant growth conditions (known as 'bioclimatic ranges' or 'bioclimatic envelopes') that tree species commonly found in Ajax are able to tolerate in order to maintain optimal survival (Natural Resources Canada 2018). The set of environmental variables used are representative of climatic constraints to tree survival and growth (McKenney et al., 2007).

The tree species included in the climate vulnerability assessment were determined using municipal tree inventory data and ecological land classification (ELC) mapping acquired from Conservation Authorities. Additional desktop research was used to supplement bioclimatic data from Natural Resources Canada.

Bioclimatic envelopes for the most common tree species were compared against predicted temperature and precipitation estimates for 2049. The results of this assessment indicated that the most common and abundant tree species in the Town located in both urban and natural areas are not anticipated to be highly vulnerable to the predicted climatic changes. The results reflect the biology and physiology of most North American tree species, which have the ability to tolerate broad temperature and precipitation ranges as required to survive throughout the changing of seasons.

2.2 Areas Susceptible to Heat Island Effect

The term 'heat island' refers to built-up spaces that are hotter than their rural surroundings, where increased coverage of paved and impermeable surfaces (such as roads and buildings) leads to dry areas and increased temperatures. Urban areas can therefore have temperatures of 1-3 °C higher than the surrounding rural areas (Akbari, 2005). The maximum survival temperature (thermal death threshold) for trees is 46°C (Coder, 1999). Other potential impacts due to the heat island effect include higher energy consumption as a result of building cooling needs which leads to increased greenhouse gas emissions, reduced air quality, and reduced water quality. Increased air pollutants such as nitrogen dioxide (NO_2) and ground level Ozone (O_3), may also contribute to increased air temperature in localized areas (Bloomer et al., 2009). Research also indicates that high ozone concentrations can also reduce vascular plant growth in some species (Ashmore, 2005; Bignal et al., 2007; Reich, 1987; Whitfield et al., 1998).

The identification of areas susceptible to heat island effect in Ajax was not directly possible with the surface temperature data provided by the Town. The surface temperature data was therefore used as an approximation of the urban locations that could be expected to experience a heat island effect; however, the estimated effect on natural capita such as municipal trees can only be inferred in a general manner.

The effect of potential heat islands in the Town was identified and characterized using NASA 2016 surface temperature data and the regional climate model that expects there to be six days with greater than 30°C temperatures, with temperatures in the summer months potentially approaching 40°C. Predicted temperatures at potential heat islands within the Town were compared to municipal areas such as parks with vegetation that may require increased irrigation and management.

2.3 Tree Conflicts with Electrical and Transmission Infrastructure

Municipal street trees often grow adjacent to utilities and may pose hazards to public safety and damage public infrastructure. The study determined that climate vulnerability scores of municipal trees can be used to identify potential conflicts between trees and overhead electrical and communication transmission and distribution line infrastructure. This information could be used as an operational tool to identify and prioritize monitoring and maintenance of trees or treed areas that may be at a higher risk of experiencing damage as a result of the projected climate changes to 2049. While this information will

be accessible to aid Town staff with tree maintenance and management, it is anticipated that municipal street trees will generally survive under the projected climate conditions according to the 2019 Regional Climate Model.

2.4 Responses of Major Diseases, Pests and Invasive Species to Climate Change

Trees stressed due to changes in climate are more likely to experience reduced health condition, higher mortality, and failure from pests and pathogens that can cause disease (Allen et al., 2010; Woods et al., 2006). The effects of pests and diseases may be intensified by the potential effects of climate change. In addition, the shifting climate has and will continue to allow for the introduction of new pests, and potentially create an environment with more favourable conditions for pests and diseases that are already established (Kahn, 2017).

Supplementary information was reviewed and summarized in this assessment for other factors that could have a negative cumulative effect on natural capita resources. This included a review of known major tree diseases and pests to identify which trees could be vulnerable to diseases, pests, and invasive species threats irrespective of a changing climate. The potential effect that invasive species could have on natural areas was also reviewed; however, this assessment was largely speculative as data regarding the bioclimatic envelopes and the locations and extent of these invasive species in the Town was unavailable.

2.5 Potential Climate Change Impacts to Species at Risk and Other Wildlife Habitat

Current available research does not provide sufficient evidence that the potential effects of climate change will have a direct or indirect effect on wildlife and their respective habitats. While field and lab studies indicate that increases in seasonal temperature and precipitation may impact the fitness of wildlife, many other environmental factors also influence survival. Moreover, as there is little research available, it is difficult to predict with certainty the effects of climate change on distinct wildlife habitats.

Factoring in the predicted climate in 2049, the climate vulnerability of natural areas within the Town's jurisdiction was modelled to be low-moderate to low, indicating a low level of risk to potential species at risk and other wildlife habitat. A review of current field studies and laboratory research completed for various animal groups (e.g., amphibians, turtles, birds, pollinating insects and freshwater fish) indicate that temperatures projected in the Regional Climate Model will not meet the maximum critical limits to impact species survival. In addition, it is not anticipated that treed habitats for wildlife, including species at risk, will become less stable if conditions predicted by the regional climate change model come to fruition.

2.6 Wetland and other Natural Area Susceptibility to Drought

Wetlands are distinct ecosystems characterized by periods of permanent or temporary inundation and include marsh meadows, marshes, swamp thickets, swamps, fens, bogs and open aquatic areas. While bioclimatic data for wetland vegetation typically does not exist, the tolerance range of vegetation communities in wetlands such as marshes may be more resilient to shifts in temperature and precipitation predicted by the Regional Climate Model. Direct and indirect effects of climate change on wetlands are difficult to isolate from impacts imposed by ecological disturbances, seasonal shifts in climate, habitat fragmentation and human development (Natural Resources Canada, 2017a, b). Changes in climate have the potential to negatively influence hydrology and hydrogeology of wetland habitats as well as other natural areas (Natural Resources Canada, 2017a, and b).

Increased prevalence of drought causes death to trees either directly through heat stress, or indirectly by influencing outbreaks in pest species populations (Gabriel and Kreutzwiser, 1993; Natural Resources Canada, 2017b). As wetland vegetation communities require moist to wet soils, these habitats are expected to be vulnerable to prolonged increases in air temperature. Increased precipitation (both annual and seasonal in the warmer months) is predicted for the Town by the Regional Climate Model. Values indicating area moisture (Climate Moisture Index, CMI) expected to decrease but stay in the positive range overall (Natural Resources Canada, 2017a), indicating that precipitation levels are sufficient to sustain a closed-canopy forest. Further, wetlands are low-lying areas that are repositories for surface water runoff and are adapted for both short and prolonged periods of inundation. Based on the Regional Climate Model, wetland communities are not expected to be affected by drought conditions should these warmer and drier conditions manifest as predicted

2.7 Recommendations

The recommendations resulting from the natural capita climate vulnerability assessment are summarized below. These recommendations could be used by planning, forestry, parks and public works staff in the planning, monitoring, management and sustainability of the urban forest and other natural capita resources.

Potential Future Studies

- Stream temperature monitoring for Conservation Authorities (TRCA and CLOCA), which may include the installation and use of data loggers in stream systems to monitor surface water temperature and flow rates over time and correlate this data with seasonal weather trends and extreme weather events.
- Research bioclimatic factors (envelopes) affecting plant species other than trees to determine the climate vulnerability of vegetation communities outside of woodlands (swamps, forests, open woodlands and plantations).
- Determine more detailed information for the vegetation composition of treed natural areas to more reliably predict the climate vulnerability for these areas in the model.

- Complete surveys in natural areas where ELC information is lacking within the Town of Ajax to acquire a more comprehensive and updated data set for the natural heritage system. This would address ELC gaps in the existing data set within the Town.
- Conduct a heat island modelling study for the Town of Ajax.
- Track and document the growth (e.g., bole diameter, crown size, location, age, etc.) of municipal street trees within the Town of Ajax over time to model tree growth rates (radial/basal area, CPA/leaf area, etc.) stratified by different land uses within the urban environment. Growth data could be used to examine relationships between growth and influencing factors such as site conditions and stewardship/management practices.
- Conduct a study to model infiltration rates of in natural areas following rain events of different magnitudes.
- Study climate vulnerability of wildlife habitat for species identified as species at risk or species of conservation concern.

Resources/Tools

- Information provided in the Natural Capita Report could be integrated into the Town's GIS system for the ongoing maintenance and monitoring of urban trees and treed natural areas. Mapping could be provided in an interactive GIS mapping format to allow for use by Town staff.

Training

- There may be opportunity to provide training to Town staff on the use of GIS mapping technology to assist in the use of GIS data as an urban forest asset management tool.

Protocols/Plans

- Opportunities may exist to review current urban forestry planning policy, by-laws and guidance documents, operational protocols, programming and procedures, and asset management practices to assess if they are compatible with information presented in this report with respect to tree climate vulnerability. The overall goal would be to ensure the longevity and health of the urban forest and determine if there is a need for increased urban forestry management and intervention. The review could include:
    - Examining the frequency of urban tree and forest recreational trail hazard risk monitoring activities to determine if the monitoring resources are adequate to manage tree species potentially vulnerable to the following:
        i. Temperature and precipitation conditions predicted in the regional climate model
        ii. Urban heat island
        iii. Diseases and pests.
    - Review current typical tree plantings detail and specifications to allow for appropriate tree species selection, proper installation and maintenance, and favourable growing conditions for urban trees under the predicted climatic conditions.
    - In conjunction with the local Conservation Authority, review natural feature monitoring and adaptive management programs within the Town's natural heritage system to track the risk factors identified in the report (e.g., drought, forest pests and disease, invasive species, etc.).

3.0 Stormwater and Overland Flooding

Overland and stormwater flooding are considered one of the key areas of concern for the Town. Understanding the areas of potential vulnerability within the Town resulting from fluvial and pluvial flooding is crucial in developing an Overall Climate Change Adaptation plan for Ajax.

Pluvial flooding refers to flooding in urban areas resulting from stormwater runoff; and *fluvial flooding* is a term used to describe flooding from creeks and rivers.

One of the main areas of focus of the Community Climate Study was to examine the performance of the storm sewer system during minor and major storm events (5-year, 25-year, 100-year storms) under 2 scenarios: current conditions and future climate change conditions. The study also focuses on the magnitude of flooding for three main creeks within the Town (i.e. Duffins Creek, Carruthers Creek, Lynde Creek) under the current and future climate change scenarios.

By combining the modelling results for flooding (fluvial and pluvial), a flood vulnerability map was generated for the Town, indicating areas where significant flooding is likely to occur under climate change. Identifying areas susceptible to flooding is necessary to determine locations for which a more detailed analysis may be required, and propose measures to mitigate these impacts that can be incorporated in the Climate Adaptation Plan for the Town of Ajax.

3.1 Areas Vulnerable to Flooding

The modelling results facilitated the identification of:

- Areas experiencing storm sewer overflow during major and minor storms;
- Properties within the 1:100-year storm area (which would be most affected by one major storm event every 100 years) and Regional Storm flooding extents of the creeks; and
- Culverts with potential capacity limitations and stream bank locations vulnerable to erosion.

The flood vulnerability map highlights urban areas that have the potential to experience significant flooding under the 1:100-year storm climate change scenario. The map also shows locations of areas that are sunken or have surface depressions, which can be indicators of flood-vulnerable areas. Under the 1:100-year scenario, runoff is likely to accumulate in these surface depressions, resulting in increased potential for and susceptibility to flooding.

The majority of the lands subject to creek and river flooding in the event of both the 1:100-year storm and Regional storm were natural areas such as woodlands; however a few properties are also noted to be within the flooding extents of the three creeks.

In order to assess the potential of erosion along stream banks, two parameters were selected as indicators of erosion: channel velocity (speed of water flow in the water body) and channel shear stress (erosion force applied by the water to the banks and bed of the channel). Locations with high values of these parameters as observed in the model (e.g. around areas where a stream curves or meanders) signify areas that with a higher potential for erosion.

The Town's stormwater infrastructure was assessed under existing versus climate change conditions. Model results demonstrated that higher number of storm sewer nodes (representing maintenance holes) would overflow under the climate change scenario, compared to existing conditions. It should also be noted that there are some areas under the 1:5-year (where a major storm occurs every five years) and 1:25-year (where a major storm occurs every 25 years) scenarios where overflow of maintenance holes above a level of 0.3m or more is predicted to occur, which could indicate sewer system capacity limitations.

Model simulations of a smaller section of the Town (a sub-model), were also developed, in which an overland flow path to manage stormwater on the surface was included. This modelling indicated that the presence of an overland path is beneficial especially under the 100-year storm, as it allows stormwater flow to be distributed more evenly on the surface of the road and identifies locations where runoff may pond, particularly in areas of low topography.

3.2 Recommendations

The resulting recommendations from the stormwater and overland flooding assessment are summarized below.

Potential Future Studies

- The TRCA Duffins Creek hydraulic model should be updated and georeferenced to allow ease of data extraction and compatibility with GIS tools.
- Culvert dimensions and cross-section data in TRCA models should be verified (by the TRCA or others) through field survey and updated to establish flood lines that reflect existing conditions.
- Areas identified as locations with high erosion potential should be cross-referenced with locations where the Town has noticed erosion of stream banks.
- A more detailed shoreline analysis should be completed to fully understand shoreline vulnerability and identify additional areas susceptible to erosion.
- The storm sewer network in the PCSWMM model should be further developed to reflect as-built sewer information, particularly inverts, and to include pipes less than 600 mm in diameter.,
- The PCSWMM model should be further refined by filling the data gaps in the GIS data provided by the Town, including maintenance hole, catch basin, stormwater pond and creek outfall details.

- A more refined level of detail for land use parameters and percent impervious can be derived from building footprints and lot dimensions and is recommended for future model development.
- The development of an overland system for the entire Town of Ajax is also recommended for future model development.
- At the sub-model scale, further refinements can be made to the model including, as needed, including developing a 2D mesh to more accurately determine overflow routes and areas of flow relief outside of road right of way and at the property/lot level.

4.0 Emergency Response and Preparedness Report Summary

Climate change variables such as severe weather, temperature and precipitation have the potential to increase demands on emergency response and preparedness agencies and compromise the delivery of the services they provide to a community. The Emergency Response and Preparedness (ER&P) Report aimed to identify and analyze the threats and risks faced by the Town of Ajax as a result of a changing climate. A vulnerability assessment was conducted around four key topics, namely:

- Demographics;
- Local partners and resources;
- Vulnerable buildings; and
- Population density.

The approach used to address the impacts that climate change stressors might have on the community was highly dependent on the data available, resulting in the qualitative assessment of some key topics identified.

The methodology applied to assess the vulnerability and community specific needs and circumstances for the key topics of this report is summarized below along with key findings based on either quantitative and/or spatial analysis, or qualitative discussion.

4.1 Demographics

The demographic component of the assessment focused on individuals whose health and well-being would be impacted by climate change stressors to a greater extent than others as a result of their exposure, adaptive capacity and level of sensitivity to a climate-related event. For the purposes of this study, individuals who may be impacted disproportionally by the effects of climate change are referred to as “priority populations”. Priority populations considered in this report included individuals living under low income conditions, individuals living in certain locations at risk for climate change impacts, the homeless, seniors, children, pregnant women, those with pre-existing medical conditions (including addiction), persons with disabilities, recent immigrants, and certain occupational groups such as outdoor workers, municipal workers and first responders.

Priority populations can be individuals who possess certain limitations (physical, cognitive, developmental, etc.) that may impede their ability to prepare for, respond to or recover from an emergency situation. The impacts of climate based scenarios upon the health, life-safety and well-being of such individuals was explored via qualitative discussion in addition to some spatial analysis.

A visual analysis of priority population mapping indicated that the populations of the highest priority reside in the following neighbourhoods:

1. Area west of Harwood Avenue and north of Lake Driveway West;
2. Neighbourhoods south of Bayly Street and east of Harwood Avenue South; and
3. Area north of Highway 401 and east of Notion road.

4.2 Local Partners and Resources

Community partnerships contribute a valuable component to successful emergency planning and programming. These partnerships are essential to each phase of an emergency (mitigation, preparedness, response and recovery) and involve establishing connections that are collaborative in nature. This portion of the report identified and qualitatively reviewed potential local partnerships and resources for the Town of Ajax in addition to the local partners the Town has already established collaborative relationships with.

As a result of desktop research a number of current and potential local partnerships and resources were identified. These are summarized below:

Local Partners

- Red Cross
- St. John's Ambulance
- Salvation Army
- Durham Catholic District School Board
- Durham District School Board
- Durham Region Health Department
- Central Lake Ontario Conservation Authority
- Toronto and Region Conservation Authority
- Local service clubs (e.g., Optimist, Rotary, etc.)

Local Resources

- Town of Ajax Emergency Response Plan and its Annexes:
  - Annex A: Human Resources Plan
  - Annex B: Flood Emergency Preparedness Plan
  - Annex C: Hazard Index Risk Assessment
  - Annex D: Critical Infrastructure
- Durham Region Emergency Master Plan
- Toronto and Region Conservation Authority – Flood Contingency Plan - 2017
- Central Lake Ontario Conservation – Watershed Flood-Risk Assessment -2017
- Towards Resilience – Durham Community Adaptation Plan - 2016

4.3 Vulnerable Buildings

The vulnerable building portion of the ER&P report consisted of an assessment of vulnerable buildings (assets), critical infrastructure, as well as existing, potential and alternative evacuation, reception and cooling centres. The term "vulnerable building" refers to occupancies used primarily by priority populations and can include but are not limited to retirement homes, long term care facilities,

emergency shelters, social housing and child care facilities. In an emergency event characterized by overland or riverine flooding, the ability of emergency response agencies could be impacted due to disruption in typical transportation routes, delaying response times. Critical Infrastructure was also identified in this study as any loss of power to these facilities could result in a loss of essential services to members of the community on a local to a more widespread scale. The risk level assignment for vulnerable buildings and critical infrastructure was either high or low based on the building's location within riverine flood lines and its proximity to overland flooding extents.

The spatial representation of vulnerable buildings (assets) identified that buildings with a high risk assignment include:

- Childcare facilities;
- Elementary and Secondary Schools;
- Emergency Shelters;
- Group Homes; and
- Social Housing.

Critical infrastructure identified as having a high risk assignment include:

- Water Treatment Plant – Water Plant;
- Food Depot –Loblaws Food Depot;
- Electrical Transmission & Distribution – Veridian Offices;
- Mail Delivery – Post Office;
- Fire Services – MacLean Community Centre;
- Hospital – Lakeridge Health Ajax Pickering; and
- Reception Centre – OLG Slots.

4.4 Population Density

In the event of an emergency, more densely populated areas may be vulnerable to increased traffic congestion and potential transit disruptions, leading to delayed evacuation and/or response times by emergency responders. Three categories of risk assignment were used to rate population density:

- ***High Risk***: The potential for high numbers of deaths, injuries and/or persons displaced/evacuated in the event of an emergency;
- ***Medium Risk***: The potential for injuries with isolated instances of fatalities or serious injuries and long-term illness and isolated instances of displacement of persons on a widespread scale; and
- ***Low Risk***: The potential for minor injuries and isolated instances of temporarily displaced people in localized areas.

Within the Town of Ajax, high density areas include densely populated residential areas and the Downtown regional centre. Due to the high number of individuals living and working within the Downtown area, the consequence of a climate change related event is greater than other areas within the Town that have a lower density population.

4.5 Recommendations

The resulting recommendations from the ER&P vulnerability assessment are summarized below which could serve as the basis for emergency preparedness and educational programming and the development of future risk reduction strategies.

Protocols/Plans

1. Consideration should be given to developing emergency response procedures that take into account the needs and circumstances of those members of the population or areas identified as priority/most vulnerable, including their linguistic and cultural needs.
2. The Town may choose to develop a list of criteria by which to evaluate the location of potential evacuation centres, reception and cooling centres, including criteria relating to the proximity to the locations with the highest number of priority populations in an effort to accommodate them.
3. Preparing a more comprehensive Flood Emergency Preparedness Plan or updating the current Emergency Preparedness Plan with copies of all relevant flood plans may be a future consideration to ensure the entire Town has been included in preparedness efforts. Consistent use of terms throughout the Emergency Response Plan and annexes would relieve any uncertainty regarding terms used. It would be recommended that Section 9 of the ERP, Acronyms, Glossary and List of Annexes be repositioned to the beginning of the document to provide readers with contextual information that may be helpful to comprehending the Plan.
4. The ERP should be reviewed through the lens of climate change
5. There would be value to adding both splash pads and sun shelters to a Hot Weather Response Plan.

Resources/Tools

1. Establishing cooling centres and splash pads within built up urban areas can be an effective way of providing relief from rising temperatures to priority individuals who do not have access to air conditioning.
2. The development of a database that inventories both human and physical resources that could be made available in the event of an emergency would be a useful tool. Developing an agreement with the local school boards or including the use of school facilities during emergency events in an existing agreement may warrant consideration.
3. An alternative method of communicating with the family of affected staff such as a fan out system, text or email notification would be recommended.

4. The development of a more comprehensive inventory of both portable and automatic back-up generator units would be valuable in future emergency preparedness efforts.
5. Expanding the use of initiatives such as the OFMEM Vulnerable Occupancy Registry and fire department pre-planning to include all vulnerable buildings, not just vulnerable occupancies, would provide a higher level of preparedness on a Town-wide scale.
6. Further discussion regarding developing a registry identifying prioritized populations may be a consideration, however it would be recommended that advice be obtained from the Town's legal department to ensure information is collected and retained in accordance with the Municipal Freedom of Information and Protection of Privacy Act.
7. There are two areas identified that permit gas stations that are within or near the overland flooding extent. These sites should be considered in future flood planning for flood potential.
8. Future modelling could consider including the Town's building stock by occupancy type, using Municipal Property Assessment (MPAC) to visually display residential and non-residential areas.

Training

1. There may be opportunity to provide training to local partners in advance of an event ensuring an increased level of preparedness should their assistance be required during an emergency.
2. Having three potential persons responsible for the role of Emergency Information Officer (EIO) has advantages, primarily, allowing the Fire Chief and/or Deputy Fire Chief to remain focused on operational emergency tasks rather than on communication with elected officials, the public and the media during an emergency.