

**COW-02/2020**

**Tuesday, February 18, 2020**

**Town of Pelham Municipal Office - Council Chambers**

**20 Pelham Town Square, Fonthill**

If you require any accommodations for a disability in order to attend and participate in meetings or events, please contact the Office of the Clerk at 905 892-2607, ext. 315 or 320. Taping and/or recording of meetings shall only be permitted in accordance with the Procedure By-law. Rules of Decorum apply to observers.

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	<b>Pages</b>
<b>1. Call to Order and Declaration of Quorum</b>	
<b>2. Adoption of Agenda</b>	
<b>3. Disclosure of Pecuniary Interest and General Nature Thereof</b>	
<b>4. Department Reports</b>	
<b>4.1 Community Planning and Development</b>	
<b>4.1.1 Cannabis Land Use Report, 2020-0014-Planning</b>	<b>3 - 48</b>
<b>4.2 Corporate Services</b>	
<b>4.2.1 November 2019 Financial Reports, 2020-0016-                 Corporate Services</b>	<b>49 - 61</b>
<b>4.3 Fire &amp; By-law Services</b>	
<b>4.4 Public Works and Utilities</b>	
<b>4.4.1 2019 Pelham Distribution System Summary Report,                 2020-0002-Public Works</b>	<b>62 - 110</b>

4.4.2 Town of Pelham Gypsy Moth Policy and 2020 Gypsy Moth Management Options , 2020-0017-Public Works 111 - 131

4.4.3 Town of Pelham's Enhanced and Optional Enhanced Waste Collection Services for Niagara, 2020-0018-Public Works 132 - 141

4.5 Recreation, Culture and Wellness

4.5.1 Summerfest Committee Terms of Reference, 2020-0015-Recreation 142 - 145

4.6 Administration

5. Unfinished Business

6. New Business

7. Adjournment

**Subject:** Land Use Study on Cannabis Production in the Town of Pelham

**Recommendation:**

**THAT Committee receive Report #2020-14 and recommend to Council:**

**THAT the Land Use Study in Appendix A be received for information and that Staff be directed to fulfill the recommendations of the Land Use Study.**

**Background:**

On October 15, 2018, the Council of the Town of Pelham approved an Interim Control By-law 4046 (2018) under Section 38 of the *Planning Act*, R.S.O. 1990, c.P. 13, placing a moratorium on new uses of land, buildings or structures for agricultural, commercial or industrial cannabis purposes across the Town for a period of one year while a review of land use policies and regulations was undertaken pertaining to cannabis related uses.

By-law 4046 (2018), the Interim Control By-law, was extended by the Town Council on September 23, 2019 until July 15, 2020 within the rural areas of the Town in order to allow adequate time to undertake an in depth analysis and review of land use considerations for this new, challenging and quickly evolving industry.

This Land Use Study on Cannabis Production has been prepared by Town Planning staff to serve as the review and study of land use impacts and recommends proposed policy changes and a regulatory framework for cannabis production and related land uses in the context of the Town of Pelham.

**Analysis:**

Extensive analysis of the existing regulatory and planning policy framework, municipal best practices, land use impacts specific to the Town of Pelham and

finally, recommendations for policy and regulatory changes are included in the Land Use Study.

### **Financial Considerations:**

There are no financial considerations at this time as the Study is provided for information purposes.

### **Alternatives Reviewed:**

Staff considered many alternatives to address land use impacts associated with cannabis uses in the Town. The findings and recommendations in the Land Use Study are Planning staff's professional opinions for future policy and regulatory changes.

### **Strategic Plan Relationship: Build Strong Communities and Cultural Assets**

The Strategic Plan includes addressing cannabis requirements and regulations as an action for 2019. Substantial work was undertaken in 2019 as part of this goal, including approval of the amended Fence By-law and Fortification of Lands By-law and the changes already made to the Site Plan Control By-law and the Development Charges By-law. The Land Use Study informs draft Official Plan and Zoning By-law amendments which will be prepared for Council's consideration prior to the expiry of the Interim Control By-law on July 15, 2020.

### **Consultation:**

Town staff have considered comments provided by commenting agencies, the public and the Cannabis Control Committee in preparation of this study. A draft copy was provided to the Cannabis Control Committee at its January 29, 2020 meeting for information purposes. As the recommendations of the Land Use Study are fulfilled, there will be other public meetings, particularly as it relates implementing the recommendations regarding the proposed amendments to the Official Plan and Zoning By-law.

### **Other Pertinent Reports/Attachments:**

Appendix A Land Use Study on Cannabis Production

### **Prepared and Recommended by:**

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Director of Community Planning and Development



**Prepared and Submitted by:**

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Chief Administrative Officer

A close-up photograph of a cannabis plant with several green, serrated leaves and a thin stem, set against a blurred grey background.

## **Cannabis Land Use Report**

Community Planning and Development Department  
February 2020

A horizontal decorative bar composed of five colored segments: orange, green, red, light green, and purple.

## Table of Contents

Executive Summary .....	iv
1.0 Background .....	1
2.0 Existing Regulatory Framework .....	3
2.1 Federal and Provincial Permissions and Requirements .....	3
2.1.1 Personal Recreational Production.....	3
2.1.2 Personal Medical Production .....	4
2.1.3 Commercial Licenses for Cannabis .....	4
2.1.4 Industrial Hemp Licenses .....	7
3.0 Planning Policy Framework .....	8
3.1 Planning Act .....	8
3.2 Provincial Policy Statement, 2014 .....	8
3.3 Greenbelt Plan, 2017 .....	9
3.4 Niagara Escarpment Plan, 2017 .....	9
3.5 Growth Plan for the Greater Golden Horseshoe, 2019 .....	10
3.6 Regional Official Plan, consolidated August 2015 .....	10
3.7 Farming and Food Production Protection Act, 1998.....	11
4.0 Other Municipal Approaches .....	13
4.1 Niagara-on-the-Lake .....	13
4.2 Lincoln .....	13
4.3 West Lincoln.....	14
4.4 Port Colborne .....	14
4.5 Wainfleet.....	15
4.6 Thorold.....	15
4.7 Fort Erie, Welland, Grimsby and Niagara Falls .....	15
4.8 St. Catharines .....	15
4.9 Norfolk County .....	16
4.10 Beckwith.....	16
4.11 Ottawa .....	16
4.12 Halton Hills .....	16
4.13 Vernon, British Columbia .....	17

5.0	Land Use Impacts .....	18
5.1	Odour & Air Quality .....	18
5.1.1	Recommendations for Odour & Air Quality Impacts .....	18
	(a) Approaches to Setbacks from Sensitive Receptors in other Applications.....	18
	(i) Minimum Distance Separation .....	18
	(ii) Separation Distances.....	19
	(b) Town of Pelham Context.....	22
5.2	Supplemental Lighting .....	25
5.2.1	Supplemental Lighting Impacts .....	25
5.2.2	Recommendations for Supplemental Lighting Impacts .....	25
5.3	Noise .....	26
5.3.1	Noise Impacts .....	26
5.3.2	Recommendations for Noise Impacts .....	26
5.4	Traffic .....	26
5.4.1	Traffic Impacts .....	26
5.4.2	Recommendation for Traffic Impacts .....	27
5.5	Groundwater .....	27
5.5.1	Groundwater Impacts .....	27
5.5.2	Recommendation for Groundwater Impacts .....	28
5.6	Property Value .....	28
5.6.1	Property Value Impacts .....	28
5.6.2	Recommendation for Property Value Impacts .....	28
5.7	Agricultural Land.....	29
5.7.1	Loss of Agricultural Lands.....	29
5.7.2	Recommendation for Loss of Agricultural Lands.....	29
5.8	Increased Costs.....	29
5.8.1	Increased Costs for the Town & Burden to the Ratepayers .....	29
5.8.2	Recommendation for Increased Costs & Burden to the Taxpayer .....	30
5.9	Environmental .....	31
5.9.1	Environmental Impacts .....	31
5.9.2	Recommendation for Environmental Impacts .....	31
5.10	Changing Character .....	31
5.10.1	Changing Character of the Rural Agricultural Area.....	31

5.10.2	Recommendations for Changing Character of the Rural Agricultural Area .....	32
6.0	Conclusion & Summary of Recommendations .....	33
	Appendix I – ‘Sensitive Receptor Setback Maps’ .....	35

## Executive Summary

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The legalization of medical cannabis in July 2001 and recreational cannabis on October 17, 2018 in Canada has created a number of challenges for municipalities attempting to balance the land use compatibility concerns of residents with the operation of legal cannabis production facilities. This report focuses on land use impacts associated with cannabis production facilities in the Town of Pelham in the rural agricultural area of the Town where existing cannabis production facilities have located. This report does not focus on cannabis retail uses as Council passed a resolution on January 14, 2019 opting out of allowing cannabis retail uses in the Town.

Negative impacts from cannabis production land uses on residents of the Town relating to odour and light emissions have been documented through complaints received. However, residents have expressed other concerns relating to the potential of adverse impacts from cannabis production uses in the rural agricultural area of the Town associated with increased noise and traffic, impacts on groundwater resources, decreased property values, loss of agricultural lands, the changing character of the rural area, costs to local municipalities, and impacts on the natural environment. This report details the experience of residents in the Town of Pelham and how that relates to the existing Provincial and Federal regulatory framework for cannabis production along with recommendations for a municipal framework that will address land use compatibility issues between residents and cannabis producers in the Town.

The principle recommendations of this report include the need for an amendment to the Town of Pelham Official Plan to provide a policy basis for allowing cannabis production land uses and related uses on site specific basis through individual zoning by-law amendments and to provide a policy framework to evaluate the appropriateness of such uses. In addition, it is also recommended that the existing cannabis production facilities and their associated uses be recognized site specifically in the Town Zoning By-law and that the existing Nuisance By-law be amended to address odour, light and noise nuisances.

## 1.0 Background

There currently are two cannabis producers in the Town of Pelham, Redecan Pharm and CannTrust. Redecan Pharm operates from 2 locations and CannTrust has one location. Both Redecan Pharm and CannTrust operations are located in the rural agricultural area in the Town and both produce cannabis in greenhouse facilities. In addition to these two producers, Woodstock Biomed Inc./Leviathan Cannabis Group Inc. owns property in the Town that they wish to develop for a cannabis production facility, however are unable to proceed with their plans at this time due to the Interim Control By-law passed by Council in 2018. Also a more modest scale cannabis production facility is proposed rural agricultural area of the Niagara Escarpment Plan area which is not impacted by the Interim Control By-law, but is subject to the Niagara Escarpment Development Permit process. Finally, in 2018 a licenced hemp producer was growing hemp outdoors also in the rural agricultural area of the Town.

On October 15, 2018, the Council of the Town of Pelham approved an Interim Control By-law 4046 (2018) under Section 38 of the *Planning Act*, R.S.O. 1990, c.P. 13, placing a moratorium on new uses of land, buildings or structures for agricultural, commercial or industrial cannabis purposes across the Town for a period of one year while a review of land use policies and regulations was undertaken pertaining to cannabis related uses. By-law 4046 (2018), the Interim Control By-law, was extended by the Town Council on September 23, 2019 until July 15, 2020 within the rural areas of the Town in order to allow adequate time to undertake an in depth analysis and review of land use considerations for this new, challenging and quickly evolving industry. This report serves as the review and study of land use policies and considerations for the Town of Pelham in the rural agricultural area of the Town. Because Pelham does not have any serviced industrial lands, cannabis production facilities have located in the rural agricultural area. These facilities also have associated processing operations as a secondary use to the production or growing of cannabis.

The rural agricultural area of Pelham is an area that is primarily agricultural in nature with a variety of agricultural operations and intensity of farming operations from livestock operations, greenhouse growers of floral culture and vegetables, nursery stock, field crops, tender fruit operations and hobby farms. The rural agricultural area also includes a variety of other land uses including non-farm residential, agricultural related uses, campgrounds, parks, institutional uses and limited rural commercial uses. The two hamlets of Ridgeville and North Pelham are located in the rural agricultural area and the urban communities of Fonthill and Fenwick abut the rural agricultural area. The Niagara Escarpment Plan area and associated Development Permit control impacts on the north east portion of the rural agricultural area of the Town.

This report does not address impacts associated with cannabis retail uses as Council passed a resolution on January 14, 2019 opting out of allowing cannabis retail stores in the Town.



## 2.0 Existing Regulatory Framework

### 2.1 Federal and Provincial Permissions and Requirements

Medical cannabis was legalized in 2001 through the *Marihuana for Medical Purposes Regulations* (MMPR) which were later replaced by the *Access to Cannabis for Medical Purposes Regulations* (ACMPR) on August 24, 2016.

Recreational cannabis was legalized by the federal government through the *Cannabis Act*, S.C. 2018 and the provincial government provided legislation, the *Cannabis Control Act*, S.O. 2017 and the *Cannabis License Act*, S.O. 2018, relating to how, where and who can buy and possess cannabis in Ontario. The intent behind the federal and provincial government's decision to legalize recreational cannabis use was to protect access to the youth, provide for public health and safety, and to address the illegal or black-market sale of cannabis. This public interest in legalizing cannabis use has been defined in the legislation.

Prior to legalization, the federal government noted that the use of recreational cannabis, particularly in the youth, had been increasing in recent years despite it having been illegal. Correspondingly, the illegal sale of recreational cannabis had also been increasing over the years, which only further contributed to the illegal drug trade. Legalization of use, production and retail sales was seen as a more effective means to controlling and regulating access to a safer product by the Federal government.

At the time of legalization, the provincial government also aligned the consumption of cannabis with the *Smoke Free Ontario Act* and instituted a regulated private retail model for recreational cannabis sales implemented through the Alcohol and Gaming Commission of Ontario (AGCO).

Access to medical cannabis continues to be subject to Health Canada rules which are different than the rules for access to recreational cannabis.

The provincial government gave municipal governments an opportunity to opt out of retail recreational cannabis stores in their communities prior to January 22, 2019. The Council of the Town of Pelham opted out of allowing retail cannabis uses in the Town on January 14, 2019. As a result, this report will not consider impacts nor provide recommendations for a municipal regulatory framework relating to cannabis retail uses.

#### 2.1.1 Personal Recreational Production

The *Cannabis Act* permits adults who are 18 years of age or older to grow, from licensed seed or seedlings, up to a maximum of four (4) cannabis plants per residence for personal use. The *Cannabis Act* does not place any restrictions on where the 4 cannabis plants may be grown, including indoors or outdoors in residential areas nor does it require odour mitigation for production at this scale.

### **2.1.2 Personal Medical Production**

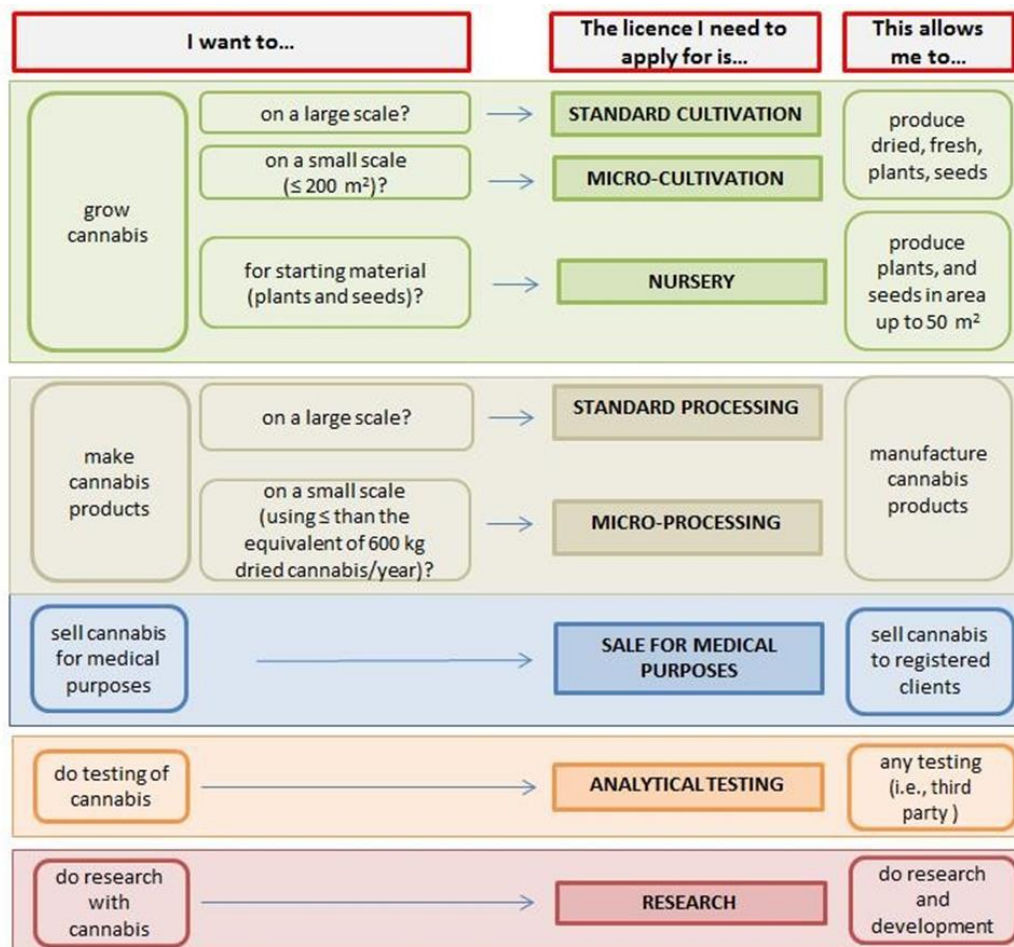
The ACMPR permits cultivation of cannabis by individuals who are registered to produce cannabis for their own medical purposes or by an individual who is registered to grow cannabis for individuals who are registered to consume cannabis for medical purposes. Registered individuals may grow cannabis for up to two people registered to consume cannabis for medical purposes, including themselves. According to Health Canada's website, individuals are permitted to grow approximately 2 plants outdoors or 5 plants indoors for every 1 gram of their "daily authorized quantity."

Each property is eligible for up to 4 registrations for production of cannabis. Only the licence holder or their designated person can water, harvest or make cannabis products from their specific plants. Each licence holder must be able to identify their cannabis and it must be kept separate from other people's cannabis.

Individuals growing cannabis outdoors must ensure the property has no contact points in common with a property containing a school, public playground, daycare or other public place mainly frequented by persons under 18 years old. There are no licensing restrictions on where cannabis can be grown by individuals for medical purposes or requirements for odour mitigation.

### **2.1.3 Commercial Licenses for Cannabis**

Health Canada is the main federal agency responsible for issuing and overseeing licenses for commercial growing, processing, and sale for medical purposes, testing and research of cannabis. There are a number of classes and sub-classes for licenses including standard cultivation, micro-cultivation and nursery for growing, standard processing and micro-processing for cannabis production, sale for medical purposes, analytical testing and research (Figure 1). Health Canada also provides licenses for analytical testing, research, industrial hemp and cannabis drug licenses. Only certain combinations of classes and sub-classes of licenses are permitted on one site.



**Figure 1 Classes and Subclasses of Commercial Cannabis Licenses<sup>1</sup>**

As of May 8, 2019, applicants for cultivation, processing or sales for medical purpose licenses must have a ready fully built site that meets all the requirements of the *Cannabis Regulations* when making application for license.

Applicants for licenses are required to provide a corporate profile and identify individuals in various roles within a company, including Directors, Officers, Partners, Responsible Person, Head of Security, Master Grower and Quality Assurance Person. All of these individuals must receive a security clearance prior to issuance of a license and in the case of processing, information about the Quality Assurance Person's training, experience and technical knowledge must also be provided. The applicant is required to provide information about the site to be licensed including the address, a survey, aerial imagery of the site and properties within 500 metres, an estimate of annual production amount, floor

<sup>1</sup> Health Canada. (2019, November 25). Government of Canada. Retrieved November 30, 2019, from <https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/industry-licensees-applicants/licensing-summary/guide.html#a5.2>

areas for combined grow and operations areas as well as floor plans of the operation where applicable.

Applicants are required to submit notice to local authorities, including the municipality, fire department and police force, prior to making an application for a license. This notice is to inform the municipality, fire department and police that they intend to obtain a licence. The notice does not seek approval from the municipality, fire department or police force. Neither the applicant nor Health Canada provide notice to a municipality, fire department or police when the actual licence has been issued or obtained. It is noted that it can take a number of years before an actual licence has been issued, from the time an applicant submits a notice that they intend to obtain a licence.

An organizational security plan is also required detailing contact information, working houses, affiliations, security status, standard operating procedures to prevent, detect and respond to security incidents, etc.

For standard cultivation, standard processing and sale for medical purposes licences, physical security measures are required and must also be demonstrated in the licencing application and include the locations and areas covered by security devices and visual monitoring devices as well as cannabis flow between rooms and locations on site. Security reports must be provided including alarm test reports and entry and exit log reports for all doors leading to and from storage areas. Visual evidence is also required to be submitted in the form of video and photography. Access controls on doors, windows and vents (key pads, locks, fobs) and materials used to construct physical barriers (fences, walls, ceilings and doors) must all be specified.

Standard cultivation, standard processing and sale for medical purposes licenced sites are encouraged to be designed using the rings of protection concept, where the intruder is detected at the first barrier with the remaining barriers slowing them down to the point that law enforcement arrives before the intruder has accessed the goods and fled the site. The perimeter of the site must be secured by a fence or exterior building walls and secured windows, doors and vent openings that are monitored at all times by a weatherproof clear (day and night) unobstructed visual monitoring system connected to a back up generator. Continuously monitored and backed up intrusion detection devices, such as fence intrusion detection sensors, photoelectric beam sensors, passive infrared motion detections, curtain motion detectors, video analytics, seismic sensors and glass break sensors, must be employed along the entire perimeter of the site. Procedures for, as well as records of all instances, must be recorded and retained for specified time periods.

The physical security requirements for micro-cultivation, micro-processing and nursery sites are limited to a continuous physical barrier, such as a fence, and restricted access. The requirements for monitoring and record keeping are less

for these licence classes. Physical security requirements do not apply for licenses for research and sale of medical purposes without possession.

A Good Production Practices (GPP) Report is required for most licence classes. GPP Reports include storage procedures, building details and product movement, filtration and ventilation systems to prevent the escape of odours and to avoid contamination including cleaning and maintenance, water supply and suitability, lighting system including maintenance and sanitizing program.

All documentation is required to be submitted to Health Canada by the applicant as part of its application for licence of a cannabis facility. The municipality has no involvement in the review of the documentation or the application.

#### **2.1.4 Industrial Hemp Licenses**

The *Industrial Hemp Regulations* under the *Cannabis Act* define the requirements for producing hemp, a cannabis plant or part of the plant with a THC concentration of 0.3% or less in the flowering heads and leaves. Growing, processing, selling, importing/exporting, sterilizing, cleaning or preparing for grain (seed, oil) requires Industrial Hemp licenses. Other activities, such as making or selling products from non-viable or sterile grain do not require licensing. Licenses are required under the Cannabis regulations for processing, selling, importing/exporting the flowering heads, leaves and branches (CBD oil extraction) or products or derivatives made from them. Licensing under the Industrial Hemp Regulations does not require the applicant to meet the standards under the *Cannabis Act* with respect to security clearance of key personnel, physical security or a Good Production Practices Report.

### 3.0 Planning Policy Framework

The review of the planning policy framework focusses on planning policies that impact on the rural agricultural area as this is the area in the Town where cannabis production facilities have located and the growing of cannabis is recognized as an agricultural use. These uses are not permitted in the Urban Area of the Town.

#### 3.1 Planning Act

The *Planning Act*, R.S.O. 1990 provides that decisions of Council in respect to planning matters shall be consistent with provincial policy statements that are in effect as of the date of Council's decision and shall conform with provincial plans that are in effect.

#### 3.2 Provincial Policy Statement, 2014

The Provincial Policy Statement, 2014 (PPS) provides guidance for managing and directing land use to achieve efficient and resilient development and land use patterns.

Policy 2.3.3.2 states that all types, sizes and intensities of agricultural uses and normal farm practices shall be promoted and protected in accordance with provincial standards in prime agricultural areas. Agricultural uses are defined in the Provincial Policy Statement as “the growing of crops, including nursery, biomass and horticultural crops; raising of livestock; raising of other animals for food, fur or fibre, including poultry and fish; aquaculture; apiaries; agro-forestry; maple syrup production; and associated on-farm buildings and structures, including, but not limited to livestock facilities, manure storages, value-retaining facilities, and accommodation for full-time farm labour when the size and nature of the operation requires additional employment.”

The definition of agricultural uses in the Provincial Policy Statement includes the growing of crops and includes horticultural crops. Based on this definition, cannabis cultivation would appear to constitute an agricultural use. Agricultural uses are supported and promoted in the prime agricultural area. Agricultural uses also include value-retaining uses, consisting of storage, cleaning, drying, sorting and packaging of an agricultural commodity, such as cannabis. A similar comparison can be made with wineries where the grapes grown in the vineyard is the agricultural use and the processing of the grape into wine, storage and bottling operations are agricultural value retaining uses associated with the growing of grapes.

The Provincial Policy Statement also contains policies for agriculture-related uses, which are commercial or industrial uses that are secondary to a farming operation. Cannabis processing activities could be considered agriculture-related, such as making oils, edibles, tablets, etc. The Provincial Policy Statement contains policies and definitions that require these uses to be farm-related commercial or industrial uses in the Prime Agricultural Area, to be



compatible with and not hinder surrounding agricultural operations, directly relate to farm operations in the area, support agriculture, provide direct products and/or services to farm operations as a primary activity and benefit from being in close proximity to farm operations.

The Province has published *Guidelines on Permitted Uses in Ontario's Prime Agricultural Areas* (Guidelines) to assist municipalities and decision makers with interpretation of the policies in the Provincial Policy Statement, 2014. This is particularly helpful when determining which uses are agriculture-related. For example the Guidelines, state that compatibility with surrounding agricultural uses means ensuring that surrounding agricultural operations can perform agricultural practices without impairment, uses should be appropriate to available rural services, maintain the agricultural/rural character of the area, meet applicable provincial air emission, noise, water and wastewater standards and receive all relevant environmental approvals and finally, the cumulative impact of multiple uses should be limited and not undermine the agricultural nature of the area.

### **3.3 Greenbelt Plan, 2017**

The Greenbelt Plan, 2017 applies to lands designated Specialty Agricultural in the Town Official Plan. These areas are designated Protected Countryside and Niagara Peninsula Tender Fruit and Grape Area in the Greenbelt Plan.

Policy 3.1.2.1 indicates that all types, sizes and intensities of agricultural uses shall be promoted and protected and a full range of agricultural uses, agriculture-related uses and on-farm diversified uses are permitted based on Provincial Guidelines. Where agricultural uses and non-agricultural uses interface, land use compatibility shall be achieved by avoiding or, where avoidance is not possible, minimizing and mitigating adverse impacts on the Agricultural System, based on provincial guidance. Where mitigation is required, measures should be incorporated as part of the non-agricultural uses, as appropriate, within the area being developed (3.1.2.5).

Cannabis cultivation is considered an agricultural use which is supported in the Specialty Agricultural designation. It is noted that the Provincial government has not developed any land use planning guidance documents specific to mitigating adverse impacts of cannabis cultivation or related uses. As discussed above, the guidance document *Guidelines on Permitted Uses in Ontario's Prime Agricultural Areas* does not specifically address cannabis or cannabis related uses.

### **3.4 Niagara Escarpment Plan, 2017**

The Niagara Escarpment Plan, 2017 (NEP) applies to lands designated Niagara Escarpment Plan Area in the Town of Pelham Official Plan, 2014. Policies of the NEP apply to these lands as well as Niagara Escarpment Development Permit Control. The NEP designates areas within the Town of Pelham as Escarpment Rural Area, Escarpment Protection Area and Escarpment Natural Area.

The NEP permits agricultural uses in the Escarpment Rural Area and Escarpment Protection Area (1.5.3.1 & 1.4.3.1) and limits the permission to only existing agricultural uses in the Escarpment Natural Area (1.3.3.1). Cannabis cultivation is considered an agricultural use in the Niagara Escarpment Plan and would be permitted.

Part 1.1.1 of the NEP allows municipalities to set standards and policies that are more stringent than the requirements of the NEP unless doing so would conflict with the NEP. Zoning By-laws do not apply to the NEP area.

### **3.5 Growth Plan for the Greater Golden Horseshoe, 2019**

The Growth Plan for the Greater Golden Horseshoe, 2019 (GPGGH) applies to lands within the Town's urban areas of Fenwick and Fonthill (Settlement Areas) and the Good General Agricultural Area in the Town's Official Plan (Prime Agricultural Area).

The definition of agricultural uses in the GPGGH is consistent with the definition in the Provincial Policy Statement and therefore, the cultivation of cannabis is considered an agricultural use.

Policy 4.2.6.3 indicates that where agricultural use and non-agricultural uses interface outside of settlement areas, land use compatibility will be achieved by avoiding or where not possible, minimizing and mitigating adverse impacts on the Agricultural System. Where mitigation is required, measures should be incorporated as part of the non-agricultural uses, as appropriate, within the area being developed. Where appropriate, this should be based on an agricultural impact assessment.

### **3.6 Regional Official Plan, consolidated August 2015**

The Region of Niagara Official Plan (ROP) applies to all lands within the Town of Pelham. According to the ROP, agricultural uses means the growing of crops, including nursery and horticultural crops; raising of livestock; raising of other animals for food, fur or fibre, including poultry and fish; aquaculture; apiaries; agro-forestry, maple syrup production; and associated on-farm buildings and structures, including accommodation for fulltime farm labour when the size and nature of the operation requires additional employment. Agricultural uses include value retention uses required to make a commodity saleable (i.e. corn dryer, washing, sorting, packing, and packaging). According to this definition, cannabis production is considered an agricultural use.

The predominant use of land in unique and good general agricultural areas is for agriculture of all types, including livestock operations as well as associated value retention uses (Policy 5.B.6). Value retention uses may include cannabis processing as part of a cannabis production facility. The Niagara Region Official Plan states that local municipalities should define and categorize farm diversification uses and provide performance criteria and that uses that have potential to generate off site impacts will be evaluated and assessed for



compatibility with the principal agricultural operation and surrounding agricultural lands through a rezoning process that will also impose controls to mitigate the impacts. (Policy 5.B.20).

Criteria that shall be considered when identifying whether or not diversification activities should be permitted in the Zoning By-law are whether the proposed activity is more appropriately located in a nearby Settlement Area or in the Rural Area; whether the use is required on or in close proximity to the agricultural operation for it to support and complement the agricultural activity; the extent to which the use is compatible with the existing farming operation and surrounding farming operations; whether the scale of the activity is appropriate to the site and the farming operation; whether the use is consistent with and maintains the character of the agricultural area; the use does not generate potentially conflicting off-site impacts; the use is limited to low water and low effluent producing uses, and the site is capable of accommodating the use on private water and private sewage treatment systems; the use does not require significant improvements to utilities or infrastructure such as roads or hydro services; the use complies with all other applicable provisions of the Regional Official Plan (Policy 5.B.21).

The Region has also indicated that growing, processing and distribution of cannabis may also be considered an industrial use and permitted on employment lands. Industrial lands within the Town of Pelham are designated as Rural Employment lands as no municipal services are available. Detailed land uses shall be identified in the local official plan and are to be compatible with adjacent agricultural uses, planned agricultural uses and not negatively impact normal farm operations (Policy 3.B.2.3).

### **3.7 Farming and Food Production Protection Act, 1998**

The *Farming and Food Production Protection Act, 1998* (FPPA) established the Normal Farm Practices Protection Board (NFPPB) in order to resolve disputes with the goal of balancing the needs of the agricultural community with health, safety and environmental concerns. The FPPA speaks to seven sources of nuisance complaints for which farmers are not liable provided they result from normal farm practices: noise, odour, dust, light, vibration, smoke and flies. The Normal Farm Practices Protection Board is responsible for determining which activities constitute normal farm practices, but resulting nuisances that could be harmful or dangerous to people or the environment are not included. The FPPA also prevents municipal by-laws from prohibiting normal farm practices.

There is little guidance regarding normal farm practices surrounding cannabis production from past decisions of the FPPA. Recently, the Burnstown Farms Cannabis Company brought a case against the Township of Beckwith before the NFPPB relating to Town zoning setbacks for fencing applied to outdoor cannabis production. A pre-hearing was held on April 17, 2019 in order to determine whether outdoor cannabis production was an “agricultural operation” under the FPPA, which farm practices were allegedly being restricted by the zoning

setback requirements and whether the NFPPB could issue decisions pertaining to an activity that is licensed by the federal government. No decision was made and it was recommended that the case proceed to a hearing. Since that time, the appellant withdrew the appeal and no hearing will take place. Beckwith Township's zoning requirements are now in place and being applied.

## 4.0 Other Municipal Approaches

A number of municipalities across the province amended their Zoning By-laws to provide regulations for medical marihuana production following legalization in 2001 and some of those municipalities, as well as others, are in the process of updating their regulations to include recreational cannabis production.

### 4.1 Niagara-on-the-Lake

Similar to the Town of Pelham, the Town of Niagara-on-the-Lake has enacted an Interim Control By-law for cannabis related uses. On July 15, 2019 Council approved the following motion:

- A Cannabis processing facility shall operate in a zone designated for industrial use only;
- Cannabis production facilities must operate in a wholly enclosed building, no outdoor cultivation to be allowed;
- Operate with an approved odour prevention protocol to eliminate the migration of noxious odour from its premises;
- Be limited to the production, processing and packaging of Cannabis on behalf of the holder of the license for the premises on which the facility is located;
- Interior lighting shall not be visible outside the building from sunset to sunrise;
- Enclosed facilities must have a set-back of at least 250 metres from neighbouring property lines, public school, place of worship, day nursery or designated heritage building or district; and
- Include a fence setback requirement between the fence and the town boulevard for landscaping purposes.

The Town will be considering amendments to the Official Plan and Zoning By-law to implement this motion. A draft Zoning By-law amendment on the Town's website identifies cannabis production and processing as a permitted use within a Rural zone, but increases the setback from sensitive receptors to 1500 metres. None of these measures have been tested in Court and their efficacy is unknown.

### 4.2 Lincoln

The Town of Lincoln has also enacted an Interim Control By-law for cannabis uses. Lincoln's Draft Official Plan policies:

- Encourage new purpose-built facilities as the first option;
- Require mitigation measures be taken to reduce impacts on sensitive land uses, and, to determine the appropriate separation distance of the proposed facility to existing sensitive land uses and zones;
- Require, on a case by case basis, appropriate buffering and screening to preserve the agricultural character of the surroundings;
- Ensure that required facilities be installed (on-site water storage, rate-of-flow control facilities, complete stormwater management facilities, etc.);

- Require a waste management plan which describes the method and location of collection and disposal of all effluent;
- A policy that enables the Town to establish a licensing framework to regulate the nature, scale and density of cannabis production facilities.
- Ensure that requirements for complete application are comparable to requirements for Federal licensing.
- Require site plan control.

Lincoln's draft Zoning By-law requires:

- minimum setbacks ranging from 150 metres to 300 metres from other zones, uses and settlement areas depending on size, including those with and without air treatment control systems;
- a minimum setback of 30 metres for all structures associated with a cannabis production facility;
- minimum separation distance of at least 1,000 metres between cannabis production facilities when situated within an Agricultural Zone;
- 1 parking space per 100 square metres of gross floor area;
- no outdoor storage;
- all primary and accessory uses be enclosed in buildings;
- a minimum lot area of 8.0 hectares.

A November 20, 2019 Lincoln report indicates that the proposed business licensing is intended to address nuisance complaints by requiring air filtration systems, etc.

#### **4.3 West Lincoln**

The Township of West Lincoln requires a site specific zoning by-law amendment for cannabis production in Agricultural and Employment zones with a minimum setback of 150 metres from lot lines on Agricultural zone properties and 45 metres from the lot lines of properties containing or permitting dwellings or institutional uses on Employment zoned properties. No outdoor growing, storage or production of cannabis is permitted. Opaque fencing is required where supplemental lighting may impact abutting residential or institutional uses and security fencing is required along all lot lines. The Town's Site Plan Control By-law requires site plan control for medical cannabis growing and production facilities.

#### **4.4 Port Colborne**

The City of Port Colborne has also enacted an Interim Control By-law for cannabis production. Changes to the Official Plan are proposed to require odour and light mitigation, control, maintenance and monitoring plans, private servicing, setbacks from sensitive receptors and Site Plan Control.

The proposed Zoning By-law amendment would permit a cannabis production facility in Light and Heavy Industrial as well as Gateway zones with no

production, processing or storage outside and require a 70 metre setback from a sensitive receptor. The current provisions for medical marihuana facilities in the Agricultural and Rural zones would remain in place for cannabis production facilities. The existing requirements include a minimum separation to a sensitive land use of 150 metres, requirement for a planting strip, parking requirement of 1 space per employee on the largest shift and a minimum lot area of 3 hectares.

#### **4.5 Wainfleet**

The Township of Wainfleet has also enacted an Interim Control By-law for cannabis production. Draft changes have not been released at this time, however current zoning requirements for medical marihuana facilities include a minimum 150 metre setback from the lot line of a Residential or Institutional use or zone, a prohibition of signage and outdoor storage as well as the location within a dwelling. Site Plan Control guidelines require buildings to be sited as far as reasonably possible from surrounding dwellings, resemblance of farm buildings with screening of rooftop ventilation equipment, surface parking to the rear or side of buildings with loading and garbage pick up zones indoors, security fences to be screened by 3 metres of landscape area between the fence and lot line with native and drought resistance planting throughout the site and security lighting to be located low on the buildings and directed downward.

Also of note, Wainfleet has a Medical Marihuana Facilities Licensing By-law which requires facilities to obtain an annual license which authorizes inspections of the facility, proof of zoning compliance, proof of Health Canada license, Fire Code compliance, Electrical Safety Authority general inspection report, proof of insurance, police check, etc. The licensing by-law also outlines nuisance abatement requirements and penalties for contraventions.

#### **4.6 Thorold**

The City of Thorold has recently adopted a new Zoning By-law which includes provisions for Licensed Marijuana Production Facilities. They are permitted as of right in the M4 Rural Industrial Employment zone and are required to be setback 150 metres from any residential, institutional or open space zone with no open storage permitted.

#### **4.7 Fort Erie, Welland, Grimsby and Niagara Falls**

Fort Erie, Welland, Grimsby and Niagara Falls are each in the process of undertaking a review of their current regulations pertaining to cannabis production. Some have interim control by-laws in place and others are considering them.

#### **4.8 St. Catharines**

The City of St. Catharines does not have specific requirements for cannabis production in its Zoning By-law. In Employment zones, it is permitted indoors as a Heavy Industrial use and subject to the requirements for Heavy Industrial uses. In Agricultural zones, it is permitted indoor as a greenhouse use and subject to

the requirement for greenhouses. Outdoor production is treated as a regular crop in Agricultural zones.

#### **4.9 Norfolk County**

Norfolk County allows used for cannabis production and processing in General Industrial, Light Industrial and Rural Industrial zones with air treatment control to be setback a minimum of 70 metres from Residential, Institutional or Open Space zones. In Agricultural zones, lands, buildings and structures used for cannabis production and processing equipped with air treatment control must be a minimum of 150 metres from Residential, Institutional or Open Space zones. In addition, lands, buildings or structures used for cannabis production and processing with air treatment control must not be located closer than 150 metres from sensitive uses, including a dwelling, public school, private school, place of worship or day care nursery. Where cannabis production and processing is not equipped with air treatment control, a minimum setback of 300 metres from sensitive uses is required. Outdoor storage is prohibited and all cannabis production and processing is subject to Site Plan Control.

#### **4.10 Beckwith**

Beckwith Township has recently enacted an amendment to their Zoning By-law and Official Plan. The amendment to the Official Plan recognizes that site plan control is required for cannabis facilities. The Zoning By-law amendment permits a cannabis facility in an Industrial, Agricultural or Rural zone and includes a setback of 150 metres from any dwelling unit or institutional zone to any part of a cannabis facility including security fencing. The zoning also requires a minimum setback of 70 metres from any lot line to any part of a cannabis facility including security fencing.

#### **4.11 Ottawa**

The City of Ottawa permits existing cannabis production facilities (as of 2019) in the Agricultural zone. New cannabis production facilities are permitted in the General Industrial, Heavy Industrial, Industrial Light (limited to 350m<sup>2</sup> gross floor area), Business Park Industrial (limited to 350m<sup>2</sup> gross floor area), Rural General Industrial and Rural Heavy Industrial zones within a building that is not a greenhouse. A cannabis production facility growing in a greenhouse or outdoors is permitted in the Rural Countryside zone. Outdoor storage is not permitted. No cannabis production facility that is contained within a building is permitted to become a nuisance due to odour or fumes. A minimum setback of 300 metres is required from a residential use or an Institutional or Rural Institutional zone when outdoor cultivation or cultivation within a greenhouse is occurring.

#### **4.12 Halton Hills**

The Town of Halton Hills requires a site specific Zoning By-law amendment for indoor cannabis uses in rural and agricultural areas subject to a minimum 150 metre setback from sensitive land uses including buildings, amenity spaces or

open space areas. Outdoor cannabis cultivation is permitted subject to a 50 metre setback from lot lines. The Official Plan includes policy for general land use compatibility such as consideration for enjoyment and privacy of neighbouring properties and the requirement to provide studies demonstrating no negative impacts with respect to adjacent agricultural uses, traffic, noise, odour and dust, groundwater and surface water, parking, private servicing and site design matters. Policies have also been included to require that cannabis processing satisfies provincial criteria for agriculture-related uses. The Town's Zoning By-law includes minimum parking requirements for all cannabis uses. Cannabis uses are permitted as of right in the Urban Employment Zone within a building provided that the lot is setback a minimum of 150 metres from the lot line of a sensitive use.

#### **4.13 Vernon, British Columbia**

The City of Vernon, British Columbia permits cannabis cultivation facilities in the Agricultural and Light Industrial zones while cannabis processing facilities are permitted in Light Industrial and Business Park zones. Cannabis cultivation facilities in Agricultural zones are required to be setback a minimum of 50 metres from residential lands. Cannabis cultivation facilities are permitted within an enclosed building in the Light Industrial zone but must not be detected beyond the property line. The zoning also contains general parking requirements.



## 5.0 Land Use Impacts

### 5.1 Odour & Air Quality

Odour impacts are the most common land use impact that is being experienced from cannabis production facilities in the Town of Pelham and beyond. High concentrations of naturally occurring chemicals that are produced by cannabis plants during the growing and flowering, known as biogenic volatile organic compounds (BVOCs), as well as other volatile organic compounds (VOCs) such as butane vapour from the extraction process have been documented inside and outside of Cannabis Production Facilities where certain types of processing takes place.<sup>2</sup>

#### 5.1.1 Recommendations for Odour & Air Quality Impacts

The most commonly applied municipal approach to mitigating odour and air quality impacts and general incompatibility between sensitive land uses and agricultural land uses has been setbacks. No guidance material is available for appropriate setbacks from cannabis production facilities from Federal or Provincial governments at this time. Other municipality's setbacks to sensitive receptors vary between minimal setbacks to property lines of about 45 metres up to a proposed 1500 metres in Niagara-on-the-Lake. The most commonly applied setback is 150 metres from sensitive receptors. It is also appropriate to look at approaches to sensitive receptors in other industries for guidance. It is noted that setbacks should consider the context of the municipality.

#### (a) Approaches to Setbacks from Sensitive Receptors in other Applications

##### (i) Minimum Distance Separation

Beginning in 1970, the Ministry of Agriculture, Food and Rural Affairs (OMAFRA) published guidance documents which provided a framework for separating new and expanding livestock operations from sensitive land uses and vice versa. The guidance documents have been revised a number of times since 1970 to reflect new information, knowledge and the needs of the agricultural industry. The Provincial Policy Statement, 2014 includes policy that new land uses, including the creation of lots, and new or expanding livestock facilities shall comply with the minimum distance separation formulae (2.3.3.3 & 2.3.6.1(b)(2)). The most recent version of the Minimum Distance Separation (MDS) is detailed in OMAFRA's 2017 Minimum Distance Separation (MDS) Document – Publication 853.

The MDS Formulae are calculated based on five factors: type of livestock housed, potential number of livestock housed, percentage increase in the size of the operation, type of manure system and storage and the type of encroaching

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<sup>2</sup> Desert Research Institute. (2019, September 18). Emissions from cannabis growing facilities may impact indoor and regional air quality: Pilot study evaluates potential for air quality impacts at facilities in Nevada and California. *ScienceDaily*. Retrieved December 11, 2019 from [www.sciencedaily.com/releases/2019/09/190918100230.ht](http://www.sciencedaily.com/releases/2019/09/190918100230.ht)



land use. There are two different calculations that are detailed, MDS I provides the MDS between proposed new development and any existing livestock barns, manure storages and/or anaerobic digesters and MDS II provides the MDS between proposed new, expanding or remodeled livestock barns, manure storages and/or anaerobic digesters and existing or approved development.

At the present time, there are no comparable setback requirements or guidance documents from OMAFRA for indoor or outdoor crop production, such as cannabis. It is noted that Town Officials raised this matter with the Minister of OMAFRA in August, 2019 and requested that OMAFRA consider developing a MDS Formulae for cannabis and cannabis related uses.

## **(ii) Separation Distances**

The Ministry of Environment, Conservation and Parks (MECP) has a number of Environmental Land Use Planning Guides. The D-1 Land Use and Compatibility Guide assists land use planning authorities by making recommendations for separation distances and control measures to prevent and minimize adverse effects from incompatible land uses. This Guide only applies to new uses and does not normally apply to lands owned or purchased by undertakings under federal jurisdiction and therefore, does not apply to cannabis production.

The D-1 Guide speaks to adverse effects which may include items such as:

- noise and vibration;
- visual impact (for landfills only);
- odours and other air emissions;
- litter, dust and other particulates; and
- other contaminants.

In the event that adverse effects cannot be mitigated through an appropriate separation distance or technology, the development cannot occur until the adverse effect no longer exists.

The D Guidelines apply to proposed new facilities as well as proposed new sensitive uses located near existing facilities. A facility is defined as:

A transportation, commercial, industrial, agricultural, intensive recreational or utilities/services building or structure and/or associated lands (e.g. abattoir, airport, railway, sewage treatment plant, landfill, manufacturing plant, generation stations, sports/concerts stadium, etc.) which produce(s) one or more 'adverse effect(s)' on a neighbouring property or properties."

The MECP does not provide any specific guidance on separation distances for agricultural uses such as cannabis. However, guidance is provided for sewage treatment, gas or oil pipelines and facilities, landfills and dumps and industrial facilities. The most similar comparator to cannabis processing, given some of the processing components is likely the D-6 Compatibility between Industrial

Facilities guide which classifies industrial uses into Classes I-III. These are illustrated in Figure 2.

Category	Outputs	Scale	Process	Operation /Intensity	Possible examples **
Class I	<ul style="list-style-type: none"> <li>Noise: Sound not audible off property</li> <li>Dust and/or Odour: Infrequent and not intense</li> <li>Vibration: No ground borne vibration on plant property</li> </ul>	<ul style="list-style-type: none"> <li>No outside storage</li> <li>Small scale plant or scale is irrelevant in relation to all other criteria for this Class</li> </ul>	<ul style="list-style-type: none"> <li>Self contained plant or building which produces/stores a packaged product. Low probability of fugitive emissions</li> </ul>	<ul style="list-style-type: none"> <li>Daytime operations only</li> <li>Infrequent movement of products and/or heavy trucks</li> </ul>	<ul style="list-style-type: none"> <li>Electronics manufacturing and repair</li> <li>Furniture repair and refinishing</li> <li>Beverages bottling</li> <li>Auto parts supply</li> <li>Packaging and crafting services</li> <li>Distribution of dairy products</li> <li>Laundry and linen supply</li> </ul>
Class II	<ul style="list-style-type: none"> <li>Noise: Sound occasionally audible off property</li> <li>Dust and/or Odour: Frequent and occasionally intense</li> <li>Vibration: Possible groundborne vibration, but cannot be perceived off property</li> </ul>	<ul style="list-style-type: none"> <li>Outside storage permitted</li> <li>Medium level of production allowed</li> </ul>	<ul style="list-style-type: none"> <li>Open process</li> <li>Periodic outputs of minor annoyance</li> <li>Low probability of fugitive emissions</li> </ul>	<ul style="list-style-type: none"> <li>Shift operations permitted</li> <li>Frequent movement of products and/or heavy trucks with the majority of movements during daytime hours</li> </ul>	<ul style="list-style-type: none"> <li>Magazine printing</li> <li>Paint spray booths</li> <li>Metal command</li> <li>Electrical production manufacturing</li> <li>Manufacturing of dairy products</li> <li>Dry cleaning services</li> <li>Feed packing plant</li> </ul>
Class III	<ul style="list-style-type: none"> <li>Noise: sound frequently audible off property</li> <li>Dust and/or Odour: Persistent and/or intense</li> <li>Vibration: Ground-borne vibration can frequently be perceived off property</li> </ul>	<ul style="list-style-type: none"> <li>Outside storage of raw and finished products</li> <li>Large production levels</li> </ul>	<ul style="list-style-type: none"> <li>Open process</li> <li>Frequent outputs of major annoyances</li> <li>High probability of fugitive emissions</li> </ul>	<ul style="list-style-type: none"> <li>Continuous movement of products and employees</li> <li>Daily shift operations permitted</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturing of paint and varnish</li> <li>Organic chemicals manufacturing</li> <li>Breweries</li> <li>Solvent recovery plants</li> <li>Soaps and detergent manufacturing</li> <li>Manufacturing of resins and costing</li> <li>Metal manufacturing</li> </ul>

**Figure 2 D-6-1 Industrial Categorization Criteria<sup>3</sup>**

<sup>3</sup> Ministry of Environment, Conservation and Parks. (2016). Retrieved January 2, 2020 from <https://www.ontario.ca/page/d-6-1-industrial-categorization-criteria>

The recommended minimum separation distances are 20 metres for Class I industrial facilities, 70 metres for Class II industrial facilities and 300 metres for Class III industrial facilities. These minimum separation distances are required even if mitigation for adverse effects is proposed.

The Compatibility between Industrial Facilities guide also includes potential influence areas of 70 metres for Class I industrial facilities, 300 metres for Class II industrial facilities and 1000 metres for Class III Industrial facilities. The location of a sensitive use within an area of potential influence requires the preparation of technical studies that outline potential problems and recommend mitigation measures if needed. MECP can recommend a larger separation distance than the largest potential influence area if the need can be demonstrated.

### (iii) S.M.A.R.T. Principles

The Ministry of Agriculture, Farming and Rural Affairs recommends employing the “S.M.A.R.T” principles to avoid and reduce nuisance complaints:

**“Separation** - Isolate buildings, livestock and storage as far from neighbours as possible. Trees, shrubs and other landscaping features reduce odour and noise drift. The aesthetics of a farm can improve its acceptance level.

**Magnitude reduction** - Reduce the amount of farm odour, spray drift and noise with some simple practices. For example, to reduce noise from crop-drying fans, use sound-absorbing materials.

**Alteration** - Consider changing the design or management of facilities. For example, in certain applications, manure composting can reduce storage volume, odour and nuisance pests. Simply adding liquid manure to the storage from the bottom rather than the top can allow the surface to crust over, thereby reducing the release of odours.

**Reduction of occurrences** - Reduce potential nuisance “events”. Most rural residents accept occasional odours from farming activities, but persistent odours are likely to generate complaints. Minimize the frequency of manure spreading and use recommended incorporation strategies.

**Timing** - Contact all neighbour(s) a few days in advance of events such as manure spreading to give them time to take appropriate action. Communications shows the farmer is concerned and

*considerate, and reduces feelings of helplessness on the part of neighbours”.<sup>4</sup>*

### **(b) Town of Pelham Context**

Odours from cannabis production facilities have been a consistent and recurring problem in the Town of Pelham. Residents and Town By-law Enforcement staff have noted odours from cannabis production facilities up to 2 kilometres away. The intensity and distance of odours are greatly influenced by weather, wind conditions and also dependent on the number and type of plants, stage of growth, odour mitigation technology and building construction. The potential for odour impacts also varies significantly depending on the activities taking place. For example, a facility for propagation of cannabis plants would not be associated with significant odours while a facility that is growing plants to the flowering stage and doing processing has the potential for significant odour impacts.

The Town of Pelham is known for its rolling topography and the presence of the Fonthill Kame and Niagara Escarpment. These geological features form the highest elevation in the Niagara Region and influence the climate by providing a buffer from southwesterly winds. While this creates a favourable growing environment for fruit, local farmers note that it creates a phenomenon known as cold-air-runoff winds. Cold-air-runoff winds occur when air comes in contact with the land, cools, flows and pools into lower lying areas. This concept can also be applied to odours meaning that the distance and concentration of odours is greatly affected by topography.

The majority of agricultural properties in the Town are less than 40 hectares in size and there are approximately 1674 sensitive receptors in the agricultural areas. Sensitive receptors include residential, school, day care, parks, churches, campgrounds and community centre uses. The dispersal of sensitive land uses in the rural area and the requirement for a significant setback from such uses in order to alleviate odours are a challenge as setbacks cannot be so large that they cause a prohibition of cannabis production uses in the Town. Maps included in Appendix I to this report depict 150 metre, 300 metre and 1000 metre setbacks to sensitive receptors while also eliminating natural heritage areas that are not developable. These maps are conservative as they place dots in the centre of residences as opposed to including the entire structure. Further, the map does not show setbacks from sensitive receptors in adjacent municipalities. The areas shown without restrictions on this map may also be further restricted for cannabis production as they may not meet other requirements for access or servicing.

Case law has demonstrated that municipalities cannot prohibit legal uses within their boundaries. Due to the large number of sensitive receptors in the rural areas of the Town, the most commonly applied setback of 150 metres is

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<sup>4</sup> McTavish, Gary (January 2005). Farmer and Neighbour Relations Preventing and Resolving Local Conflicts [Fact Sheet]. Retrieved December 12, 2019 from <http://www.omafr.gov.on.ca/english/engineer/facts/05-001.htm>

appropriate. While a setback of 150 metres from sensitive receptors may help to mitigate some odour impact it is not the only tool to mitigate odours. Both the D-6 Compatibility between Industrial Facilities Guide and the S.M.A.R.T principles recommended by the Ministry of Agriculture recognize mitigation through the use of technology and magnitude reduction. Health Canada also requires filtration and ventilation systems to prevent the escape of odours as part of a License for commercial cultivation and processing.

In addition to impacting the use and enjoyment of personal property in the surrounding area, the escape of BVOCs and VOCs can contribute to ground level ozone by reacting with other harmful emissions, such as nitrogen oxide from vehicle emissions, in the presence of sunlight. Ground level ozone is harmful to human health.<sup>5</sup> These impacts are magnified in areas with industrial uses that produce nitrogen oxide and high traffic and lesser in rural areas.

Generally, cannabis production activities which are associated with odours release the largest number of VOCs. Odour control technologies that reduce the emission of VOCs reduce odours as well as the potential for harmful ground level ozone to occur.<sup>6</sup>

The experience in the Town of Pelham has been that the most common odour control technologies employed by the cannabis production facilities are not effective or not consistently effective which has resulted in negative impacts to residents. Cannabis production is a new and evolving industry and a number of odour control technologies are still being tested or are being applied to cannabis for the first time. Further some of the odour control technologies being employed, such as the use of masking agents, are also offensive to sensitive uses. The technology does exist to predict odours, model the areas impacted and test odour mitigation technologies. This work is commonly done in industrial applications.

Given the characteristics of the Town of Pelham, the variation in odour impacts by different cannabis production processes and characteristics and the failure of a minimum setback from sensitive receptors to adequately address odour impacts, it is recommended that cannabis production facilities be considered on a site specific basis through a Zoning By-law amendment. Official Plan policies should require the submission of an Odour Emission Summary, Dispersion Modelling and Mitigation Report demonstrating no adverse effects on sensitive receptors for consideration by Council as part of a complete application. This will ensure that setbacks and technologies are science-based, not subjective and fit

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<sup>5</sup> Desert Research Institute. (2019, September 18). Emissions from cannabis growing facilities may impact indoor and regional air quality: Pilot study evaluates potential for air quality impacts at facilities in Nevada and California. *ScienceDaily*. Retrieved December 11, 2019 from [www.sciencedaily.com/releases/2019/09/190918100230.ht](http://www.sciencedaily.com/releases/2019/09/190918100230.ht)

<sup>6</sup> Denver Public Health & Environment, *Cannabis Environmental Best Management Practices Guide*, [https://www.denvergov.org/content/dam/denvergov/Portals/771/documents/EQ/MJ%20Sustainability/CannabisBestManagementPracticesGuide\\_FINAL.pdf](https://www.denvergov.org/content/dam/denvergov/Portals/771/documents/EQ/MJ%20Sustainability/CannabisBestManagementPracticesGuide_FINAL.pdf), (October 2018).

each situation. In addition to impacts on sensitive receptors, the Odour Emission Summary, Dispersion Modelling and Mitigation Report should consider cumulative impacts of nearby cannabis operations. While setbacks can be effective in mitigating some cumulative impacts, the science based approach for determining an appropriate setback is advisable.

It should be noted that the Ministry of Environment, Conservation and Parks does not have air quality monitoring requirements for cannabis production facilities as there are for industrial uses. It is recommended that further to the requirement for the Odour Emission Summary, Dispersion Modelling and Mitigation Report, that Official Plan policy include the requirement for Odour Control, Maintenance, Monitoring and Contingency Plans to ensure that systems remain in good working order, detect issues early and implement back up plans in the event of failure. If this is part of a Site Plan Control requirement, it is acknowledged that this is over and above what the *Planning Act* allows for through Site Plan Control.

It is still recommended that a minimum setback of 150 metres from cannabis production facilities to sensitive receptors be required, however this will address basic land use compatibility as discussed later in this report more than simply odour.

It is noted that a number of municipalities are experiencing challenges related to land use compatibility impacts resulting from designated producers. It is unclear how to regulate designated producers from a municipal standpoint without limiting access to medical cannabis as permitted by the ACMPR. Further investigation should be undertaken in this regard.

Existing cannabis production facilities in the Town should be recognized site specifically for the currently licensed activities. Future expansion or change to the licensed activities should be subject to a Zoning By-law amendment so that the land use impacts of those activities can be considered through examination of supporting studies provided as part of complete applications as well as reviewed in light of Official Plan, Regional and Provincial Policies. Site Plan Control is an existing requirement for any future expansions.

With respect to cannabis processing activities, the Town Official Plan does not speak to value-added agricultural uses at this time. Such uses would require an Official Plan amendment in addition to a Zoning By-law amendment in the Agricultural areas. It is recommended that the Town add policies for value added agricultural uses to the Good General and Specialty Agricultural designations in conformity with the Provincial Policy Statement.

Finally, while not a land use planning tool, it is advisable that the Town use its authority under the *Municipal Act, 2001* to amend its Nuisance By-law to include odour nuisances which will provide a mechanism for regulation and enforcement of odour complaints.



## 5.2 Supplemental Lighting

### 5.2.1 Supplemental Lighting Impacts

Light pollution has been a major land use impact associated with cannabis production taking place in greenhouses in the Town of Pelham due to the use of supplemental lighting. Many residents have expressed discontent that their yards are lit up during the night, making it unenjoyable to use their properties in the evening. Others have lamented about the inability to enjoy the stars and the night sky. Further concerns have been raised that the light impacts adjacent outdoor crops that require a certain number of hours of darkness for viability and that the light attracts insects causing negative impacts to nearby crops and natural vegetation.

Figure 3 is an image taken in the Town of Pelham in December 2018 showing the light pollution from a cannabis production facility.



**Figure 3** Light Pollution from Cannabis Production Facility in Pelham, Ontario in December 2018

Photo by Janet O'Sullivan Snelgrove

### 5.2.2 Recommendations for Supplemental Lighting Impacts

Light pollution impacts can be mitigated through the use of black-out curtains on the walls and roofs of cultivation areas in greenhouses. It is recommended that the requirement to install and operate light mitigation systems that reduce the off-

property impact to a level of causing no adverse effects, as well as to prepare light control, maintenance, monitoring and contingency plans, where supplemental lighting is proposed, be entrenched in Official Plan policy as well as being made conditions of Site Plan approval for cannabis production and other operations using supplemental lighting in greenhouses.

Further, while not a land use planning tool, it is advisable that the Town use its authority under the *Municipal Act, 2001* to amend its Nuisance By-law to provide for a mechanism for regulation and enforcement of light complaints.

## **5.3 Noise**

### **5.3.1 Noise Impacts**

While cannabis cultivation activities are not generally associated with significant noise impacts, a number of the facilities in the Town of Pelham are using natural gas generators as their primary source of power for their greenhouses. The constant sound of the generator has created a negative impact for nearby sensitive receptors. In addition to noise impacts from the generators, various processes associated with the processing of cannabis could be associated with noise impacts in some cases.

### **5.3.2 Recommendations for Noise Impacts**

The minimum setback of 150 metres may assist in mitigating some noise impacts, however given that new cannabis production uses will be subject to a site specific zoning by-law amendment depending on the type and scale of operation, any noise considerations can be reviewed as part of this process. The ability to request such a study is already present in Section E.3.1 of the Town's Official Plan as part of complete applications for Zoning By-law amendment and Site Plan Control. No further policy changes are recommended in this regard. Any proposal for cannabis processing activities would also be considered in light of recommended Official Plan policy respecting value-added agricultural uses in Agricultural areas which speak to compatibility with surrounding agricultural operations and meeting provincial noise emission criteria.

## **5.4 Traffic**

### **5.4.1 Traffic Impacts**

Cannabis production facilities have the potential to generate significant traffic depending on the type of operation, number of employees, shifts, deliveries and shipments. Within the Town of Pelham, large cannabis production facilities with many employees have been located on rural roads. As such, the Town has received complaints that the roads are not able to accommodate the volume of traffic created and have contributed to congestion at intersections.



### **5.4.2 Recommendation for Traffic Impacts**

It is recommended that the requirement for a traffic study be included as part of a complete application for Zoning By-law Amendment and Site Plan Control where the number of employees, deliveries and shipments is significant and that any recommendations be implemented through the Site Plan Agreement. The ability to request such a study is already present in Section E.3.1 of the Town's Official Plan. No further policy changes are recommended in this regard. Any proposal for cannabis processing activities would also be considered in light of recommended Official Plan policy respecting value-added agricultural uses in Agricultural areas which speak to compatibility with surrounding agricultural operations and the use being appropriate to available rural services (roads).

## **5.5 Groundwater**

### **5.5.1 Groundwater Impacts**

Cannabis production facilities are generally significant water users as water is needed for irrigation of the plants, cleaning and disinfecting, processing activities where applicable, as well as domestic use for employees. In accordance with Regional policy, Cannabis production is permitted in Agricultural and Employment Areas. Within the Town of Pelham, these areas are unserviced meaning that water supply must come from other sources, such as a well, pond or cistern. Some cannabis producers in the Town recycle the run off from the roofs to use as a main source of water. The use of a well for a facility has the potential to impact groundwater level and the water supply of others using wells. Permits to take water over certain thresholds are required and authorized by the Ministry of Environment, Conservation and Parks. However, it is still appropriate for the Town to consider impacts on groundwater supply as part of applications for Zoning By-law amendment and Site Plan Control.

In addition to concerns over impacts to groundwater quantity, some questions have arisen over the potential for contamination due to waste products generated from cannabis production facilities. These concerns relate to the amount of sewage output associated with a significant number of employees as well as bi-products from water treatment. Sewage systems that treat over 10,000 L/day of effluent are reviewed and require permits from the Ministry of Environment, Conservation and Parks and smaller systems are reviewed and require permits from the Niagara Region. Ground water is often required to be treated and purified prior to application to plants in order to meet product quality requirements. The minerals and metals that are being removed during the water purification process as well as chemicals used in disinfection processes require disposal and may have the potential to contaminate groundwater. In Pelham however, the cannabis producers do not use groundwater for irrigation purposes, but rather use run-off collected in ponds that is treated with a UV system.

### **5.5.2 Recommendation for Groundwater Impacts**

In the absence of public sewer and water services, it is appropriate to include the requirement for a Private Servicing Report prepared by a Qualified Professional that includes information relating to septic systems, identifies water supply and potential impacts on the water table. Further, depending on the water supply proposed as Waste Management Report could also be required identifying the waste products produced and how they will be disposed of. The ability to request such a study is already present in Section E.3.1 of the Town's Official Plan as part of complete applications for Zoning By-law amendment and Site Plan Control. No further policy changes are recommended in this regard. Any proposal for cannabis processing activities would also be considered in light of recommended Official Plan policy respecting value-added agricultural uses in Agricultural areas which speak to not hindering surrounding agricultural operations and uses being appropriate to available rural services.

## **5.6 Property Value**

### **5.6.1 Property Value Impacts**

Many residents in Pelham have claimed that their property values are being negatively impacted by the location of Cannabis Production Facilities. Some cannabis producers have made a contrary argument. A recent report prepared by RE/MAX claimed that home sales rose by 27.1% year-over-year with average prices going up by 10.5% in the Rideau-St. Lawrence Region due to the establishment of large-scale cannabis production facilities that have created jobs.<sup>7</sup> A similar trend was reported in Leamington and in Eastern Canada. It should be noted that the characteristics of the Rideau-St. Lawrence Region, Leamington and Eastern Canada are different than the Town of Pelham as well as the size and characteristics of the cannabis production facilities operating within the Town of Pelham. No studies have been conducted in the Town of Pelham regarding property values at this time.

Municipal Property Assessment Corporation (MPAC) staff have been contacted for information on this matter. MPAC staff's preliminary analysis has shown no impact on sales of properties within 1 kilometer of a facility at this time. This analysis was upheld as part of a recent decision by the Assessment Appeals Tribunal. MPAC will be completing an official study for the 2021 tax year.

### **5.6.2 Recommendation for Property Value Impacts**

A number of recommendations are being made with the intent to achieve better land use compatibility between sensitive land uses and cannabis production facilities and activities. By addressing the negative impacts through the

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<sup>7</sup> Rodriguez, Jeremiah. (October 16, 2019). Cannabis Industry Contributed to Spike in Home Prices, Housing Shortages: Survey. CTV News. Retrieved from <https://www.ctvnews.ca/canada/cannabis-industry-contributed-to-spike-in-home-prices-housing-shortages-survey-1.4641444>

implementation of the recommendations of this study, property values should not be negatively impacted.

## **5.7 Agricultural Land**

### **5.7.1 Loss of Agricultural Lands**

Concerns have been raised that high quality agricultural lands in the Town are being lost to the construction of large greenhouses and structures dedicated to cannabis production and processing activities, along with parking and loading areas and septic systems.

As discussed under the Planning Policy Review section of this report, Provincial Policies and Guidelines as well as Regional Official Plan policies consider the growing of cannabis to be an agricultural use and processing is also permitted in agricultural areas as a value-added agricultural use. Provincial and Regional policies all support agriculture of all types in agricultural areas.

### **5.7.2 Recommendation for Loss of Agricultural Lands**

From a planning perspective, cannabis production and processing is a permitted use in agricultural areas. The requirement for a site specific Zoning By-law amendment and Site Plan Control for any new cannabis uses will allow the use of property to be reviewed on a site specific basis so that impacts can be minimized where possible through appropriate siting and review for compliance with policies for agricultural and value-added agricultural uses. Any proposal for cannabis processing activities would also be considered in light of recommended Official Plan policy respected value-added agricultural uses in Agricultural areas which speak to maintaining the agricultural/rural character of the area.

## **5.8 Increased Costs**

### **5.8.1 Increased Costs for the Town & Burden to the Ratepayers**

A common concern for Town residents has been that cannabis production facilities are classified into a farm tax class and so pay a lower rate of taxes than residential property owners. MPAC completed a review of taxation of Cannabis Production Facilities in November 2019. The review determined that structures or portions thereof used for growing and harvesting cannabis are included in the farm tax class and those used for processing of cannabis produced on the same site are classified in the value added farm tax class. Structures or portions thereof used for changing the consistency of the plant into a marketable product, testing and research are classified in the industrial tax class. This is a similar hybrid model that is used in other agricultural uses and value added industries, such as wineries.

The establishment of cannabis production facilities in the Town of Pelham can result in additional burden being placed on roads and fire services as any new

development does. However, the Town's Development Charges By-law did exempt farm buildings from paying development charges. In 2019, Council amended the Development Charges By-law to require development charges for "marijuana production facilities." This By-law is currently under appeal. The intent of the applying development charges to cannabis operations is for the Town to recover growth related costs from these operations.

Finally, the Town has incurred significant direct and indirect costs resulting from cannabis production facilities. Direct costs have included fees for external legal counsel where conflicts have arisen. Indirect costs have included significant amounts of staff time from By-law Enforcement staff to respond to complaints and for Planning staff to undertake this study, prepare draft policies and regulations and facilitate the planning process. Staff from various Town Departments have participated in the process by drafting By-laws, attending and facilitating meetings as well as providing review and comments.

Indirect costs are expected to continue as policies and regulations are implemented and enforced. More direct costs are also anticipated for training, odour measuring equipment and annual calibration as well as legal costs where required.

Future applications for new or expanded cannabis production operations would require planning approvals (Site Plan and Zoning By-law Amendment). Staff time for processing these applications is partially funded through application fees collected from applicants.

#### **5.8.2 Recommendation for Increased Costs & Burden to the Taxpayer**

The Town of Pelham received a total of \$13,838.00 from the provincial government through the Ontario Cannabis Legalization Implementation Fund to help with the implementation costs of recreational cannabis legalization. Since the Town opted out of having a retail cannabis store, no additional funds will be provided.

Unfortunately, the Town is limited in terms of its ability to collect additional fees from cannabis producers. Tax classifications are determined by MPAC and outside of the municipality's jurisdiction. The Town is attempting to amend the Development Charges By-law which is within its power to recover growth related costs.

There may be an opportunity to recover some fees in the event that fines are issued in response to enforcement.

This issue is not a land use compatibility concern so no recommendations are made in this regard.

## **5.9 Environmental**

### **5.9.1 Environmental Impacts**

Concerns have been expressed about environmental or natural heritage impacts resulting from the development of new cannabis production facilities in the Town. These impacts include impacts on endangered species, destruction of habitat and other ecological harm.

### **5.9.2 Recommendation for Environmental Impacts**

The recommended approach to require a site specific Zoning By-law amendment and Site Plan approval for new facilities will allow environmental impacts to also be considered on a case by case basis. Depending on the environmental features present on a property, an Environmental Impact Study can be required to assess any impacts as part of a submission for a complete application. The ability to request such a study is already present in Section E.3.1 of the Town's Official Plan as well as in the Environmental designations in the event that a property includes an environmental designation. No further policy changes are recommended in this regard. Any proposal for cannabis processing activities would also be considered in light of recommended Official Plan policy respecting value-added agricultural uses in Agricultural areas which speak to maintaining the agricultural/rural character of the area which includes avoiding major modification of land and removal of natural heritage features.

## **5.10 Changing Character**

### **5.10.1 Changing Character of the Rural Agricultural Area**

Many residents of the Town of Pelham have cited concerns about how the existing cannabis production facilities are changing the character of the rural agricultural area. The existing rural areas of the Town generally consist of a mix of traditional agricultural uses, such as cash crops, orchards and small livestock operations as well as greenhouse operations combined with many estate and rural residential type lots.

Outside of odour and light pollution concerns, residents have compared cannabis production facilities with industrial uses in terms of their appearance and operations. Traditional greenhouse operations for vegetables or flora culture within the Town have not required large numbers of employees on a regular basis, however some of the cannabis production facilities require hundreds of employees resulting in the need for large parking areas and septic systems. The parking areas are required to be lit for safety purposes and parking concerns have arisen where insufficient parking exists and contributes to traffic and safety concerns. Cannabis production facilities can employ staggered shifts of workers in a day, however they do not operate 24 hours per day.

In addition, the security measures required by Health Canada, including fencing, building construction types, visual monitoring and alarm systems contribute to the

impression that cannabis production facilities are similar to industrial uses and changing the character of the rural area.

#### **5.10.2 Recommendations for Changing Character of the Rural Agricultural Area**

Setbacks from sensitive receptors assist in reducing the feeling of being encroached on by a use that is similar to an industrial operation, however there are other requirements that should be included in zoning to mitigate the incompatibility between sensitive uses and cannabis production uses. The requirement for a minimum 5 metre landscaped buffer between all lots that permit or contain a sensitive land use and any security fencing as well as any roadway would assist in mitigating the visual impacts of large parking areas, parking area lighting and security fencing. A minimum parking requirement should be included in the Zoning By-law as well as a requirement that parking areas should also be located to the side or rear of facilities where possible or screened from the view of passing and adjacent residents.

These items should be reviewed in detail on a site specific basis by the Town through the Site Plan Control process. Site Plan Control is already required for greenhouses. Some housekeeping to the Site Plan Control By-law may be required to provide clarity.

Any proposal for cannabis processing activities would also be considered in light of recommended Official Plan policy respecting value-added agricultural uses in Agricultural areas which speak to maintaining the agricultural/rural character of the area which includes preference to reuse existing buildings, minimizing outdoor storage and lighting, providing visual screening and avoiding major modification of land.



## 6.0 Conclusion & Summary of Recommendations

Policy recommendations have been made based on the specific experience, context and land use impacts that have been experienced in the Town of Pelham due to the establishment of cannabis production facilities within the Town of Pelham. Those recommendations are as follows:

- (a) Cannabis production facilities should be considered on a site specific basis through a Zoning By-law amendment;
- (b) That further investigation be undertaken regarding regulation of designated producers.
- (c) Existing cannabis production facilities in the Town should be recognized site specifically for the currently licensed activities
- (d) The Zoning By-law should contain a minimum setback requirement of 150 metres from cannabis production facilities to sensitive receptors; a minimum 5 metre landscaped buffer requirement between all lots that permit or contain a sensitive land use or roadway and any security fencing; and the location of parking areas to the side or rear of facilities where possible or screened from the view of passing and adjacent residents. Consideration should also be given to including minimum parking requirements.
- (e) Official Plan policies should require the submission of an Odour Emission Summary, Dispersion Modelling and Mitigation Report demonstrating no adverse effects on sensitive receptors and considering cumulative impacts of nearby cannabis operations for consideration by Council as part of a complete application for Zoning By-law amendment;
- (f) Official Plan policies should include the requirement for Odour Control, Maintenance, Monitoring and Contingency Plans to ensure that systems remain in good working order, detect issues early and implement back up plans in the event of failure;
- (g) Official Plan policies should be added addressing value-added agricultural uses (cannabis processing) in conformance with the Provincial Policy Statement and Niagara Region Official Plan.
- (h) Official Plan policies should include the requirement to install and operate light mitigation systems that reduce the off-property impact to no adverse effects as well as to prepare light control, maintenance, monitoring and contingency plans where supplemental lighting is proposed as conditions of Site Plan approval for cannabis production and other operations using supplemental lighting in greenhouses;



- (i) While not a land use planning tool, it is advisable that the Town use its authority under the *Municipal Act, 2001* to amend the Nuisance By-law to address odour and light nuisances to provide for regulation and enforcement measures against these nuisances;
- (j) That the Town exercises its ability to request studies pertaining to noise, traffic, private servicing, waste management, groundwater and environment impacts already present in Section E.3.1 of the Town's Official Plan as part of complete applications for Zoning By-law amendment and Site Plan Control where warranted.
- (k) That the Town review the Site Plan Control By-law to ensure that all cannabis production facilities are subject to Site Plan Control and that site design protects the character of the rural area.

It is noted that any new policies and regulations that the Town may wish to impose on cannabis production facilities shall not interfere with federal licencing requirements of such operations and shall not be so onerous that they have the effect of prohibiting the establishment of these legal uses.

Prepared by:



**Shannon Larocque, MCIP, RPP**  
Senior Planner  
Town of Pelham  
Community Planning & Development



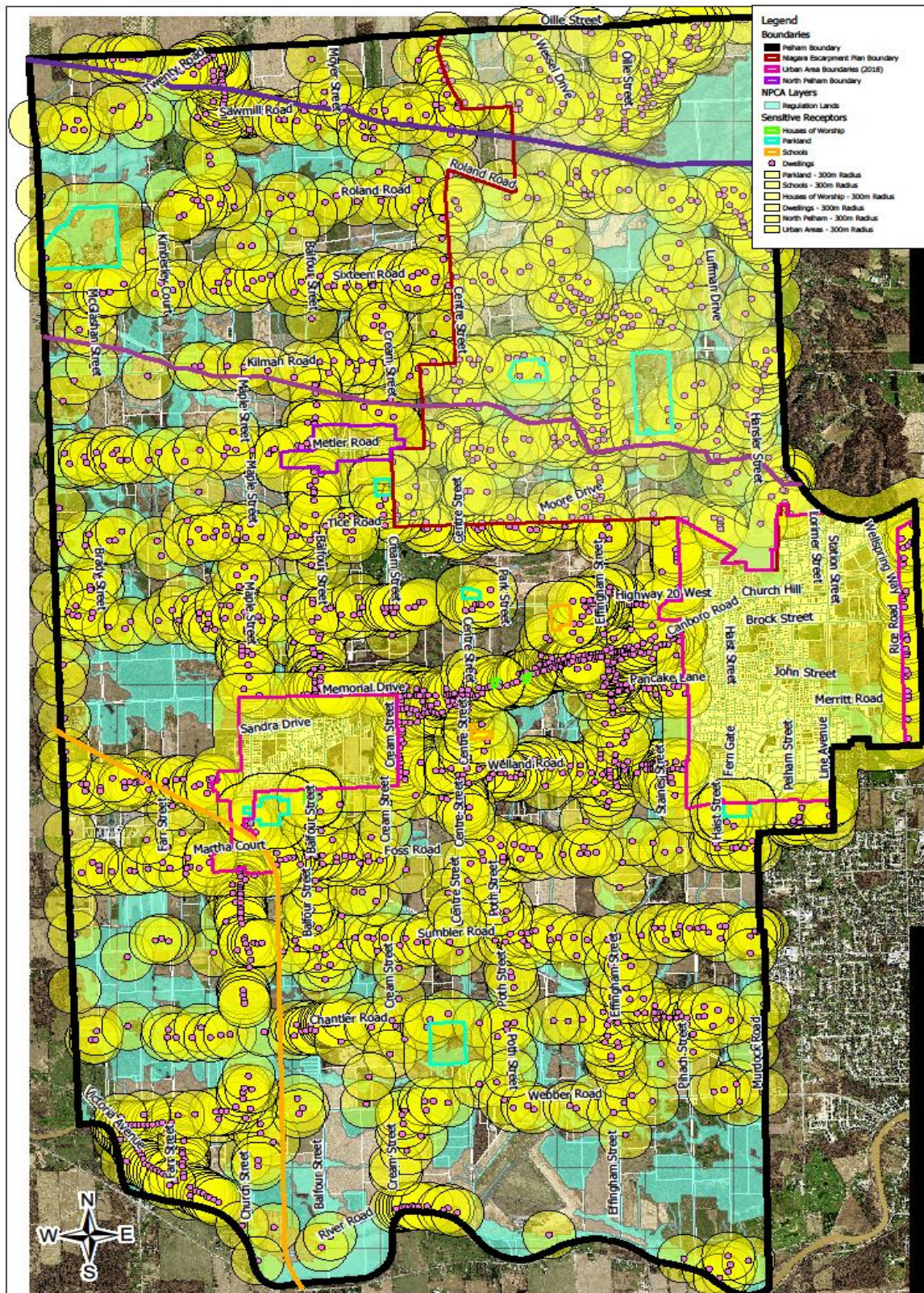
**Barbara Wiens, MCIP, RPP**  
Director  
Town of Pelham  
Community Planning & Development

## Appendix I – ‘Sensitive Receptor Setback Maps’

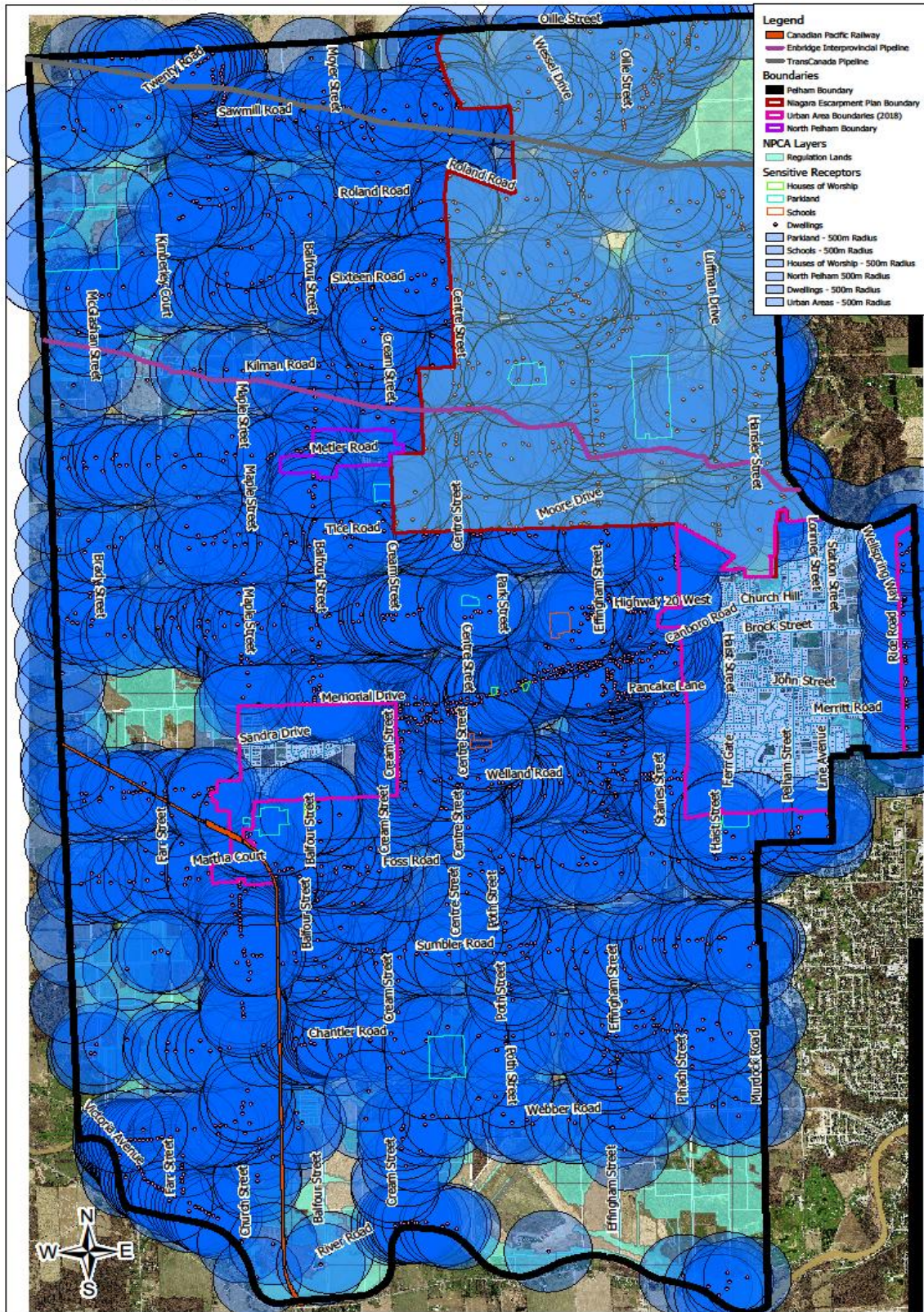












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**Subject:** November 2019 Financial Reports**Recommendation:**

**THAT Committee receive Report #2020-0016-Corporate Services and recommend to Council:**

**THAT Council receive Report #2020-0016-Corporate Services for information.**

**Background:**

The Corporate Services Department has prepared the attached financial reports, as at November 30, 2019, for the information of Council. The MCC and Transit reports also include non-financial indicators such as facility usage and ridership.

**Analysis:**

As at November 30, 2019, approximately 92% of time had lapsed. Total revenues were at approximately 92% of budget and appear to be on track. However, water and wastewater revenues are lower than budget due to reduced consumption in the summer. This consumption was impacted by weather patterns and is unpredictable. Total expenses were at approximately 88% of budget and appear to be on track. The Town has savings related to hydro at the MCC due to the work of the Utility Sustainability Committee, and the first year of debenture payments on the \$4M issued during the year came in slightly below budget.

MCC revenues are exceeding budget because Pelham received the New Horizons for Seniors Program Grant subsequent to budget approval, and because camp revenues and concession sales have exceeded budget for the year. MCC expenses are below budget due to hydro savings as a result of the work of the Utility Sustainability Committee. The MCC also has savings on natural gas resulting from mild winter weather and decreased use of humidifiers.

Transit revenues are below budget because the Region contribution to the link was received in December and the grant from the Ministry of Transportation related to the second bus is still being pending. Transit expenses appear to be on track.

**Financial Considerations:**

None.

**Alternatives Reviewed:**

Not applicable.

**Strategic Plan Relationship: Financial Sustainability**

By reviewing the monthly financial reports, Council can remain informed about whether there are any significant budget variances that would impact year-end financial results.

**Consultation:**

Not applicable.

**Other Pertinent Reports/Attachments:**

Appendix 1- Monthly Revenue Report at November 30, 2019

Appendix 2- Monthly Expenditure Report at November 30, 2019

Appendix 3- Meridian Community Centre Report at November 30, 2019

Appendix 4- Transit Report at November 30, 2019

**Prepared and Recommended by:**

Teresa Quinlin, MBA, CPA, CA  
Director of Corporate Services/Treasurer

**Prepared and Submitted by:**

David Cribbs, BA, MA, JD, MPA  
Chief Administrative Officer



# Appendix 1

## Monthly Revenue Report at November 30, 2019 (92% of time lapsed)

	Notes	2019			2018	
		Budget	Actual at Nov 30	Actual as a % of Budget	Budget	Actual at Dec 31
<b>Taxation</b>						
General Tax Levy		\$ 13,674,386	\$ 12,534,844	92 %	\$ 12,530,619	\$ 12,530,627
Payments in Lieu		300,471	275,802	92 %	300,471	299,576
<b>Total Taxation</b>	(1)	13,974,857	12,810,646	92 %	12,831,090	12,830,203
<b>Finance Department</b>						
Penalties and Interest		270,000	240,591	89 %	340,000	268,465
Supplemental Taxation Revenues	(2)	210,000	360,576	172 %	300,000	172,853
Transfer from Building Department		77,938	71,443	92 %	77,938	77,938
Ontario Unconditional Grants	(3)	39,800	40,500	102 %	39,800	39,800
Miscellaneous		15,000	19,507	130 %	10,000	80,029
Investment Income	(4)	10,000	158,771	1,588 %	5,000	52,756
<b>Total Finance Department</b>		622,738	891,388	143 %	772,738	691,841
<b>Clerk's Department</b>						
Committee of Adjustment		50,000	47,178	94 %	50,000	37,829
Miscellaneous		16,750	13,259	79 %	16,750	15,141
<b>Total Clerk's Department</b>		66,750	60,437	91 %	66,750	52,970
<b>Fire and By-law Services</b>						
Fire Department Revenues	(5)	35,450	42,235	119 %	34,700	37,086
By-law and Parking Enforcement	(6)	14,300	22,989	161 %	14,300	22,809
Provincial Offences Act Revenue	(7)	10,000	20,865	209 %	10,000	43,474
<b>Total Fire and By-law Services</b>		59,750	86,089	144 %	59,000	103,369
<b>Public Works</b>						
Facilities and Beautification		676,219	657,393	97 %	530,506	499,763
Aggregate Resource Grant	(8)	25,000	52,831	211 %	25,000	23,147
Transfer from Reserve		425,500	390,042	92 %	-	78,836
Miscellaneous	(9)	80,500	64,254	80 %	18,000	26,902
Fonthill/Hillside Cemeteries		78,500	74,294	95 %	71,600	95,850
<b>Total Public Works</b>		1,285,719	1,238,814	96 %	645,106	724,498
<b>Recreation, Culture and Wellness</b>						
Recreation and Wellness	(10)	347,450	408,742	118 %	225,423	256,881
Special Events and Festivals	(10)	150,150	148,917	99 %	150,250	197,521
Culture and Community Enhancement	(10)	78,500	66,463	85 %	66,000	78,824
Public Transit	(11)	211,953	75,954	36 %	165,000	80,576
<b>Total Recreation, Culture and Wellness</b>		788,053	700,076	89 %	606,673	613,802
<b>Community Planning and Development</b>						
Building Department Revenues		500,500	662,448	132 %	500,500	655,957
Planning Fees		65,340	149,395	229 %	65,340	196,913
Municipal Drainage		-	-	- %	12,000	-
<b>Total Community Planning and Development</b>	(12)	565,840	811,843	143 %	577,840	852,870
<b>Water and Wastewater</b>						
Water Revenues		2,761,884	2,181,572	79 %	2,477,727	2,512,226
Wastewater Revenues		2,014,104	1,604,747	80 %	1,708,694	1,796,919
<b>Total Water and Wastewater</b>	(13)	4,775,988	3,786,319	79 %	4,186,421	4,309,145
<b>GRAND TOTAL</b>		\$ 22,139,695	\$ 20,385,612	92 %	\$ 19,745,618	\$ 20,178,698

## Appendix 1

## Monthly Revenue Report at November 30, 2019 (92% of time lapsed)

## Explanatory Notes:

- (1) Taxation revenue based on budget, final tax bills were sent out in June.
- (2) Supplemental revenue is collected June through November, and has exceeded budget for 2019.  

Supplementary/omitted taxes result from an addition, renovation, construction or class change that occurred on a property that was not previously recorded on the assessment roll. When supplementary/omitted assessment is added to the roll, additional property taxes can be collected for the current year, and if applicable, for any part of all of the two previous years as described in Section 34 of the Assessment Act.
- (3) Budget of \$39,800 pertained to Ontario Municipal Partnership Fund (OMPF). OMPF payments for Q1-Q3 have been received, and new Municipal Modernization grant of \$725,000 has been deferred until it can be applied to expenditures approved by Council. Approximately \$520k has been approved to be applied to capital projects in order to allocate Federal Gas Tax to the Pelham St. project. These grants are considered unconditional because they are not dependent upon a specific project being completed.
- (4) Interest will be allocated to non-discretionary reserves and obligatory reserve funds at year-end.
- (5) \$5,000 Grant received from Enbridge for fire equipment which has been purchased.
- (6) Increased fees for permits and parking fines.
- (7) Q3 POA received in October and has exceeded budget for 2019.
- (8) Aggregate resource grant received in September, and is significantly higher than prior years.
- (9) Additional payment expected for federal grant related to climate change and innovation. The first payment was received in October for approximately the first seven months of the year.
- (10) Most recreation camp and special event activity occurs in Q2 and Q3. New horizons for Seniors grant funding of \$25,000 received subsequent to budget approval and will have related increased expenditures.
- (11) Awaiting first portion of grant related to second bus as well as Region contribution to the link.
- (12) Increased revenue due to growth within the Town. At year-end, any Building Department surplus is transferred to its reserve fund.
- (13) Includes water and wastewater billed for January to October. Consumption tends to be higher in the summer, therefore revenue appears to be lower than budget due to lower consumption than anticipated.

## Appendix 2

### Monthly Expenditure Report at November 30, 2019 (92% of time lapsed)

	Notes	2019			2018	
		Budget	Actual at Nov 30	Actual as a % of Budget	Budget	Actual at Dec 31
<b>Administration Services</b>						
Members of Council		\$ 217,409	\$ 195,021	90 %	\$ 184,643	\$ 189,270
CAO's Office	(1)	257,512	143,250	56 %	269,326	251,004
Human Resources	(2)	86,145	85,525	99 %	201,180	178,811
<b>Total Administration Services</b>		561,066	423,796	76 %	655,149	619,085
<b>Clerk's Department</b>						
Clerk's Department		357,814	331,184	93 %	413,943	414,959
Marketing and Communication		125,975	100,000	79 %	107,761	102,750
Committee of Adjustment	(3)	6,650	2,223	33 %	6,650	3,167
<b>Total Clerk's Department</b>		490,439	433,407	88 %	528,354	520,876
<b>Corporate Services</b>						
Finance Department		809,394	750,207	93 %	844,232	823,910
Shared Administrative Overhead	(4)	845,015	814,875	96 %	620,250	933,824
Shared Information Technology		448,848	415,267	93 %	455,702	431,258
<b>Total Corporate Services</b>		2,103,257	1,980,349	94 %	1,920,184	2,188,992
<b>Fire and By-law Services</b>						
Fire Services	(5)	1,329,511	1,285,485	97 %	1,297,766	1,303,643
By-law and Parking Enforcement		126,146	108,422	86 %	114,791	124,848
Health and Safety	(6)	7,955	8,194	103 %	88,434	26,459
Crossing Guards		42,563	38,250	90 %	41,508	44,482
Animal Control	(8)	36,000	35,850	100 %	39,868	39,868
<b>Total Fire and By-law Services</b>		1,542,175	1,476,201	96 %	1,582,367	1,539,300
<b>Public Works</b>						
General Administration	(8)	1,183,229	971,890	82 %	940,037	898,545
Roadway Maintenance		3,810,707	3,574,420	94 %	3,474,595	3,492,779
Facilities and Beautification	(9)	3,703,562	3,001,675	81 %	2,921,217	2,911,042
Street Lighting	(10)	224,789	166,763	74 %	224,789	175,896
Fonthill and Hillside Cemeteries		128,322	107,893	84 %	127,396	116,583
Niagara Central Airport	(11)	20,844	20,844	100 %	46,566	42,816
<b>Total Public Works</b>		9,071,453	7,843,485	86 %	7,734,600	7,637,661
<b>Recreation, Culture and Wellness</b>						
General Administration		357,669	316,208	88 %	413,502	356,848
Recreation and Wellness	(12)	379,270	372,826	98 %	275,835	306,276
Special Events and Festivals	(12)	270,601	253,129	94 %	257,976	339,723
Culture and Community Enhancement	(12)	158,046	143,789	91 %	167,064	147,714
Public Transit	(13)	442,390	393,119	89 %	218,850	259,054
Libraries		814,218	746,367	92 %	814,218	814,218
<b>Total Recreation, Culture and Wellness</b>		2,422,194	2,225,438	92 %	2,147,445	2,223,833
<b>Community Planning and Development</b>						
Building Department	(14)	500,500	396,976	79 %	500,500	655,956
Planning and Zoning		633,487	561,222	89 %	475,573	469,295
Municipal Drainage		39,136	29,680	76 %	15,025	14,556
<b>Total Community Planning and Development</b>		1,173,123	987,878	84 %	991,098	1,139,807
<b>Water and Wastewater</b>						
Water	(15)	2,761,884	2,242,414	81 %	2,477,727	2,512,226
Wastewater		2,014,104	1,810,407	90 %	1,708,694	1,796,918
<b>Total Water and Wastewater</b>		4,775,988	4,052,821	85 %	4,186,421	4,309,144
<b>GRAND TOTAL</b>		\$ 22,139,695	\$ 19,423,375	88 %	\$ 19,745,618	\$ 20,178,698

## Appendix 2

### Monthly Expenditure Report at November 30, 2019 (92% of time lapsed)

#### Explanatory Notes:

- (1) Budget variance due to organizational changes.
- (2) Increased contracted services required.
- (3) Honorariums are paid at the end of the year.
- (4) WSIB expense is higher than budget and some will be allocated to water, wastewater, and building. Postage fees are higher than budget due to mailout of Haist arena survey. Insurance premiums have been paid in full for the year.
- (5) Volunteer firefighter stipends are paid in November.
- (6) Health and safety interdepartmental transfers will be recorded at year-end to allocate to departments.
- (7) Animal control payments have been made for Q1 to Q4.
- (8) Half year of debenture payments on \$4M issued this year are slightly lower than budget.
- (9) Hydro savings at the MCC due to work of Utility Sustainability Committee.
- (10) Hydro savings on streetlights from increased use of LED lighting.
- (11) Operating contribution to Niagara Central Dorothy Rungeling Airport Commission has been paid.
- (12) Most recreation camp and special event activity occurs in Q2 and Q3.
- (13) Addition of second bus occurred in September.
- (14) WSIB and insurance expenses still to be allocated.
- (15) WSIB and interdepartmental transfers to be recorded at year-end. Reduced costs for meter flushing due to development.

			2019			Actual 2019										
	Notes		Budget	Actual YTD Total	Actual as a % of Budget	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
<b>MCC Revenues</b>																
Arena Revenues			\$ 539,219	\$ 534,785	99 %	\$ 88,496	\$ 78,269	\$ 38,268	\$ 30,031	\$ 15,589	\$ 17,618	\$ 20,680	\$ 33,715	\$ 51,574	\$ 74,496	\$ 86,049
Multi-Purpose Space Revenues			63,000	69,735	111 %	7,271	5,128	6,629	7,283	7,651	4,912	4,265	3,518	7,634	6,957	8,487
Gymnasium Revenues	(1)		61,000	61,751	101 %	1,175	6,628	7,400	5,788	6,687	3,932	5,956	5,102	4,529	5,178	9,376
Programming Revenues	(2)		114,800	133,642	116 %	1,921	-	12,861	(71)	-	-	62,079	55,584	-	382	886
Grants	(3)		42,700	83,476	195 %	3,558	3,558	3,558	3,558	28,307	8,558	3,558	3,558	4,558	10,675	10,030
Other Rev. - Miscellaneous	(4)		55,550	63,190	114 %	12,538	5,623	3,081	6,190	4,353	2,686	4,168	2,155	5,265	7,066	10,065
Other Revenues - Advertising	(5)		30,000	14,137	47 %	-	-	-	7,500	-	-	-	-	6,637	-	-
<b>Total Revenues</b>		(a)	906,269	960,716	106 %	114,959	99,206	71,797	60,279	62,587	37,706	100,706	103,632	80,197	104,754	124,893
<b>MCC Expenditures</b>																
Salaries and Benefits	(6)		1,068,127	962,601	90 %	100,625	74,389	75,620	53,827	66,221	72,230	89,048	168,454	87,801	92,573	81,813
Professional Development			10,900	8,097	74 %	6,752	-	102	-	-	310	-	-	-	519	414
Associations and Memberships			7,000	3,799	54 %	3,013	305	-	-	-	-	50	-	431	-	-
Travel			4,500	2,401	53 %	-	-	-	-	2,401	-	-	-	-	-	-
Hydro	(7)		542,140	287,286	53 %	37,634	36,695	(26,028)	18,015	22,329	22,919	32,468	29,280	38,543	42,859	32,572
Natural Gas	(8)		95,072	47,815	50 %	6,462	7,282	5,699	4,121	2,261	1,868	2,196	3,313	5,425	5,201	3,987
Water	(9)		45,212	29,600	65 %	-	6,237	-	5,305	-	4,451	-	7,336	-	6,271	-
Telephone	(10)		4,200	11,072	264 %	618	618	1,194	1,160	1,189	1,160	880	1,207	871	1,264	911
Office Supplies			6,150	5,502	89 %	89	316	187	168	159	635	677	588	1,255	239	1,189
Materials and Supplies	(11)		48,000	99,207	207 %	9,051	7,694	6,814	1,836	1,868	6,301	11,879	6,826	20,879	18,736	7,323
Furniture and Equipment	(11)		1,000	24,531	2,453 %	-	81	-	9,110	7,305	-	-	-	2,215	3,091	2,729
Materials and Supplies - Janitorial			34,488	17,878	52 %	1,415	1,117	1,177	401	3,186	757	1,710	2,438	1,658	2,078	1,941
Fuel			4,850	4,354	90 %	622	529	431	153	290	138	24	487	460	444	776
Internet			12,000	9,067	76 %	824	824	824	824	824	824	824	824	824	824	827
Insurance	(12)		30,000	43,716	146 %	-	3,597	-	15,303	-	-	-	24,816	-	-	-
Contract Services - Janitorial	(13)		135,968	60,248	44 %	15,205	17,036	15,205	15,205	-	(2,403)	-	-	-	-	-
Contract Services - Other			118,950	116,613	98 %	7,014	5,733	7,296	7,081	15,113	3,981	26,037	15,211	3,753	13,486	11,908
Repairs and Maintenance			11,500	10,387	90 %	-	34	2,410	80	246	1,297	1,332	595	-	1,688	2,705
<b>Total Expenditures before Debt and Other Items</b>		(b)	2,180,057	1,744,174	80 %	189,324	162,487	90,931	132,589	123,392	114,468	167,125	261,375	164,115	189,273	149,095
<b>Net Surplus (Deficit) before Debt and Other Items</b>		(c)= (a) - (b)	(1,273,788)	(783,458)	62 %	(74,365)	(63,281)	(19,134)	(72,310)	(60,805)	(76,762)	(66,419)	(157,743)	(83,918)	(84,519)	(24,202)
<b>MCC Debt Activity</b>																
Tax Levy Debenture Interest	(14)		(288,500)	(144,779)	50 %	-	-	-	-	-	(144,779)	-	-	-	-	-
Tax Levy Debenture Principal	(14)		(191,768)	(95,090)	50 %	-	-	-	-	-	(95,090)	-	-	-	-	-
Development Charge Revenue	(15)		630,310	630,310	100 %	317,023	-	-	-	-	-	313,287	-	-	-	-
Development Charge Debenture Interest	(15)		(377,212)	(377,212)	100 %	(191,485)	-	-	-	-	-	(185,727)	-	-	-	-
Development Charge Debenture Principal	(15)		(253,098)	(253,098)	100 %	(125,538)	-	-	-	-	-	(127,560)	-	-	-	-
<b>Pre-MCC RCW and Facility Net Costs</b>			893,531	819,071	92 %	74,461	74,461	74,461	74,461	74,461	74,461	74,461	74,461	74,461	74,461	74,461
<b>One-Time Transfer from MCC Reserve</b>			425,500	390,042	92 %	35,458	35,458	35,458	35,458	35,458	35,458	35,458	35,458	35,458	35,458	35,462
<b>Net Debt and Other Items</b>		(d)	838,763	969,244	116 %	109,919	109,919	109,919	109,919	109,919	(129,950)	109,919	109,919	109,919	109,919	109,923
<b>NET SURPLUS (DEFICIT)</b>		(e)= (c) + (d)	\$ (435,025)	\$ 185,786	646 %	\$ 35,554	\$ 46,638	\$ 90,785	\$ 37,609	\$ 49,114	\$(206,712)	\$ 43,500	\$ (47,824)	\$ 26,001	\$ 25,400	\$ 85,721

Meridian Community Centre

Appendix 3

Actual Results to Budget at November 30, 2019 (92% of time lapsed)

Explanatory Notes:

- (1) Revenue for January 2019 has been adjusted to reflect changes made within the recreation software permit system related to bookings held during 2018 but adjusted in 2019. Permits are now being set up monthly to ensure more accuracy in monthly reporting.
- (2) Due to popularity and high demand for camp programs, additional spaces were added resulting in revenue above budget.
- (3) New Horizons for Seniors Program Grant monies received for approximately \$25,000 subsequent to budget approval. Niagara Community Foundation grant of \$5,000 received above budget, and additional Senior Active Living Centre special funding of \$10,000 received. All grants have related expenditures.
- (4) Miscellaneous revenue includes cost recoveries, equipment rentals, event revenue, donations, concession sales, and other items that are individually too small to classify separately. Revenue above budget relates primarily to concession sales.
- (5) Advertising payment received in December. Total anticipated advertising revenue will be slightly below budget for 2019.
- (6) There were three pay periods in August, and more camp staff are employed in the summer.
- (7) A credit of \$66,858 was received for the period of November 22, 2017 to March 25, 2019. A lower rate is now being charged. There should be approximately \$200,000 savings on this budget line for 2019.
- (8) Natural gas usage is higher in the fall and winter months. Savings compared to budget result from mild winter weather and decreased use of dehumidifiers.
- (9) Water is billed bi-monthly.
- (10) Telephone costs for the MCC are coming in above budget and are now estimated at \$15,000 for the year, due to dedicated analog lines required for the elevators as well as handheld devices for staff which were budgeted in facilities - general. Budget savings are expected in general facilities expense to offset.
- (11) Costs incurred for puck boards, equipment hooks and cable covers. Purchase of floor equipment, including floor scrubbers. Savings in Contract-Services-Janitorial expected to offset the cost. Increased cost of materials in September due to supplies purchased with New Horizons for Seniors grant funding, which was received subsequent to 2019 budget approval, as well as pads and netting for the goals.
- (12) Insurance exceeding budget based on rates renewed in July 2019. 2020 budget will be adjusted to reflect higher premiums.
- (13) Expenses for Contracted Services-Janitorial ended on April 30, 2019. Staff have taken on the janitorial duties.
- (14) Tax levy debenture payments for the MCC occur in June and December.
- (15) Development charge debenture payments for the MCC occur in January and July.

## Meridian Community Centre - Revenue by Major Customer &amp; Activity

## Appendix 3

For the month ended November 30, 2019 (92% of time lapsed)

	Hours	Amount
<b>Arena Revenues</b>		
Pelham Minor Hockey Association (PMHA)	298.5	\$ 41,334
Niagara Centre Skating Club (NCSC)	76.5	11,779
Pelham Junior Hockey Club	31.0	4,616
Southern Tier Admirals AAA Hockey	38.5	6,287
Public Ice	83.0	15,412
School Ice	15.5	1,198
Recreation & Wellness Programming	95.0	5,423
<b>Arena Revenues Subtotal</b>	<b>638.0</b>	<b>86,049</b>
<b>Multi-Purpose Space Revenues</b>		
Room Rentals	59.0	4,716
Recreation Programming	46.0	3,771
<b>Multi-Purpose Space Revenues Subtotal</b>	<b>105.0</b>	<b>8,487</b>
<b>Gymnasium Revenues</b>		
Pelham Panthers Basketball	355.0	6,916
Other	64.0	2,460
<b>Gymnasium Revenues Subtotal</b>	<b>419.0</b>	<b>9,376</b>
<b>Camp and Multi-Space Program Revenue</b>		
Camp Revenues	-	448
55+ Memberships	-	438
<b>Camp and Multi-Space Program Revenue Subtotal</b>	<b>-</b>	<b>886</b>
<b>Grants</b>	<b>-</b>	<b>10,030</b>
<b>Other Revenues</b>		
Miscellaneous	-	10,065
<b>TOTAL REVENUES</b>	<b>1,162.0</b>	<b>\$ 124,893</b>



**Town of Pelham****Meridian Community Centre Facility Usage Statistics Internal Activities**

For the month ended November 30, 2019

<b>Facility Name</b>	<b>Description</b>	<b>Days Reserved</b>	<b>Hours Reserved</b>
195- Main Level Meeting Room	Meeting Room	7	24
211 and 212-Kinsmen Community Room	Full Room	9	39
211-Kinsmen Community Room	1/2Room	3	7
212-Kinsmen Community Room	1/2 Room	4	9
228 and 229-Dr Gary & Mall Accursi Rm.	Full Room	4	23
228-Dr Gary & Mall Accursi Community RmA	1/2 Room	9	46
229-Dr Gary & Mall Accursi Community RmB	1/2 Room	18	55
230-Dr & Mrs Accursi Special Function Rm	Special function room (add on)	10	19
Duliban Insurance Arena	Arena	20	47
Accipiter Arena	Arena	16	49
218-Dr Gary & Mall Accursi Rm Kitchen	Kitchen (add on)	1	6
MCC Lucchetta Gymnasium 1 - Full Gym	Full Gym	19	86
MCC Lucchetta Gymnasium 2 - Full Gym	Full Gym	19	87
MCC Lucchetta Gymnasium 2 - No.2A	1/4 Gym		
<b>Total</b>		<b>139</b>	<b>497</b>

\*Internal Activities revenue comes from programming.

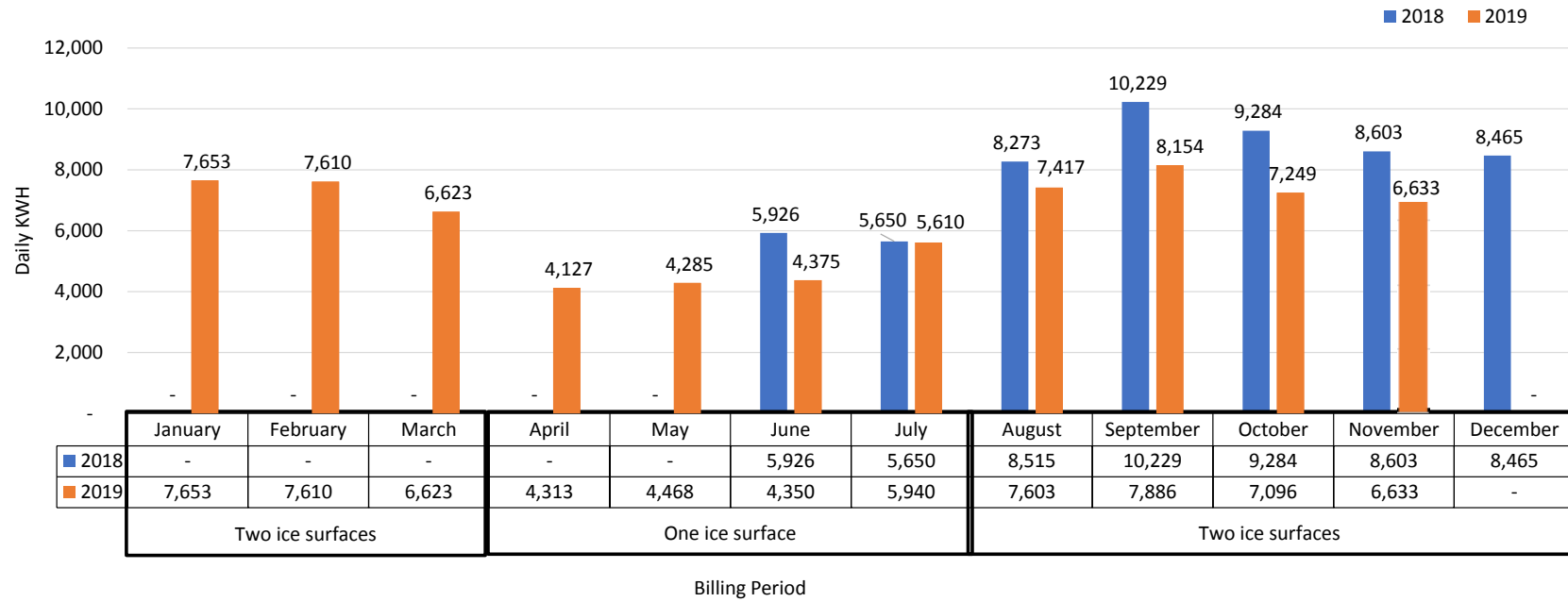
**Town of Pelham****Meridian Community Centre Facility Usage Statistics External Activities**

For the month ended November 30, 2019

<b>Facility Name</b>	<b>Description</b>	<b>Days Reserved</b>	<b>Hours Reserved</b>
195- Main Level Meeting Room	Meeting Room	10	35
211 and 212-Kinsmen Community Room	Full Room	10	66
211-Kinsmen Community Room	1/2 Room	4	5
212-Kinsmen Community Room	1/2 Room	1	1
218-Dr Gary & Mall Accursi Rm Kitchen	Kitchen (add on)	4	40
228 and 229-Dr Gary & Mall Accursi Rm.	Full Room	4	42
228-Dr Gary & Mall Accursi Community RmA	1/2 Room	6	26
229-Dr Gary & Mall Accursi Community RmB	1/2 Room	2	3
Accipiter Arena	Arena	30	276
Duliban Insurance Arena	Arena	29	267
MCC Lucchetta Gymnasium #1 - No. 1	Arena	3	3
MCC Lucchetta Gymnasium 1 - Full Gym	1/4 Gym	27	195
MCC Lucchetta Gymnasium 1 - No.1A	Full Gym	17	33
MCC Lucchetta Gymnasium 2 - Full Gym	1/4 Gym	26	179
MCC Lucchetta Gymnasium 2 - No.2	1/4 Gym	5	9
MCC Lucchetta Gymnasium 2 - No.2A	1/4 Gym	1	1
<b>Total</b>		<b>179</b>	<b>1,181</b>

\*External Activities revenue comes from room and gym

## Meridian Community Centre Hydro Usage



	Notes	2019			Actual 2019										
		Budget	Actual YTD Total	Actual as a % of Budget	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
<b>Revenues</b>															
Grants - Provincial	(1)	\$ 121,953	\$ 51,334	42 %	\$ -	\$ -	\$ 38,501	\$ -	\$ 12,833	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grants - Other	(2)	62,500	-	- %	-	-	-	-	-	-	-	-	-	-	-
Other Revenues	(3)	20,000	15,620	78 %	7,866	342	638	1,087	810	655	1,040	1,111	755	569	747
Sponsorships	(4)	7,500	9,000	120 %	5,250	3,000	250	-	-	-	250	-	250	-	-
<b>Total Revenues</b>		211,953	75,954	36 %	13,116	3,342	39,389	1,087	13,643	655	1,290	1,111	1,005	569	747
<b>Expenditures</b>															
Salaries and Benefits		107,196	98,588	92 %	3,627	9,716	8,674	11,503	8,932	9,197	8,666	12,293	8,589	8,648	8,743
Materials and Supplies	(5)	5,570	2,399	43 %	570	-	30	-	94	671	-	575	439	20	-
Contract Services - Bus	(5)	325,124	292,132	90 %	21,397	21,600	20,162	21,238	21,011	19,828	22,400	22,570	37,233	41,490	43,203
Interdepartmental Transfers	(6)	4,500	-	- %	-	-	-	-	-	-	-	-	-	-	-
<b>Total Expenditures</b>		442,390	393,119	89 %	25,594	31,316	28,866	32,741	30,037	29,696	31,066	35,438	46,261	50,158	51,946
<b>NET SURPLUS (DEFICIT)</b>		\$ (230,437)	\$ (317,165)	138 %	\$ (12,478)	\$ (27,974)	\$ 10,523	\$ (31,654)	\$ (16,394)	\$ (29,041)	\$ (29,776)	\$ (34,327)	\$ (45,256)	\$ (49,589)	\$ (51,199)
<b>Ridership 2019</b>			7,314		453	464	594	786	559	783	671	797	609	834	764
<b>Ridership 2018</b>			7,259		437	420	574	544	511	527	538	467	380	600	747

Explanatory Notes:

- (1) The Town has been notified that our most recent provincial gas tax allocation is \$51,334. The remaining approximate \$70,000 relates to the Ministry of Transportation Grant of \$500,000 over 5 years, and is for start-up and operating costs related to the second bus, but has not yet been received.
- (2) Region contribution to link received in December.
- (3) Niagara College and Brock uPass paid in advanced for the first half of the year; Ticket revenues not dispersed evenly through the year because they are sometimes purchased in blocks of tickets.
- (4) Sponsorships are often paid in advanced for the full year of advertising.
- (5) Expenses below budget because the second bus commenced operation in September. The budget was based on the first bus operating for a full year and the second bus operating from approximately September to December.
- (6) Interdepartmental transfers are allocations of costs from other department, such as facilities. These are recorded at year-end based on actual results.

## **Subject:** 2019 Pelham Distribution System Summary Report

### **Recommendation:**

**THAT Committee receive Report #2020-0002 for information; and**

**THAT Committee recommend that Council approve the 2019 Pelham Distribution System Summary Report**

### **Background:**

Two annual water reports are required by the Ministry of the Environment, Conservation and Parks (MECP): (1) the 'MECP Annual Report' (O. Reg. 170/03 section 11), and (2) the municipal 'Summary Report' (O. Reg. 170/03 schedule 22).

Both reports have been added as attachments to this report. The MECP Annual report is due before February 28th of each year. The municipal summary report is due before March 31st of each year.

The MECP completes inspections of drinking water systems annually, usually unannounced, and are either 'focused' (where critical elements required to assess key compliance issues are covered), or 'detailed' (where a thorough, in-depth inspection of all relevant areas is conducted). Communication of all findings from the inspection report allows the Owner to remain informed on the status of the Drinking Water System. The timing of 2019 inspection allows it to be included in the 2019 Pelham Distribution System Summary Report.

### **The MECP Annual Report**

The *Safe Drinking Water Act, 2002*, requires municipalities that maintain drinking water systems to prepare an 'Annual Report' on the operation of the water system and the quality of its water.

Reports are made available to the public online through the Town's website, and hardcopies of the reports are also available at Town Hall.

The purpose of this regulated report is to summarize key parameters of the system, using the prescribed MECP form, and make it available to the public.

The MECP Annual Report has been added as an attachment to the 2019 Pelham Distribution System Summary Report as Appendix A.

### **The Municipal Summary Report**

The Town is required to prepare a Municipal Summary Report not later than March 31 for the preceding calendar year and the report is to be presented to the municipal council in accordance with Schedule 22 of the *Safe Drinking Water Act*.

The Municipal Summary Report is to list the requirements of the *Safe Drinking Water Act*. This report covers the period from January 1, 2018 to December 31, 2018.

The Municipal Summary Report has been added as an attachment to the 2019 Pelham Distribution System Summary Report as Appendix B.

### **The Pelham Distribution System Inspection Report**

On December 17, 2019 a “focused” inspection of the Pelham Distribution System was undertaken by the MECP to confirm compliance with Drinking Water legislation. The Water Inspector performed interviews with key staff, as well as document reviews involving paper records, logbooks, electronic records, training documents, sample results, procedures, manuals and processes.

During the inspection no non-compliances to regulatory requirements were identified. Based on the findings, the Town of Pelham received a final inspection rating of 100%.

A number of recommendations and best practice issues were identified during the inspection related to: minor process improvements, implementation of a backflow prevention program, and discussions with the Niagara Region and neighboring municipalities regarding possible impacts of replacing the elevated water tank on the distribution system. At the time of this report, work has already begun to address all recommendations.

The MECP Pelham Distribution System Inspection Report has been added as an attachment to the 2019 Pelham Distribution System Summary Report as Appendix C.

**Analysis:**

The attached report(s) satisfy the legislated and license requirements for reporting of information to the Owner of the drinking water system.

Successful receipt of information by Committee and subsequently by Council satisfies the regulatory and license requirements for O.Reg. 170 section 11 reporting.

**Financial Considerations:**

There are no financial considerations in relation to this report.

**Alternatives Reviewed:**

There were no alternatives considered in preparation of this report.

**Strategic Plan Relationship: Communication and Engagement**

As legislated, Council is responsible as Owner of the water system for ensuring these reports are prepared and available to the public so that they may be made aware of the condition of the distribution system and the quality of the water delivered by Town of Pelham.

**Consultation:**

There was no consultation required in the preparation of this report.

**Other Pertinent Reports/Attachments:**

- 1) Appendix A – 2019 MECP Annual Report
- 2) Appendix B – 2019 Municipal Summary Report
- 3) Appendix C – 2019 MECP Pelham Distribution System Inspection Report

**Prepared and Recommended by:**

Jason Marr, P. Eng.  
Director of Public Works

**Prepared and Submitted by:**

David Cribbs, BA, MA, JD, MPA  
Chief Administrative Officer





**OPTIONAL ANNUAL REPORT TEMPLATE**

<b>Drinking-Water System Number:</b>	<b>260001604</b>
<b>Drinking-Water System Name:</b>	Pelham Distribution System
<b>Drinking-Water System Owner:</b>	The Corporation of the Town of Pelham
<b>Drinking-Water System Category:</b>	Large Municipal
<b>Period being reported:</b>	January 1, 2019 to December 31, 2019

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p><b>Does your Drinking-Water System serve more than 10,000 people? Yes [ X ] No [ ]</b></p> <p><b>Is your annual report available to the public at no charge on a web site on the Internet? Yes [ X ] No [ ]</b></p> <p><b>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</b></p> <div style="border: 1px solid black; padding: 5px;"> <p>Pelham Municipal Building 20 Pelham Town Square Fonthill, Ontario</p> <p>www.pelham.ca</p> </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p><b>Number of Designated Facilities served:</b></p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> <p><b>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ]</b></p> <p><b>Number of Interested Authorities you report to:</b></p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> <p><b>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ]</b></p>
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**Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report**

**List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:**

<b>Drinking Water System Name</b>	<b>Drinking Water System Number</b>
None	Not applicable

**Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?**  
[Not Applicable]



Indicate how you notified system users that your annual report is available, and is free of charge.

☒ Public access/notice via the web

☒ Public access/notice via Government Office

☐ Public access/notice via a newspaper

☒ Public access/notice via Public Request

☐ Public access/notice via a Public Library

☐ Public access/notice via other method \_\_\_\_\_

**Describe your Drinking-Water System**

The Corporation of the Town of Pelham operates a water distribution system which is supplied with treated water by the Regional Municipality of Niagara from the Welland Water Treatment Plant, located at #4 Cross Street in Welland. The source of the water for the treatment plant is the Welland Recreational Waterway.

The treated water is transported to the Town by way of a 750mm diameter watermain to the Shoalts Drive Reservoir located at #5 Shoalts Drive in Fonthill. Water is distributed from the reservoir by way of a series of watermains and a Regional elevated tank located at #177 Highway #20 West in Fonthill, to lands within the designated service area.

The Town of Pelham distributes drinking water to Fonthill and Fenwick urban areas in Pelham through approximately 84 kilometres of watermain varying in size from 50mm to 400mm diameter. In addition there is 6.5 kilometers in length owned by the Regional Municipality of Niagara which is connected to the Pelham Distribution System and also distributes water to lands within the service area. The watermains are primarily cast iron, asbestos concrete, high pressure concrete piping, copper and PVC piping. There are approximately 554 hydrants and 683 valves located throughout the system. The Town owns a fill station with side-fill and a backflow prevention device and a residential pressure boosting station.

**List all water treatment chemicals used over this reporting period**

Not applicable

**Were any significant expenses incurred to?**

☐ Install required equipment

☒ Repair required equipment

☒ Replace required equipment



**Please provide a brief description and a breakdown of monetary expenses incurred**

- (1) General repairs and maintenance of watermain and appurtenances - \$ 90,000
- (2) Replacement of watermain on Clare Avenue - \$250,000
- (3) Replacement of watermain on Haist Street & Welland Road – \$519,750

**Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre**

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
None	-----	-----	-----	-----	-----

**Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.**

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	Not applicable				
Treated	Not applicable				
Distribution	585	0 - 0	0 - 0	585	0-370

**Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.**

Period covered by this Annual Report:			
	Number of Grab Samples	Range of Results (min #)-(max #)	Unit of Measure
Turbidity			
Chlorine	1174	0.22 – 1.08	mg/l
Fluoride (If the DWS provides fluoridation)	DWS does not provide fluoridation		

**NOTE:** For continuous monitors use 8760 as the number of samples.



**Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.**

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
Not Applicable				

**Summary of Inorganic parameters tested during this reporting period or the most recent sample results**

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Not Applicable				

\*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems.

**Summary of lead testing under Schedule 15.1 during this reporting period**

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Plumbing	Exempt			
Distribution	8	0.00005– 0.00188	mg/l	0

**Summary of Organic parameters sampled during this reporting period or the most recent sample results**

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
<b>Haloacetic Acids</b> (NOTE: show latest annual running average)	Dec. 2019	16.68	ug/L	None
<b>THM</b> (NOTE: show latest annual running average)	Dec. 2019	37.34	ug/L	None

**List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.**

Parameter	Result Value	Unit of Measure	Date of Sample
Not Applicable			



Department/Division:	Public Works / Pelham Distribution System
Report:	Municipal Summary Report
Covering:	January 1, 2019 to December 31, 2019

## 1. Purpose

This report was prepared by the Director of Public Works and Manager of Public Works for the Owner of the Pelham Distribution System, the Corporation of the Town of Pelham, to be presented to Council.

Two annual water reports are required by the Ministry of the Environment, Conservation and Parks (MECP) to be prepared: (1) the 'MECP Annual Report' (O.Reg. 170/03 section 11), and (2) the municipal 'Summary Report' (O. Reg. 170/03 schedule 22).

As required by QMS-PROC-021 in the Town of Pelham's Quality Management System, results of the annual management and infrastructure review shall be presented to the Owner through the Annual Municipal Summary Report.

As legislated, Council is responsible as the Owner of the water system for ensuring these reports are prepared and available to the public each year.

The MECP Annual Report has been prepared and submitted as an attachment to the Public Works Report #2020-0002, 2019 Pelham Distribution System Summary Report.

This is the Municipal Summary Report.

To enhance the communication and understanding of these reports, this Municipal Summary Report contains additional non-legislated information on the drinking water system operations and water quality.

## 2. Definitions

"DWQMS" means Drinking Water Quality Management Standard.

"MECP" means Ontario Ministry of the Environment, Conservation, and Parks.

"WTP" means Water Treatment Plant.

"QMS" means Quality Management System.

"OIC" means Operator in Charge of the distribution system, as per O.Reg 128/04

"ORO" means Overall Responsible Operator of the distribution system, as per O.Reg 128/04

"HAA" means Haloacetic Acid. Haloacetic Acids in drinking water are a by-product of Chlorine disinfection.

"THM" means Trihalomethanes. Trihalomethanes in drinking water are a by-product of Chlorine disinfection.

"CFU" means Colony Forming Units. It is a unit of measure for bacteriological contaminants in drinking water.

"HPC" means Heterotrophic Plate Count. It is a method that measures colony formation on culture media of heterotrophic bacteria in drinking water.

### 3. System Overview

The provision of drinking water for residents in the Niagara Region is a responsibility shared between two tiers of municipal government. The Niagara Region is responsible for treatment and supply of the water to the Town of Pelham via transmission mains. The Town of Pelham is responsible for distributing water to local consumers via its own network of distribution pipes.

The Pelham Distribution System is a Class 2 water distribution subsystem. The system consists of approximately 84.5 km of watermains varying in size from 50mm to 400mm diameter providing water to approximately 12,500 residents within the general urban area.

The service area is approximately 14 km<sup>2</sup> and includes the Villages of Fonthill, Ridgeville and Fenwick. The system receives treated drinking water from the Welland Water Treatment Plant located on Cross Street in the City of Welland. The treatment plant is owned and operated by the Regional Municipality of Niagara. The plant receives its raw water from the Welland Recreational Canal. Treated water is transmitted to the Town by way of a 750mm diameter watermain to the Shoalts Drive Reservoir. The reservoir, which includes chlorination, is also Regionally-owned and operated. Water enters the Pelham Distribution System at the reservoir outlet.

The Town of Pelham owns and operates a water filling station with side-fill and a backflow prevention device to serve consumers outside of the urban boundary who do not have direct access to the distribution system. Water haulers must obtain approval from the Niagara Region before being permitted to use the station.

The Town of Pelham owns a small pressure booster pump station which is located on the Niagara Region's Elevated Tank Property. This pump is used to improve water pressure in the Chestnut Ridge development area. The normal operating pressure in the area is low due to its geographic location in relation to the elevated tank that supplies distribution supply and pressure by way of gravity.

The Town of Pelham Distribution System consists of 5 pressure zones separated by Pressure Reducing Valves (PRV). In Pelham, because of our unique topography, maintaining safe operating pressure within the system is a delicate balance. Increasing pressure in one area can cause damage to municipal infrastructure and private plumbing downstream.

## 4. Water Quality Testing

Ontario Regulation 170/03 prescribes water quality testing requirements for municipal drinking water systems.

The requirements prescribed by the MECP include: test parameters, number of test samples, frequency of testing, location of testing, reporting of test results, and reporting and corrective action of adverse test results, amongst other items. Operational guidelines are parameters used to monitor the general quality of water and the performance of the system.

The Town carried out testing in 2019 as prescribed by legislation.

In 2012, the Town of Pelham qualified for an exemption from collecting lead samples from residential or non-residential plumbing under the community lead testing program; however, reduced sampling must still take place in four locations within the distribution system. As such, the Town has continued with its lead testing program in the distribution system, with no concerns.

In addition to the prescribed sampling, the Town tested for water quality in response to complaints from consumers. Complaints generally refer to colour, odour, pressure, particulate, supply and/or taste.

The Town responded to 24 water quality/supply complaints in 2019. 8 were related to low pressure concerns and 16 to water colour/odour. All were resolved promptly.

Taste and odour episodes are often related to a natural phenomenon caused by seasonal biological changes in the source water. These changes may produce odour-causing chemical compounds that can be detected by humans at very low levels. Most municipalities in Ontario which obtain their water supply from surface water sources experience this problem periodically in the summer or early fall. Also, private plumbing fixtures including small water filtration systems and drain traps can also contribute to concerns regarding taste and odour of municipally supplied water. Once identified, most of these can be resolved quickly and easily through regular maintenance completed by the property owner.

Water Treatment Plants are equipped with various filtration systems designed to reduce the effects of taste and odour, but may not eliminate it entirely.

**Table 1 - Testing requirements and results.**

<b>Table 1 – 2019 Testing Summary</b>					
<b>Parameter</b>	<b># Samples Required</b>	<b># of Samples Taken</b>	<b>Legislated Requirement</b>	<b>Guideline</b>	<b># of Samples Exceeding Limit</b>
Esherichia Coli (bacteriological)	22 per month	~ 44 per month	0 CFU/100mL Not detected	--	0
Total Coliform (bacteriological)	22 per month	~ 44 per month	0 CFU/100ml Not detected	--	0
HPC (heterotrophic plate count)	6 per month	~ 44 per month	--	< 500 CFU/100mL (AWWA c651-05)	0

Trihalomethanes	1 per quarter	3 per quarter	100 ug/L (annual running average)	--	0
Haloacetic Acids	1 per quarter	3 per quarter	80 ug/L (annual running average)	--	0
Free Chlorine	7 per week	14 per week	$\geq 0.05$ mg/L $\leq 4.0$ mg/L	--	0
pH	8 per year	8 per year	--	6.5 – 8.5 Operational guideline	0
Alkalinity	8 per year	8 per year	--	30 – 500 Operational guideline	0
Lead	8 per year	8 per year	0.01 mg/L	--	0
Pressure	None	5 per month (taken from each pressure zone)	--	$\geq 28$ psi	0

## 5. Adverse Water Quality Incidents

An “adverse water quality incident” refers to a water quality test result exceeding the legislated requirements shown in **Table 1**.

A total of **Zero** incidents of adverse water quality conditions were detected in the system in 2019.

## 6. MECP Drinking Water System Inspection Report

In December 2019, the Town’s distribution system underwent a “focused” inspection by a MECP Drinking Water Inspector. The inspection included a review of operational records from November 16, 2018 to December 15, 2019.

The Town of Pelham received a Final Inspection Rating of 100%.

The Pelham Distribution System Inspection Report is included in the 2019 Pelham Distribution System Summary Report.

## 7. Regulatory Updates

In 2019, the standard for HAA’s was set at 80 ug/L calculated as an annual running average. The standard came into force on January 1, 2020. The Town of Pelham has been conducting HAA sampling since 2017.

It is anticipated that an updated Watermain Disinfection Procedure will be issued by the MECP in 2020. Staff are expecting that a number of internal procedures and forms will require updating to conform to the new procedure but will not have a major impact on water operations.



## 8. Competency, Licensing and Training

Operator training is required by law to maintain drinking water licenses and ensure competency. Operators and key water staff participate in a number of diverse course offerings aimed at broadening their knowledge.

The Town of Pelham owns and operates a Class 2 Water Distribution System and a Class 2 Wastewater Collection System. The Town of Pelham Water Division currently has a compliment of a Manager of Public Works, Supervisor of Water and Wastewater, and three Water Operators. All water and wastewater operators must maintain a Water Distribution License and Waste Water Collection Facility License to operate the Town's systems.

## 9. Flow Data

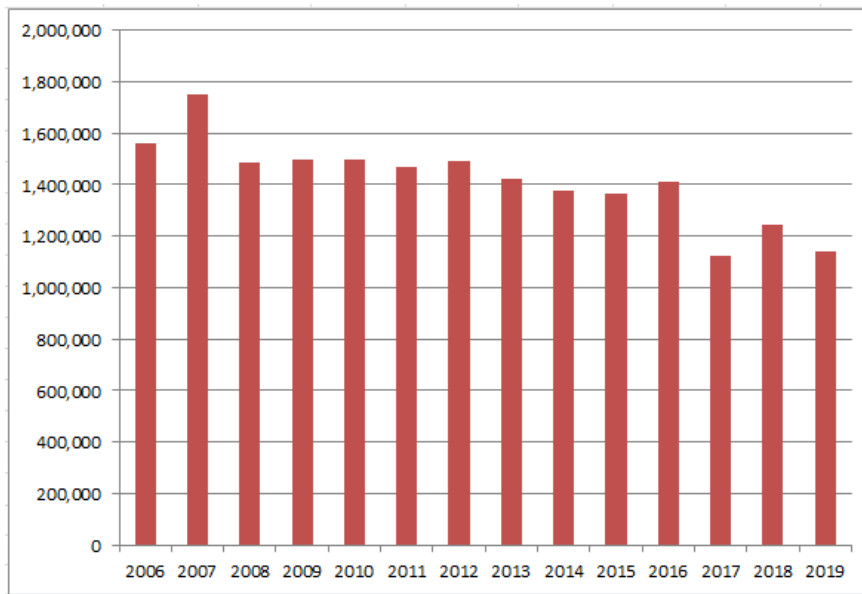
Water consumed by the Town of Pelham is measured by the Niagara Region, and provided monthly to the Town. In 2019, a total of 1,150,570 cubic meters (m<sup>3</sup>) of water flowed to the Town of Pelham in total. (1 cubic meter of water = 1,000 litres).

**Table 2 – Annual Totals**

Year	Supply (m <sup>3</sup> )
2006	1,559,490
2007	1,752,470
2008	1,488,891
2009	1,499,700
2010	1,497,110
2011	1,469,470
2012	1,491,850
2013	1,420,220
2014	1,374,130
2015	1,364,450
2016	1,410,410
2017	1,122,740
2018	1,243,900
2019	<b>1,150,570</b>

The totals in this table are also reflected in the graph below, **Figure 1**

**Figure 1 – 2019 Total Water Supplied by the Region of Niagara**



All water demands were met in the system, thus the Town was not required to implement the additional use restrictions under section 4(p) of the Water Supply By-law No. 3198-2011.

The Town's Drinking Water License does not limit demand of flows to the Town, so a comparison to license limits is not required. The 2019 average daily consumptions are shown in **Table 3**, along with the maximum daily flows for each month.

**Table 3 – 2019 Daily Water Usage**

Month	Average Daily Flow (m³)	Maximum Flow in One Day (m³)
January	2796	3410
February	2689	3310
March	2799	3450
April	2821	3360
May	3015	3550
June	3437	4680
<b>July</b>	<b>4732</b>	<b>6750</b>
August	3941	5990
September	3232	4160
October	2866	3900
November	2708	3620
December	2736	3780

The 2019 highest demand day occurred in July, which aligns with the typical high monthly demands in the summer.

No servicing concerns are noted. The Niagara Regional Master Servicing Plan (MSP) lists the firm capacity of the Shoalts Drive Reservoir to be 19,400 m³ / day. The MSP has identified future projects

including the replacement of the Pelham Elevated Water Tank and increased pumping capacity at the Shoalts Drive Reservoir to accommodate projected 2041 servicing needs.

## 10. Capital Projects and Purchases

The Town updated the 20-year capital plan. Although efforts to ensure it represents the most current water distribution system improvement needs were made, many allowances were necessary based on competing capital infrastructure needs.

The 150mm Cast Iron Haist Street Watermain originally built in 1955 was replaced from Welland Road to Beckett Crescent. A portion of watermain on Welland Road from Haist Street to Edward Avenue was also replaced as part of this project.

The replacement of watermain on Pelham Street from Burton Avenue to 1634 Pelham Street is currently underway as well as the watermain on Station Street between Hwy 20 and Port Robinson Road. These projects will be completed in 2020.

Developments involving the construction of new watermain by developers included the Fonthill Yards, Saffron Meadows Phase 2 and River Estates Phase 2.

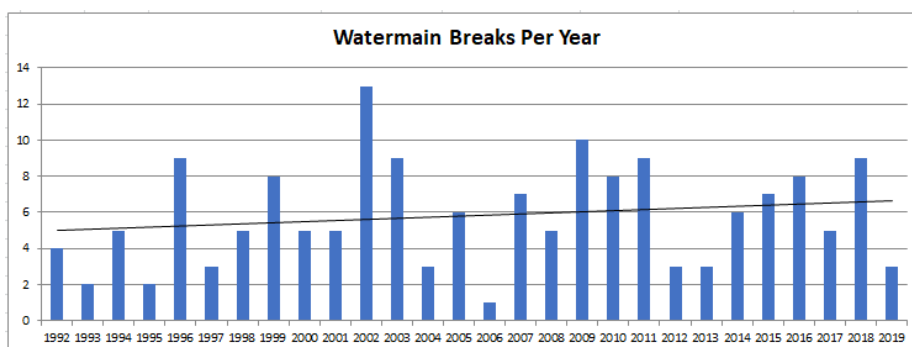
## 11. Rehabilitation and Repairs

A Total of 3 watermain breaks occurred in 2019, summarized in **Table 4**. **Figure 2** shows the overall trend for the total number of watermain breaks caused by pipe material and age.

**Table 4 – Watermain Break Summary**

Date	Location	Pipe Material	Suspected Cause	Planned Replacement
1-17-2019	8 Blackwood Cres.	Asbestos Concrete (AC)	Bedding, Age	20+ years
7-29-2019	698 Welland Rd.	AC	Bedding, Age, High water table	Pending grant approval 2022
9-29-2019	698 Welland Rd.	AC	Settlement from previous repair	Pending grant approval 2022

**Figure 2 – Town of Pelham – Watermain Breaks per Year**



In addition to watermain repairs, in 2019 Town of Pelham Staff replaced 5 leaking water services.

Regular maintenance and repairs are required at our Chestnut Ridge Booster Pump Station. Since installation these have been completed by the Niagara Regional Staff through a Maintenance Agreement. The Town continues to work closely with the Region of Niagara to maintain close communication about pressure or supply interruptions related to this pumping station.

The Town of Pelham owns and operates a Water Loading Station at 294 Canboro Road. Minor maintenance tasks are performed throughout the year including backflow prevention device testing and sampling programs.

## 12. Backflow Prevention

The Ontario Building Code requires backflow prevention devices are to be installed at each connection to new buildings where a potentially severe health hazard may be caused by backflow. The Town relies on the Building Code to ensure that backflow preventers are installed in new buildings.

As approved in the 2018 budget, plans commenced in 2019 for the creation of a backflow prevention policy, associated by-law and programs. The program is in the final stages of completion and will be presented to Council for consideration in 2020. The MECP has been strongly encouraging the Town of Pelham to develop such a program for a number of years.

## 13. Leak Detection

Canadian Leak Detection provided a small water leak detection survey for the Town of Pelham in 2019. The survey was focused on older cast iron watermain within the distribution system most likely to experience leaks. The surveyed watermain sections appear to be tight with no significant leak issues.

## 14. Municipal Drinking Water Licensing Program

The Municipal Drinking Water Licensing Program is a five-stage initiative by the MECP under the Safe Drinking Water Act, 2002. The Town of Pelham maintains its Certificate of Accreditation as an Operating Authority for its water distribution system, and the system license and permit(s) are in place. **Table 6** lists the status of the key elements for water licensing.

**Table 6 – Municipal Drinking Water Licensing Program Status**

Stage	Status
License #072-101	Renewed July 23, 2019 – Expires July 22, 2024
Permit #072-201	Active and current – No expiry
Operational Plan	Updated to version 2.0 and endorsed by Council March 4, 2019
Accreditation	Maintains full accreditation. Expires May 24, 2021
Financial Plan	Updated in 2018, covering 2019 – 2024 inclusive

## 15. Quality Management System

The Quality Management System (QMS) is fully integrated into Water operations, and maturing and improving with time. Council should remain aware of its commitments in the QMS Policy, which is the framework upon which to set the QMS.

The current Operational Plan is available through the network or in printed copies at select locations.

## 16. Infrastructure Review

The Infrastructure Review is a required component of the DWQMS, where infrastructure includes piping and related infrastructure, but also buildings, workspace, process equipment, hardware, software, and supporting services such as transport or communication. The purpose of the review was to assess the adequacy of the infrastructure necessary to operate and maintain the water system.

Recommendations from the annual 2019 review (performed in October 2019) were translated accordingly into the 2020 water operational and capital budget requests, and into the 20-year Capital Plan updates, and are communicated in this report below.

The Infrastructure Review has been included in **Appendix A**

## 17. Management Review

Management review is a required component of the DWQMS. In December 2019, the Director of Public Works and Manager of Public Works completed a management review of the QMS in alignment with the budget and capital planning process, in accordance with the Town's Operational Plan. Recommendations will be translated accordingly into future water operational and capital budget requests, and into the 20-year Capital Plan updates, and are communicated in this report below.

The Management Review has been included in **Appendix B**

## 18. Internal Audit Results

Results from the QMS internal audit performed in November 2019 are summarized. The internal audit must be performed once per year.

The Internal Audit found one (1) minor non-conformance and three (3) opportunities for improvement. All non-conformances and opportunities for improvement were discussed during management review as action items.

The Internal Audit Results have been included in **Appendix C**

## 19. External Audit Results

In May 2019, the Town engaged NSF as a third party auditor to the QMS, in accordance with the Town's drinking water license requirements.

No non-conformances or corrective action requests were identified. One (1) opportunity for improvement was identified with a recommendation for adding flow charts to operating procedures.

The External Audit Results have been included in **Appendix D**

## Appendix A – Infrastructure Review

Infrastructure Review Meeting Minutes	
Details / Discussion Points / Issues Identified	Recommendation (for budget ask) / <b>Action Items</b> (to be tracked via QMS LIST 006)
<p><b>Outcomes of the Risk Assessment</b></p> <p>Reviewed the Town of Pelham's Critical Control Point (loss of chlorine residual) and associated Critical Control Limit (CCL = 0.20 mg/L after routine flush) and processes in place to maintain (i.e., Spring/Fall and watermain flushing) and monitor (weekly distribution system Cl2 sampling). There have been no deviations from the CCL in 2018/2019 and there are no current implications to the capital request.</p>	No additional recommendations or action items.
<p><b>Watermain – servicing, replacement, monitoring, operating &amp; capital needs, other</b></p> <ul style="list-style-type: none"> <li>Reviewed <b>2018 Infrastructure Review Summary</b> and associated recommendations (<b>current status is in bold text; related risk assessment outcomes #4-7 &amp; 17</b>): <ul style="list-style-type: none"> <li>Clare Avenue Watermain Replacement - development driven (<b>development section has been completed by Developer – Town of Pelham portion was not approved</b>)</li> </ul> </li> <li>Haist Street: Welland Rd to Beckett Cres, including Welland Rd Haist to Edward (approved and going to construction Fall 2019)</li> <li>Station Street: Hwy 20 to Port Robinson, Watermain Replacement - trench only (WTR 02-18 in progress)</li> <li>Water System Repair Equipment (WTR 03-18 re- approved, now WTR 02-20)</li> <li>Backflow Prevention Program (WTR 01-2018 – should note context identifies this as a repeated recommendation from MOECC [now MECP]. Blue circled however project is in progress with the tender 90% complete, bylaw to be in place Spring 2020 and backflow testing form in place with testing to take place Jan-2020 – linked to risk assessment outcome #11) – no new projects are arising from risk assessment outcomes</li> <li>Reviewed 2018/2019 break histories to date: <ul style="list-style-type: none"> <li>8 in total in 2018 (1 pulled by contractor on Hurricane [risk assessment outcome 8]) 2x Pelham St N, 2x Pelham St S, 1 Strathcona Drive, 165 Welland and 1441 Station St. (watermain to be replaced in these areas)</li> <li>2 to date in 2019 (Welland Rd., Blackwood)</li> <li>5-10 per year previously with highest frequency in replacement process which is also dependent on funding/available reserves, wastewater and roads needs.</li> </ul> </li> <li>Reviewed the 2018/2019 projected 20-Year Capital and 2018 Pelham St S (Welland St. to south limit) which is projected for 2023 with Pelham N (originally recommended for 2016) under construction and anticipated to be completed December 2020 addressing the 2018 Infrastructure Review action item. 2020 working 20-Year Capital was approved 21-Oct-2019 and reviewed (includes annual request for inventory [Water System Repair Equipment = \$30,000 annually], Clare Ave (deferred to 2021) and Haist Street identified from 2017 with imminent construction); budget process to move up to May 2020. <ul style="list-style-type: none"> <li>Reviewed Action Item identified during 2017 Infrastructure Review re: addition of ATP to existing sampling [related to risk assessment outcome #9] is now closed as per QMS LIST 006 Corrective Action List.</li> </ul> </li> </ul>	Action Items (tracking via inclusion on 20-Year Capital rather than QMS LIST 006):

<p><b><u>Hydrants – monitoring, servicing, operating &amp; capital needs, other</u></b></p> <ul style="list-style-type: none"> <li>No hydrant needs have been identified by the Fire Chief since Pelham St. Merrit to Quaker (see 2017 Infrastructure Review). No implications to capital requests.</li> </ul>	None
<p><b><u>Main valves – monitoring, servicing, operating &amp; capital needs, other</u></b></p> <ul style="list-style-type: none"> <li>No implications to capital requests. Discussed NC-2018-NC-03 re: 2017 delinquent maintenance activities has been addressed and was also confirmed as part of 28- Oct-2019 TGC onsite day (documented within QMS LIST 006)</li> <li>Existing PRVs – April 2020 inspection (prior to budget process) as part of operating budget (to be scheduled Jan-2020), no short-term concerns (2020 Final 20-Year Capital identifies projected needs in 2034 and 2035 which may change depending on 2020 inspection)</li> </ul>	None
<p><b><u>Other appurtenances – operating &amp; capital budget needs, other</u></b></p> <ul style="list-style-type: none"> <li>Bulk Station was discussed (identified 50-year life span); no short-term concerns / no implications to capital request.</li> <li>5 low pressure issues (same as last year) have been reported as part of customer complaints (up from last 2 years); 5 complaints related to colour (average number), 2 leaky with no impact to capital requests</li> <li>No Best Management Practices identified</li> </ul>	None
<p><b><u>Inventory and Tools – operating &amp; capital needs, other</u></b></p> <ul style="list-style-type: none"> <li>MPW identified potential need to begin replacing existing colorimeters (4 in total) with new units in 2018 <ul style="list-style-type: none"> <li>replaced 2 in 2019 addressing 2018 action</li> </ul> </li> </ul>	None
<p><b><u>Software / hardware – capital needs, other</u></b></p> <ul style="list-style-type: none"> <li>Water Model upgrade in draft in 2018 are now completed</li> <li>Work order software (all Public Works Departments) was approved for 2018 and now waiting for assets to be uploaded.</li> </ul>	None
<p><b><u>Pumping Station</u></b></p> <ul style="list-style-type: none"> <li>Region attends the site once / month and contacts the Town in the event of an issue. A redundant pump is in place in the event of issues with the duty pump.</li> <li>The Region does intend on moving the Water Tower, at which point the pumping station will become obsolete. Related to Risk Assessment Outcomes #s 1 and 2.</li> </ul>	None
<p><b><u>Staffing</u></b></p> <ul style="list-style-type: none"> <li>No implications to capital requests. New staff member in 2018 now OIT</li> </ul>	None



## Appendix B - Management Review

Input	Details / Discussion Points / Issues Identified /Decisions Made	Action Item(s)
1)	<p>Incidents of regulatory non-compliance:</p> <p><b>MPW stated last MECP Inspection took place 17-Dec-2019 and report has not been issued yet.</b> Issues addressed included backflow and HAAs.</p> <p>No non-compliances and a 100% score for <a href="#">MECP Inspection Report</a> dated 16-Nov-2018 led to 4 recommendations (also discussed at review of infrastructure meeting 28-Oct-2019) documented and managed within <a href="#">QMS LIST 006</a>:</p> <p><b>1</b> - Create a new <b>heading for non-certified people in the logbook</b> or add a note besides the person's name to indicate that he/she is not a certified Operator (<b>2018-OFI-14 / 2017-IA-03 In Progress</b>, new log template has not yet been used).</p> <p><b>2</b> - Complete the implementation of its proposed <b>backflow program</b> as its topography makes it more prone to backflow (<b>also raised 2016-09-01 and 11-Jan-2018 via other MECP Inspections – In Progress</b>).</p> <p><b>3</b> - Use an <b>alternate sampling station for HAAs in 2019</b> in order to comply with the requirements from the Ministry's 9-May-2018 letter titled "Re: Haloacetic Acids (HAAs) Sampling Concerns". (<b>2018-OFI-16 COMPLETE with updated QMS LIST 003 (rev.4)</b>)</p> <p><b>4</b> - The ORO agreed to include the HAA's running annual average in the 2018 Annual Report (<b>2018-OFI-17 COMPLETE</b>).</p>	<p><a href="#">QMS LIST 006</a> to be shared with MECP for updates on 2019 issues raised left in the event same issues raised</p>
2)	<p>Incidents of <a href="#">adverse drinking-water tests</a>:</p> <p><b>No AWQIs</b> since 4 incidents in 2015 as per '<a href="#">Current Combined Water Ops 2015 onward spreadsheet</a>' 'Maintenance Activities' tab.</p>	Not applicable (N/A)
3)	<p>Deviations from critical control point limits and response actions:</p> <p><b>Last deviation from the identified CCL took place 10-Nov-2017</b> as per logbook (Town of Pelham W D System #260001604 Water Distribution System System Operation Record for 24-Aug to 17-Jan-2018) – linked to <b>2017-IA-03 (In Progress)</b> where logbook template has been developed for appropriate recording and is to be implemented when new logbook is issued (anticipated to be 2021).</p>	N/A
4)	<p>The effectiveness of the <a href="#">risk assessment process</a>:</p> <p>Last QMS LIST 001 review was completed 28-Oct-2019 as a precursor to review of infrastructure – no changes identified. Next Re-Assessment scheduled with review of infrastructure Q1 2020 to coincide with 2020 budget process to be completed by end of summer (refer to 'DWQMS Timeline' tab of <a href="#">QMS LIST 006</a>).</p>	Meeting notice went out 27-Dec-2019 to MPW, DPW and Supervisor – W/WW
5)	<p><a href="#">Internal</a> / <a href="#">third-party</a> audit results:</p> <p>Reviewed results of the internal audit completed by Tavares Group Consulting. 1 NC + 4 OFIs were identified (elements 5 and 13 resurfaced again). 2019 findings have been added to <a href="#">QMS LIST 006</a>, root cause, actions, timelines and personnel responsible discussed and updated. <b>Proposed that 2020 audit be over a 2-day period – November 5/6, 19/20 or 26/27.</b></p> <p>All 2018 identified and addressed and verified via internal audit except for 2018-OFI-18 (Element 3 i) Consider: b. documenting the process for ensuring OA awareness of all applicable legislative and regulatory requirements and the tracking (e.g. <a href="#">QMS LIST 006</a>) of any identified changes remains open and</p>	2019 findings to be addressed.

	to be addressed at next OP revision.) and 2018-OFI-23 requiring a longer verification time.	
	2019 external audit findings 2019-OFI-02 and -03 have been addressed.	
6)	Results of emergency response testing:  Last conducted <a href="#">17-Nov-2017</a> (watermain break). As per 2018-OFI-10 from the external audit, the next mock-up scenario (due by 2020) will be weather-related relating to QMS SOP 020 Frozen Service.	Meeting notice went out 27-Dec-2019 to MPW, DPW and Supervisor – W/WW
7)	Operational Performance:  As per <b>Supervisor-W/WW</b> : <ul style="list-style-type: none"> <li>• Sampling results is being inputted within an excel spreadsheet, <a href="#">2019 Chlorine Residual Sampling Summary</a> to enable easier annual reporting; no trends / incidents were identified.</li> <li>• Maintenance as per '<a href="#">Current Combined Water Ops 2015 onward spreadsheet</a>' was reviewed: <ul style="list-style-type: none"> <li>- PRVs (completed 5-Sep-2019 for the Region with pressure zone readings done monthly as per 'Pressure Test' tab), booster station through the Region of Niagara, and Town-owned backflow devices (observed using Backflow Prevention Assembly Testing and Inspection Report QMS FORM 006 as requested by contractor pertaining to sprinkler system, with program to be rolled out Spring 2020 as per MECF backflow recommendation)</li> <li>- 2018/2019 annual valve maintenance (refer to <a href="#">QMS LIST 006</a> 2018-NC-03 for closure of this item; Q1 started in 2018 and finished Jun-2019 utilizing QMS FORM 14; Q2 was done in 2019 as well, Q3 scheduled for Fall 2020 and Q4 in 2021)</li> <li>- 2018/2019 annual hydrant maintenance (including flushing, greasing, repair if needed) is also completed in 4 quadrants in one year; completion of individual hydrants are tracked using QMS FORM 002 (refer to OFI 2018-IA-03) and also observed in logbook dated 22-Nov-2019</li> <li>- 2019 dead end blow off flushing was completed in the Spring (10-26-Apr) and Fall (30-Sep to 31-Oct) and is documented on QMS FORM 001.</li> </ul> </li> <li>• Completion of valve maintenance/exercising program and frequency set in SOP 014 was discussed (2018-OFI-24 COMPLETED and confirmed valve maintenance every 4 years is feasible)</li> <li>• Supervisor W/WW signs off and repairs listing completed for hydrants and valves through work orders</li> </ul>	Annual Valve and Hydrant Maintenance was added to the 'DWQMS Timeline' tab of <a href="#">QMS LIST 006</a> .
8)	Raw water supply <a href="#">reports</a> & drinking water trends:  Follow-up with Region of Niagara by MPW to confirm communication of any/all water quality issues 2018-OFI-25 was COMPLETE 4-Mar-2019; Region of Niagara reports reviewed Jan-2019 by MPW identified no issues.	N/A
9)	Follow-up on actions from <a href="#">previous Management Reviews</a> :  2018-OFI-24 through -26 complete	N/A
10)	Status of management actions items identified between reviews:	N/A

	Refer directly above																																											
11)	<p>Changes that could affect the Quality Management System:</p> <p>i) As per MPW, discussion ensued during the 2019 MECP Inspection pertaining to <b>Ontario's Watermain Disinfection Procedure</b> DRAFT which has been released but a copy has not been received.</p> <p>ii) DPW followed up re: status of requirements under O.Reg. 588/17 Asset Management Planning for Municipal Infrastructure which at this time is not determined as having an impact on the DWQMS.</p> <p>iii) 2-hr Standard of Care / DWQMS Awareness presentation to Council and Sr. Leadership Team took place 1-Feb-2019 prior to annual reporting deeming 2018-OFI-26 complete.</p>	<p>i) Obtain a copy of the draft Ontario Watermain Disinfection Procedure.</p> <p>ii) Confirm dates of training for admin staff and annual calibration in 2020 as per meeting notice sent 27-Dec-2019 and DWQMS timeline</p>																																										
12)	<p>Consumer feedback (incl. <a href="#">complaints</a>):</p> <p>Annual summary in 'Complaint Summary' tab of '<a href="#">Current Combined Water Ops 2015 onward spreadsheet</a>' was reviewed by Supervisor W/WW:</p> <table><tr><th></th><th>2016</th><th>2017</th><th>2018</th><th>2019</th><th>TOTAL</th></tr><tr><td><b>Air Complaints / Year</b> – tied to watermain breaks (incl. approx. 75% contractor issues, natural watermain breaks dropped to 2-3 / year related to Haist, Welland and Pelham Sts.) and colour</td><td>3</td><td>1</td><td>1</td><td>2</td><td>7</td></tr><tr><td><b>Colour Complaints / Year</b> – internal plumbing issues have led to an increase in 2019 (e.g., rusty water tanks)</td><td>4</td><td>7</td><td>3</td><td>12</td><td>26</td></tr><tr><td><b>Leaky Service Complaints / Year</b> – replacement of water mains has reduced this number</td><td>5</td><td>22</td><td>3</td><td>2</td><td>32</td></tr><tr><td><b>Low Pressure Complaints / Year</b> – moves from one area to another</td><td>9</td><td>13</td><td>5</td><td>6</td><td>33</td></tr><tr><td><b>Odour Complaints / Year</b></td><td>1</td><td>2</td><td>1</td><td>2</td><td>6</td></tr><tr><td><b>TOTAL</b></td><td><b>22</b></td><td><b>45</b></td><td><b>13</b></td><td><b>24</b></td><td><b>104</b></td></tr></table>		2016	2017	2018	2019	TOTAL	<b>Air Complaints / Year</b> – tied to watermain breaks (incl. approx. 75% contractor issues, natural watermain breaks dropped to 2-3 / year related to Haist, Welland and Pelham Sts.) and colour	3	1	1	2	7	<b>Colour Complaints / Year</b> – internal plumbing issues have led to an increase in 2019 (e.g., rusty water tanks)	4	7	3	12	26	<b>Leaky Service Complaints / Year</b> – replacement of water mains has reduced this number	5	22	3	2	32	<b>Low Pressure Complaints / Year</b> – moves from one area to another	9	13	5	6	33	<b>Odour Complaints / Year</b>	1	2	1	2	6	<b>TOTAL</b>	<b>22</b>	<b>45</b>	<b>13</b>	<b>24</b>	<b>104</b>	N/A
	2016	2017	2018	2019	TOTAL																																							
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13)	<p>The resources needed to maintain the QMS:</p> <p>MPW and DPW identified assistance services an asset and to continue into 2019. Ok with number of operators and work required on the system. DWQMS Timeline tracks significant annual activities.</p>	N/A																																										
14)	<p>The result of the <a href="#">infrastructure review</a>:</p> <p>Draft Water 20-Year Projected Capital Budget was communicated to the Senior Leadership Team (this information drove their inclusion within the Standard of Care training in early 2019). Projects were documented within the updated Infrastructure Review Meeting Minutes (QMS FORM 026). Risk Assessment, Review of Infrastructure including Tailgate Meeting and Budget Submission was conducted 28-Oct-2019 with risk assessment review with no risk assessment outcomes affecting budget with the following projects updated since meeting - Haist Street: Welland Rd to Beckett Cres, including Welland Rd Haist to Edward is now complete. Timeline for budget has shifted and proposed to Q1 2020 to initiate the process (budgets to be in by end of summer).</p>	N/A																																										

15)	<a href="#">Operational plan currency, content and updates</a> (incl. need for re-endorsement):	N/A																												
	Some Operational Plan updates have been identified as a result of audit findings, etc. with no need for re-endorsement in early 2020 at time Annual Report goes to Council as they are not major revisions and do not involve a new Council.																													
16)	Personnel suggestions:	N/A																												
	No additional details reviewed; actions have been given consideration and are being effectively tracked via <a href="#">QMS LIST 006</a> - 2018-OFI-13 and 2019-OFI-01 remain open related to backflow and calibration.																													
17)	General assessment of suitability, adequacy and effectiveness	N/A																												
	Internal audit report identified the following trending: <table><tr><td></td><td>2015</td><td>2016</td><td>2017</td><td>2018</td><td>2019</td></tr><tr><td>Internal Audit</td><td>3 NCs, 5 OFIs</td><td>5 NCs, 13 OFIs</td><td>8 OFIs</td><td>6 OFIs</td><td>1 NC, 4 OFIs</td></tr><tr><td>MECP Inspection (OFIs)</td><td>-</td><td>3</td><td>4</td><td>TBA</td><td></td></tr><tr><td>External audit (OFIs)</td><td>4</td><td>2</td><td>2</td><td>3</td><td>2</td></tr><tr><td>TOTAL</td><td>3 NCs, 9 OFIs</td><td>5 NCs, 18 OFIs</td><td>16 OFIs</td><td>9 OFIs</td><td>1 NC, 6 OFIs</td></tr></table> Most findings are generated from internal audits and mostly OFIs. Corrective and preventive actions are being managed effectively. The QMS is deemed to be suitable, adequate and effective.			2015	2016	2017	2018	2019	Internal Audit	3 NCs, 5 OFIs	5 NCs, 13 OFIs	8 OFIs	6 OFIs	1 NC, 4 OFIs	MECP Inspection (OFIs)	-	3	4	TBA		External audit (OFIs)	4	2	2	3	2	TOTAL	3 NCs, 9 OFIs	5 NCs, 18 OFIs	16 OFIs
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External audit (OFIs)	4	2	2	3	2																									
TOTAL	3 NCs, 9 OFIs	5 NCs, 18 OFIs	16 OFIs	9 OFIs	1 NC, 6 OFIs																									
18)	Review and consideration of applicable best management practices	N/A																												
	MECP website identified no BMPs. MECP recommendations (see input 1) are to be included within <a href="#">QMS LIST 006</a> as well as BMPs / Preventive Actions.																													

## Appendix C – Internal Audit Results

### Summary of Findings

Owner & Operating Authority:	The Corporation of the Town of Pelham (Public Works)
Auditor:	Sandra Tavares, B.Sc., M.Sc., EP(EMS-LA), EP-Sustainability
Systems Reviewed:	The Pelham Distribution System
REQUIREMENT ↓	FINDING(S) ↓
1. Quality Management System	C
2. Quality Management System Policy	C
3. Commitment and Endorsement	C
4. Quality Management System Representative	C
5. Document and Records Control	OFI
6. Drinking Water System	C
7. Risk Assessment	C
8. Risk Assessment Outcomes	C
9. Organizational Structure, Roles, Responsibilities and Authorities	C
10. Competencies	C
11. Personnel Coverage	C
12. Communication	C
13. Essential Supplies and Services	Mn
14. Review and Provision of Infrastructure	C
15. Infrastructure Maintenance, Rehabilitation & Renewal	OFI
16. Sampling, Testing and Monitoring	OFI
17. Measurement & Recording Equipment Calibration and Maintenance	OFI
18. Emergency Management	C
19. Internal Audits	C
20. Management Review	C
21. Continual Improvement	
C	Conforms to the requirement – <a href="#">See comments in body of report</a>
Mj	Major Non-conformity
Mn	Minor Non-conformity
OFI	Opportunity for improvement – See <a href="#">Annex A</a>
OFI *	Opportunity for improvement which may become a nonconformity if not addressed– See <a href="#">Annex A</a>

## Appendix D - External DWQMS Audit Results



### Executive Summary

Ontario's Drinking Water Quality Management Standard Version 2	DWQMSR is the source & inspiration for the upkeep of the system.
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### Opportunities

Ontario's Drinking Water Quality Management Standard Version 2	Could consider flow charting SOP's- for internal audit, training the new employees and finding Continual improvements.
--	--

### Corrective Action Requests

There is NO Corrective Action Request in this audit.	
--	--

### Site Information

The audit was based on a sampling of the company's management system.

#### Industry Codes

NACE:E 41

#### Scope of Registration

Ontario's Drinking Water Quality Management Standard Version 2 : Pelham Distribution System, 072-OA1, Entire Full Scope Accreditation



**Ministry of the Environment,  
Conservation and Parks  
Drinking Water and Environmental  
Compliance Division  
West Central Region  
Niagara District Office**

**Ministère de l'Environnement  
de la Protection de la nature et des Parcs  
Division de la conformité en matière d'eau  
potable et d'environnement  
Direction régionale du Centre-Ouest  
Bureau du district de Niagara**



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301 St. Paul Street  
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Tel.: 905 704-3900  
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301, rue St. Paul  
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Tel.: 905 704-3900  
1-800-263-1035  
Téléc: 905 704-4015

Monday, December 3, 2018

File: SI NI PE A540 – 2018-19  
DWS# 260001604

Mr. Jason Marr  
Director of Public Works and Utilities  
20 Pelham Town Square  
Fonthill, Ontario  
L0S 1E0

Re: Pelham Distribution System Inspection Report

Dear Mr. Marr,

Please find the enclosed copy of the inspection report for the Pelham Distribution System initiated on November 16, 2018. Please note that as of June 29, 2018 the Ministry of the Environment and Climate Change's name has changed to the Ministry of the Environment, Conservation and Parks. This name change will take some time to be reflected in ministry materials and systems.

Section 19 of the Safe Drinking Water Act (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in "Taking Care of Your Drinking Water: A guide for members of municipal council" found under on the Ontario website at [www.ontario.ca/environment-and-energy/taking-care-your-drinking-water-guide-members-municipal-councils](http://www.ontario.ca/environment-and-energy/taking-care-your-drinking-water-guide-members-municipal-councils).

The items found within the section entitled "Non-compliance with Regulatory Requirements and Actions Required" outline non-compliance with regulatory requirements contained within an Act, a Regulation, or site-specific approvals, licenses, permits, orders, or guidelines. Please ensure that the required actions are completed within the prescribed timeframe.

The items found within the section entitled "Summary of Best Practice Issues and Recommendations" provide information to the owner or operating authority outlining practices or standards established through existing and emerging industry standards that should be considered in

order to advance current efforts. These items do not, in themselves, constitute violations. More recommendations are also provided within the body of the report.

Thank you for the assistance during the inspection. Please do not hesitate to contact me if you have any questions or concerns about the attached report.

Sincerely,



Sylvain Campbell, P. Eng.  
Provincial Officer #1278, Water Inspector  
Niagara District Office - West Central Region  
Phone: (905) 704-3910 or 1 (800) 235-1035 x. 43910  
E-mail: sylvain.campbell@ontario.ca

Cc: Ryan Cook – Town of Pelham  
Dave Vaccaro – Town of Pelham  
Anthony Habjan - Niagara Public Health Department  
Tareq Al-Zabet - Niagara Peninsula Conservation Authority  
Zafar Bhatti – Ministry of the Environment, Conservation and Parks  
MECP Niagara District File



**Ministry of the Environment, Conservation and Parks**

**PELHAM DISTRIBUTION SYSTEM**

**Inspection Report**

<b>Site Number:</b>	260001604
<b>Inspection Number:</b>	1-I6G4P
<b>Date of Inspection:</b>	Nov 16, 2018
<b>Inspected By:</b>	Sylvain Campbell

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## TABLE OF CONTENTS

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### **Cover Letter**

### **Owner & Contact Information** 2

### **Inspection Details & Drinking Water System Components Description** 2

### **Inspection Summary (should include all of the following if applicable)** 4

- Introduction
- Capacity Assessment
- Treatment Processes
- Treatment Process Monitoring
- Distribution System
- Operations Manuals
- Logbooks
- Contingency/Emergency Planning
- Security
- Consumer Relations
- Certification and Training
- Water Quality Monitoring
- Water Quality Assessment
- Reporting & Corrective Actions
- Other Inspection Findings

### **Non-Compliance with Regulatory Requirements and Actions Required** 8

### **Summary of Best Practice Issues and Recommendations** 9

### **Signatures** 10

## **APPENDICES**

**APPENDIX A: Stakeholder Appendix**

**APPENDIX B: MOE Audit Sample Results (if applicable)**

**APPENDIX C: Inspection Rating Report**

## OWNER INFORMATION:

<b>Company Name:</b>	PELHAM, THE CORPORATION OF THE TOWN OF	<b>Unit Identifier:</b>	
<b>Street Number:</b>	20		
<b>Street Name:</b>	PELHAM TOWN Sq		
<b>City:</b>	FONTHILL		
<b>Province:</b>	ON	<b>Postal Code:</b>	L0S 1E0

## CONTACT INFORMATION

<b>Type:</b>	Director	<b>Name:</b>	Jason Marr
<b>Phone:</b>	(905) 892-2607 x313	<b>Fax:</b>	(905) 892-5055
<b>Email:</b>	jmarr@pelham.ca		
<b>Title:</b>	Director of Public Works and Utilities		

<b>Type:</b>	ORO	<b>Name:</b>	Ryan Cook
<b>Phone:</b>	(905) 892-2607	<b>Fax:</b>	
<b>Email:</b>	rcook@pelham.ca		
<b>Title:</b>	Manager of Public Works		

<b>Type:</b>	Niagara Health Unit	<b>Name:</b>	Anthony Habjan
<b>Phone:</b>	(905) 688-3762	<b>Fax:</b>	(905) 641-4994
<b>Email:</b>	anthony.habjan@niagararegion.ca		
<b>Title:</b>	Manager, Environmental Health - Niagara Region Public Health Unit		

<b>Type:</b>	Niagara Conservation Authority	<b>Name:</b>	Tareq Al-Zabet
<b>Phone:</b>	(905) 788-3135	<b>Fax:</b>	
<b>Email:</b>	talzabet@npca.ca		
<b>Title:</b>	Director, Watershed Management		

## INSPECTION DETAILS:

<b>Site Name:</b>	PELHAM DISTRIBUTION SYSTEM
<b>Site Address:</b>	20 PELHAM TOWN SQ FONTHILL L0S 1E0
<b>County/District:</b>	Pelham
<b>MECP District/Area Office:</b>	Niagara District
<b>Health Unit:</b>	REGIONAL NIAGARA PUBLIC HEALTH DEPARTMENT
<b>Conservation Authority:</b>	Niagara Peninsula Conservation Authority
<b>MNR Office:</b>	Guelph Regional Office
<b>Category:</b>	Large Municipal Residential
<b>Site Number:</b>	260001604
<b>Inspection Type:</b>	Announced
<b>Inspection Number:</b>	1-I6G4P
<b>Date of Inspection:</b>	Nov 16, 2018
<b>Date of Previous Inspection:</b>	Jan 11, 2018

## COMPONENTS DESCRIPTION

**Site (Name):** Distribution (Water Inspection)**Type:** Other**Sub Type:** Other**Comments:**

The Town of Pelham Water Distribution System receives its supply of treated water from the Regional Municipality of Niagara's Welland Drinking Water System via a 750 mm diameter watermain. Raw water for the Welland Water Treatment Plant is taken from Lake Erie via the Welland Recreational Waterway. Two drinking water storage facilities are located within the Town of Pelham: the Shoalts Drive Reservoir/Rechlorination Station and the Pelham Elevated Tank. The Welland Water Treatment Plant and the two storage facilities are subject to a separate inspection as they are owned and operated by the Regional Municipality of Niagara.

The Town of Pelham owns and operates the water distribution system, which supplies drinking water to Fonthill and Fenwick urban areas in Pelham. The Pelham Water Distribution System supplies drinking water to approximately 12,546 people through approximately 84 kilometres of Town watermains ranging from 50 mm to 400 mm. The watermains are primarily cast iron, asbestos concrete, high pressure concrete piping, copper and PVC piping. There are approximately 554 hydrants and 683 valves located throughout the system. The Town owns a fill station with side-fill and a backflow prevention device as well as a residential pressure boosting station. The Town of Pelham does not provide any additional treatment or rechlorination.

**Site (Name):** Chestnut Ridge Pumping Station**Type:** Other**Sub Type:** Pumphouse**Comments:**

The Town owns the Chestnut Ridge booster pump station which is located on the Pelham's Elevated Tank property. There is one fire pump on site which supplies a small part of the Town when needed.

**Site (Name):** MOE DWS Mapping**Type:** DWS Mapping Point**Sub Type:**

## INSPECTION SUMMARY:

### Introduction

- The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O. Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This report is based on an inspection of a "stand alone connected distribution system". This type of system receives treated water from a separately owned "donor" system. This report contains the elements required to assess key compliance and conformance issues associated with a "receiver" system. This report does not contain items associated with the inspection of the donor system, such as source waters, intakes/wells and treatment facilities.

This report is based on a "focused" inspection of the system. Although the inspection involved fewer activities than those normally undertaken in a detailed inspection, it contained critical elements required to assess key compliance issues. This system was chosen for a focused inspection because the system's performance met the ministry's criteria, most importantly that there were no deficiencies as identified in O. Reg. 172/03 over the past 3 years. The undertaking of a focused inspection at this drinking water system does not ensure that a similar type of inspection will be conducted at any point in the future.

**This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.**

This focused inspection included a review of operational records for the Pelham Distribution System (DS) from January 1, 2018 to November 15, 2018. Permit 072-201 and Licence 072-101, Issues 3, were approved on May 16, 2017.

This inspection included a visit of the Chestnut Ridge booster station and to the Town's bulk water fill station.

During the site visits, the inspector met with the Manager of Public Works, and the Supervisor of Water/Wastewater.

### Treatment Processes

- **The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.**

The only equipment required by the Permit is the Chestnut Ridge Pumping Station. The station was visited however, as the Town does not operate the equipment and the station is located on a Niagara Region's property, the equipment could not be accessed. The Supervisor of Water/Wastewater mentioned that the equipment was as per the Permit.

- **The owner/operating authority was in compliance with the requirement to prepare Form 1 documents as required by their Drinking Water Works Permit during the inspection period.**

The status of the Forms 1 projects from the previous inspection period which had not been integrated in the distribution system (DS) drawings at the time is the following:



### Treatment Processes

Project Description	Approval Date	Date Commissioned	In DS Drawing?
1 - Station Street from Port Robinson Rd. to Regional Road 20	August 16, 2016	Not yet	No
2 - Summersides Boul. And Station Street	Feb. 2, 2017	June 14, 2018	No

Four Form 1 projects were approved during the inspection period. The Forms appeared to meet the requirements of Condition 3 of Schedule B of the Permit.

Project Description	Approval Date	Date Commissioned	In DS Drawing?
1 – Lymburner St. and Acacia Rd. Swan Ave. and Myrtle St. Walker Rd.	May 16, 2018	Sep. 6, 2018	No
2 – Clare Avenue South of Quaker Road	May 22, 2018	July 12, 2018	No
3 – Rice Road between Highway 20 and Steve Bauer Trail	Sep. 12, 2018	Oct 19, 2018	No
4 – Station Street and Lyndhurst Ave.	Sep. 26, 2018	Not yet	No

### Treatment Process Monitoring

- **The secondary disinfectant residual was measured as required for the distribution system.**

The Town took four chlorine samples during one day of the week and three samples on another day of the week at least 48 hours apart from the previous samples. The minimum free chlorine residual (FCR) concentration during the inspection period was 0.22 mg/L on September 20, 2018.

### Distribution System

- **Existing parts of the distribution system that are taken out of service for inspection, repair or other activities that may lead to contamination, and all new parts of the distribution system that come in contact with drinking water, were disinfected in accordance with Schedule B, Condition 2.3 of the Drinking Water Works Permit, or an equivalent procedure (i.e. the Watermain Disinfection Procedure).**

The Pelham's contractors are required to follow the 'Niagara Peninsula Standard Contract Document' for construction work on the watermain, which details watermain disinfection and testing requirements before connection to the Pelham's distribution system. The Town received issue 3 of its Permit on May 16, 2017 which requires using the new Ontario "Watermain Disinfection Procedure" for new watermains and watermain repairs as of November 15, 2017. Standard Operating Procedure 025 - "Watermain Break" is used for watermain repairs. The main break records complied with the record requirements of the Watermain Disinfection Procedure.

### Operations Manuals

- **The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.**

The manuals included a distribution map which showed the sampling locations, main sizes, and hydrants. They also contained a drawing showing the location of the Town's Pressure Reducing Valves (PRVs) and a drawing indicating the flushing locations.

### Operations Manuals

- **The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.**

### Logbooks

- **Logbooks were properly maintained and contained the required information.**

There were a few occasions where the name of a non-certified person was written in the main logbook under the "Operators on Duty" heading. The Town is encouraged to either create a new heading for non-certified people in the logbook or add a note besides the person's name to indicate that he/she is not a certified operator.

- **Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.**

### Security

- **The owner had provided security measures to protect components of the drinking water system.**

The Chestnut Ridge pump station is located on the Pelham Tank's property, which is owned by the Region of Niagara. The station was locked with an alarm within a fenced area. The Town's filling station had a keypad access system. Its internal parts were in a locked compartment.

### Certification and Training

- **The overall responsible operator had been designated for each subsystem.**

The Pelham DS received a Class II DS Licence #1733 on November 9, 2005. The Town has designated an overall responsible operator (ORO) for the Pelham Class 2 Distribution System through By-Law # 3612 (2015).

- **Operators in charge had been designated for all subsystems which comprised the drinking-water system.**

### Water Quality Monitoring

- **All microbiological water quality monitoring requirements for distribution samples were being met.**

The Town is required to take 20 microbiological samples per month including at least one per week. The Town complied with the requirements as they took 7 to 12 samples per week using 4 different sampling routes during the inspection period.

In addition, at least 25% of these samples must also be tested for Heterotrophic Plate Count (HPC). All bacteriological samples reviewed during the inspection were tested for HPC.

- **All haloacetic acid water quality monitoring requirements prescribed by legislation are being conducted within the required frequency and at the required location.**

Haloacetic Acid (HAA) samples were collected and tested from one location on a quarterly basis. The highest readout was 16.1 µg/L from a sample obtained on June 11, 2018. There is no limit for HAA running annual average at this time. The limit of 80 µg/L will take effect on January 1, 2020.

The ORO was made aware of the May 9, 2018 letter sent by the Ministry's Director, Compliance, Promotion and Support Branch titled "Re: Haloacetic Acids (HAAs) Sampling Concerns". The ORO advised the inspector that he already had a second station in mind for the next samples to comply with this guidance letter.

### **Water Quality Monitoring**

The HAA's running annual average was not included in the Town's 2017 Annual Report. The ORO agreed to include the average in the 2018 Annual Report.

- **All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.**

The running annual average for trihalomethane (THM) for 2017 was 50.0 µg/L, half of the limit of 100 µg/L. The numbers for 2018 appear to be lower than in 2017. The ORO mentioned that they contacted the Region of Niagara to ensure that they were aware of the higher THM readouts in 2017.

The THM running annual average reported in the Town's Annual Report was incorrect. The report was updated prior to the issuance of this report.

- **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**

### **Water Quality Assessment**

- **Records showed that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O.Reg. 169/03).**

### **Reporting & Corrective Actions**

- **All changes to the system registration information were provided within ten (10) days of the change.**

Although there were no changes to the system registration information during the inspection period, the ORO indicated that there may be changes in the near future. The Town is reminded that Subsection 10.1 (3) of O. Reg. 170/03 states:

10.1(3) If there is any change to the information given to the Director under subsection (1) or (2), the owner of the drinking-water system shall give the Director written notice of the change within 10 days of the change.

### **Other Inspection Findings**

- **The following issues were also noted during the inspection:**

The ORO mentioned that the Town has hired a consultant to set up a new backflow prevention program which will likely be implemented by the end of 2019. The Town is encouraged to complete the implementation of the program as its topography makes it more prone to backflow.

- **The following items are noted as being relevant to the Drinking Water System:**

The ORO mentioned that the Region of Niagara is planning to install a new elevated tank within the next 5 years which would replace the existing tank. The Town may not need its pressure-booster station when the new tank is installed.

## NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

Not Applicable

## SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

**1. The following issues were also noted during the inspection:**

- 1 - There were a few occasions where the name of a non-certified person was written in the main logbook under the "Operators on Duty" heading.
- 2 - The ORO mentioned that the Town has hired a consultant to set up a new backflow prevention program which will likely be implemented by the end of 2019.
- 3 - The ORO was made aware of the May 9, 2018 letter sent by the Ministry's Director, Compliance, Promotion and Support Branch titled "Re: Haloacetic Acids (HAAs) Sampling Concerns". The ORO advised the inspector that he already had a second station in mind for the next samples to comply with this guidance letter.
- 4 - The HAA's running annual average was not included in the Town's 2017 Annual Report.

**Recommendation:**

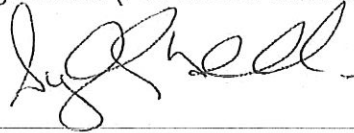
- 1 - The Town is encouraged to either create a new heading for non-certified people in the logbook or add a note besides the person's name to indicate that he/she is not a certified operator.
- 2 - The Town is encouraged to complete the implementation of its proposed backflow program as its topography makes it more prone to backflow.
- 3 - The Town is reminded to use an alternate sampling station for HAAs in 2019 in order to comply with the requirements from the Ministry's May 9, 2018 letter titled "Re: Haloacetic Acids (HAAs) Sampling Concerns".
- 4 - The ORO agreed to include the HAA's running annual average in the 2018 Annual Report.

**SIGNATURES**

Inspected By:

Sylvain Campbell

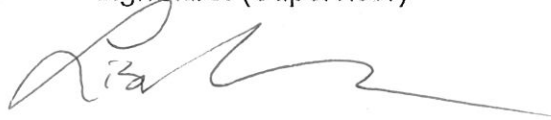
Signature: (Provincial Officer)



Reviewed &amp; Approved By:

Zafar Bhatti

Signature: (Supervisor)



Review &amp; Approval Date:

03 DEC 2018

Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.

## **APPENDIX A:**

### **STAKEHOLDER APPENDIX**



# Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles in the table below or use your web browser to search for their titles. Contact the Public Information Centre if you need assistance or have questions at 1-800-565-4923/416-325-4000 or [picemail.moe@ontario.ca](mailto:picemail.moe@ontario.ca).

For more information on Ontario's drinking water visit [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater) and email [drinking.water@ontario.ca](mailto:drinking.water@ontario.ca) to subscribe to drinking water news.



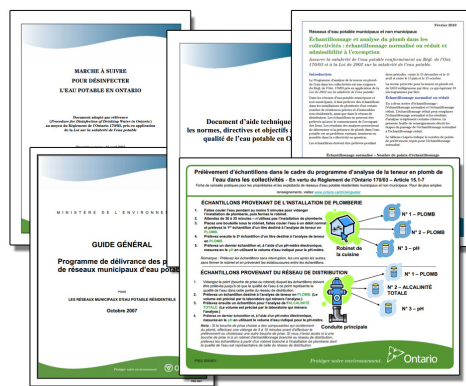
PUBLICATION TITLE	PUBLICATION NUMBER
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	7889e01
FORMS: Drinking Water System Profile Information, Laboratory Services Notification, Adverse Test Result Notification Form	7419e, 5387e, 4444e
Procedure for Disinfection of Drinking Water in Ontario	4448e01
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	7152e
Total Trihalomethane (TTHM) Reporting Requirements Technical Bulletin (February 2011)	8215e
Filtration Processes Technical Bulletin	7467
Ultraviolet Disinfection Technical Bulletin	7685
Guide for Applying for Drinking Water Works Permit Amendments, Licence Amendments, Licence Renewals and New System Applications	7014e01
Certification Guide for Operators and Water Quality Analysts	
Guide to Drinking Water Operator Training Requirements	9802e
Taking Samples for the Community Lead Testing Program	6560e01
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	7423e
Guide: Requesting Regulatory Relief from Lead Sampling Requirements	6610
Drinking Water System Contact List	7128e
Technical Support Document for Ontario Drinking Water Quality Standards	4449e01

[ontario.ca/drinkingwater](http://ontario.ca/drinkingwater)

# Principaux guides et documents de référence sur les réseaux résidentiels municipaux d'eau potable

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment.

Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le Centre d'information au public au 1 800 565-4923 ou au 416 325-4000, ou encore à [picemail.moe@ontario.ca](mailto:picemail.moe@ontario.ca) si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site [www.ontario.ca/eaupotable](http://www.ontario.ca/eaupotable) ou envoyez un courriel à [drinking.water@ontario.ca](mailto:drinking.water@ontario.ca) pour suivre l'information sur l'eau potable.

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Prendre soin de votre eau potable – Un guide destiné aux membres des conseils municipaux	7889f01
Renseignements sur le profil du réseau d'eau potable, Avis de demande de services de laboratoire, Formulaire de communication de résultats d'analyse insatisfaisants et du règlement des problèmes	7419f, 5387f, 4444f
Marche à suivre pour désinfecter l'eau potable en Ontario	4448f01
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids (en anglais seulement)	7152e
Total Trihalomethane (TTHM) Reporting Requirements: Technical Bulletin (février 2011) (en anglais seulement)	8215e
Filtration Processes Technical Bulletin (en anglais seulement)	7467
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	7685
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable, de modification du permis de réseau municipal d'eau potable, de renouvellement du permis de réseau municipal d'eau potable et de permis pour un nouveau réseau	7014f01
Guide sur l'accréditation des exploitants de réseaux d'eau potable et des analystes de la qualité de l'eau de réseaux d'eau potable	
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802f
Prélèvement d'échantillons dans le cadre du programme d'analyse de la teneur en plomb de l'eau dans les collectivités	6560f01
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	7423f
Guide: Requesting Regulatory Relief from Lead Sampling Requirements (en anglais seulement)	6610
Liste des personnes-ressources du réseau d'eau potable	7128f
Document d'aide technique pour les normes, directives et objectifs associés à la qualité de l'eau potable en Ontario	4449f01

[ontario.ca/eaupotable](http://ontario.ca/eaupotable)

## **APPENDIX B:**

### **MINISTRY AUDIT SAMPLE RESULTS (IF APPLICABLE)**

## **APPENDIX C:**

### **INSPECTION RATING REPORT**

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2018-2019)

**DWS Name:** PELHAM DISTRIBUTION SYSTEM  
**DWS Number:** 260001604  
**DWS Owner:** Pelham, The Corporation Of The Town Of  
**Municipal Location:** Pelham

**Regulation:** O.REG 170/03  
**Category:** Large Municipal Residential System  
**Type Of Inspection:** Adhoc  
**Inspection Date:** November 16, 2018  
**Ministry Office:** Niagara District

**Maximum Question Rating:** 175

Inspection Module	Non-Compliance Rating
Treatment Processes	0 / 18
Distribution System	0 / 21
Operations Manuals	0 / 28
Logbooks	0 / 18
Certification and Training	0 / 14
Water Quality Monitoring	0 / 51
Reporting & Corrective Actions	0 / 4
Treatment Process Monitoring	0 / 21
<b>TOTAL</b>	<b>0 / 175</b>

<b>Inspection Risk Rating</b>	<b>0.00%</b>
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<b>FINAL INSPECTION RATING:</b>	<b>100.00%</b>
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Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2018-2019)

**DWS Name:** PELHAM DISTRIBUTION SYSTEM  
**DWS Number:** 260001604  
**DWS Owner:** Pelham, The Corporation Of The Town Of  
**Municipal Location:** Pelham

**Regulation:** O.REG 170/03  
**Category:** Large Municipal Residential System  
**Type Of Inspection:** Adhoc  
**Inspection Date:** November 16, 2018  
**Ministry Office:** Niagara District

**Maximum Question Rating:** 175

<b>Inspection Risk Rating</b>	<b>0.00%</b>
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<b>FINAL INSPECTION RATING:</b>	<b>100.00%</b>
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# APPLICATION OF THE RISK METHODOLOGY USED FOR MEASURING MUNICIPAL RESIDENTIAL DRINKING WATER SYSTEM INSPECTION RESULTS



The Ministry of the Environment (MOE) has a rigorous and comprehensive inspection program for municipal residential drinking water systems (MRDWS). Its objective is to determine the compliance of MRDWS with requirements under the Safe Drinking Water Act and associated regulations. It is the responsibility of the municipal residential drinking water system owner to ensure their drinking water systems are in compliance with all applicable legal requirements.

This document describes the risk rating methodology, which has been applied to the findings of the Ministry's MRDWS inspection

results since fiscal year 2008-09. The primary goals of this assessment are to encourage ongoing improvement of these systems and to establish a way to measure this progress.

MOE reviews the risk rating methodology every three years.

The Ministry's Municipal Residential Drinking Water Inspection Protocol contains 15 inspection modules consisting of approximately 100 regulatory questions. Those protocol questions are also linked to definitive guidance that ministry inspectors use when conducting MRDWS inspections.

[ontario.ca/drinkingwater](http://ontario.ca/drinkingwater)



The questions address a wide range of regulatory issues, from administrative procedures to drinking water quality monitoring. The inspection protocol also contains a number of non-regulatory questions.

A team of drinking water specialists in the ministry assessed each of the inspection protocol regulatory questions to determine the risk (not complying with the regulation) to the delivery of safe drinking water. This assessment was based on established provincial risk assessment principles, with each question receiving a risk rating referred to as the Question Risk Rating. Based on the number of areas where a system is deemed to be non-compliant during the inspection, and the significance of these areas to administrative, environmental, and health consequences, a risk-based inspection rating is calculated by the ministry for each drinking water system.

It is important to be aware that an inspection rating less than 100 per cent does not mean the drinking water from the system is unsafe. It shows areas where a system’s operation can improve. The ministry works with owners and operators of systems to make sure they know what they need to do to achieve full compliance.

The inspection rating reflects the inspection results of the specific drinking water system for the reporting year. Since the methodology is applied consistently over a period of years, it serves as a comparative measure both provincially and in relation to the individual system. Both the drinking water system and the public are able to track the performance over time, which encourages continuous improvement and allows systems to identify specific areas requiring attention.

The ministry’s annual inspection program is an important aspect of our drinking water safety net. The ministry and its partners share a common commitment to excellence and we continue to work toward the goal of 100 per cent regulatory compliance.

## Determining Potential to Compromise the Delivery of Safe Water

The risk management approach used for MRDWS is aligned with the Government of Ontario’s Risk Management Framework. Risk management is a systematic approach to identifying potential hazards, understanding the likelihood and consequences of the hazards, and taking steps to reduce their risk if necessary and as appropriate.

The Risk Management Framework provides a formula to be used in the determination of risk:

**RISK = LIKELIHOOD × CONSEQUENCE**  
(of the consequence)

Every regulatory question in the inspection protocol possesses a likelihood value (L) for an assigned consequence value (C) as described in **Table 1** and **Table 2**.

TABLE 1:	
Likelihood of Consequence Occurring	Likelihood Value
0% - 0.99% (Possible but Highly Unlikely)	L = 0
1 – 10% (Unlikely)	L = 1
11 – 49% (Possible)	L = 2
50 – 89% (Likely)	L = 3
90 – 100% (Almost Certain)	L = 4

TABLE 2:	
Consequence	Consequence Value
Medium Administrative Consequence	C = 1
Major Administrative Consequence	C = 2
Minor Environmental Consequence	C = 3
Minor Health Consequence	C = 4
Medium Environmental Consequence	C = 5
Major Environmental Consequence	C = 6
Medium Health Consequence	C = 7
Major Health Consequence	C = 8

The consequence values (0 through 8) are selected to align with other risk-based programs and projects currently under development or in use within the ministry as outlined in **Table 2**.

The Question Risk Rating for each regulatory inspection question is derived from an evaluation of every identified consequence and its corresponding likelihood of occurrence:

- All levels of consequence are evaluated for their potential to occur
- Greatest of all the combinations is selected.

The Question Risk Rating quantifies the risk of non-compliance of each question relative to the others. Questions with higher values are those with a potentially more significant impact on drinking water safety and a higher likelihood of occurrence. The highest possible value would be 32 (4×8) and the lowest would be 0 (0×1).

**Table 3** presents a sample question showing the risk rating determination process.

TABLE 3:							
Does the Operator in Charge ensure that the equipment and processes are monitored, inspected and evaluated?							
Risk = Likelihood × Consequence							
C=1	C=2	C=3	C=4	C=5	C=6	C=7	C=8
Medium Administrative Consequence	Major Administrative Consequence	Minor Environmental Consequence	Minor Health Consequence	Medium Environmental Consequence	Major Environmental Consequence	Medium Health Consequence	Major Health Consequence
L=4 (Almost Certain)	L=1 (Unlikely)	L=2 (Possible)	L=3 (Likely)	L=3 (Likely)	L=1 (Unlikely)	L=3 (Likely)	L=2 (Possible)
R=4	R=2	R=6	R=12	R=15	R=6	R=21	R=16

### Application of the Methodology to Inspection Results

Based on the results of a MRDWS inspection, an overall inspection risk rating is calculated. During an inspection, inspectors answer the questions related to regulatory compliance and input their “yes”, “no” or “not applicable” responses into the Ministry’s Laboratory and Waterworks Inspection System (LWIS) database. A “no” response indicates non-compliance. The maximum number of regulatory questions asked by an inspector varies by: system (i.e., distribution, stand-alone); type of inspection (i.e., focused, detailed); and source type (i.e., groundwater, surface water).

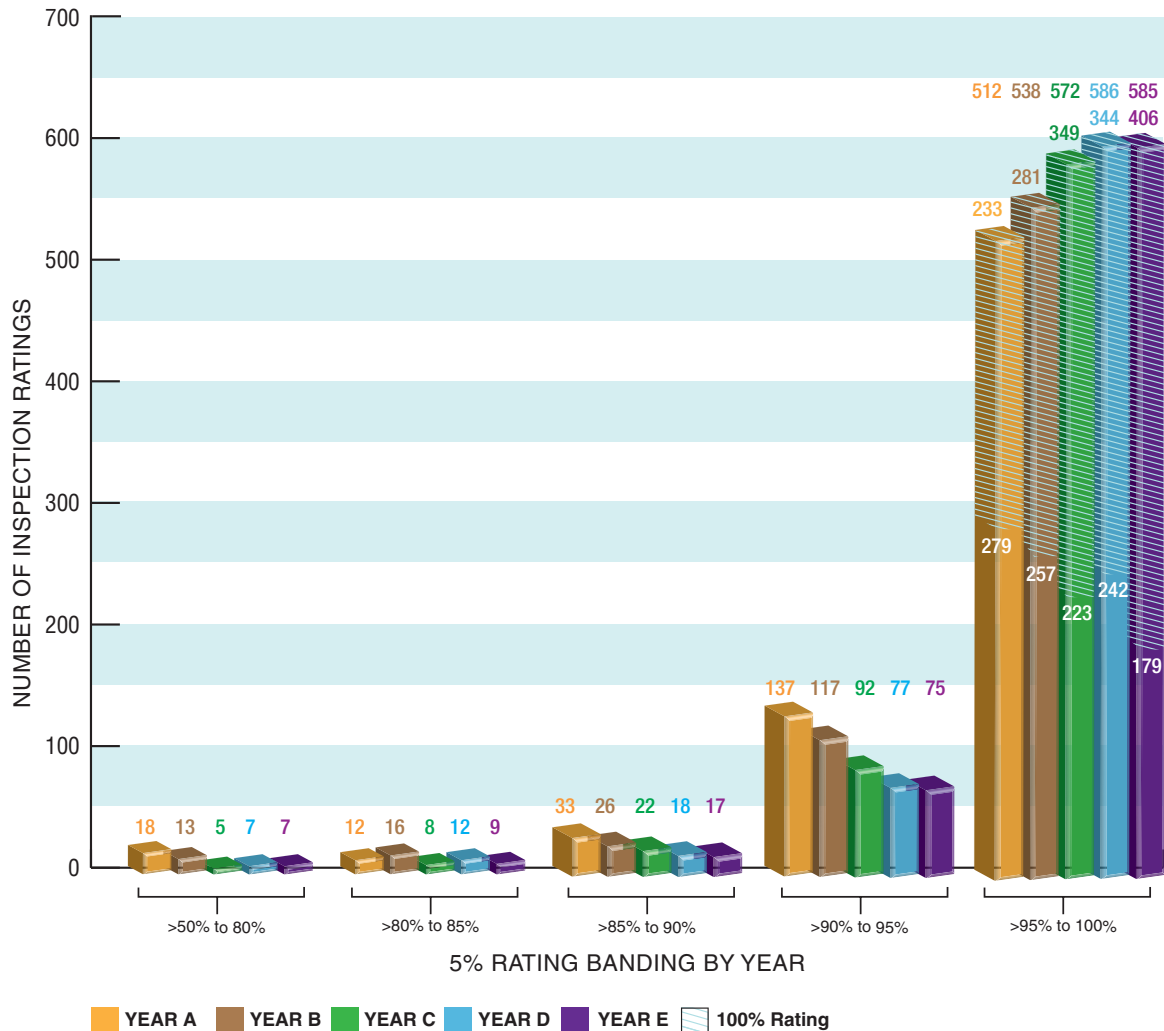
The risk ratings of all non-compliant answers are summed and divided by the sum of the risk ratings of all questions asked (maximum question rating). The resulting inspection risk rating (as a percentage) is subtracted from 100 per cent to arrive at the final inspection rating.

## Application of the Methodology for Public Reporting

The individual MRDWS Total Inspection Ratings are published with the ministry’s Chief Drinking Water Inspector’s Annual Report.

**Figure 1** presents the distribution of MRDWS ratings for a sample of annual inspections. Individual drinking water systems can compare against all the other inspected facilities over a period of inspection years.

**Figure 1: Year Over Year Distribution of MRDWS Ratings**



## Reporting Results to MRDWS Owners/Operators

A summary of inspection findings for each system is generated in the form of an Inspection Rating Record (IRR). The findings are grouped into the 15 possible modules of the inspection protocol,

which would provide the system owner/operator with information on the areas where they need to improve. The 15 modules are:

- |                         |                                 |  |  |
|-------------------------|---------------------------------|--|--|
| 1. Source               | 5. Treatment Process Monitoring | 9. Logbooks                            | 13. Water Quality Monitoring                       |
| 2. Permit to Take Water | 6. Process Wastewater           | 10. Contingency and Emergency Planning | 14. Reporting, Notification and Corrective Actions |
| 3. Capacity Assessment  | 7. Distribution System          | 11. Consumer Relations                 | 15. Other Inspection Findings                      |
| 4. Treatment Processes  | 8. Operations Manuals           | 12. Certification and Training         |  |

For further information, please visit [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater)

**Subject:** Town of Pelham Gypsy Moth Policy and 2020 Gypsy Moth Management Options

**Recommendation:**

**THAT Committee of the Whole receive Report #2020-0017 Town of Pelham Gypsy Moth Policy and 2020 Gypsy Moth Management Options; and**

**THAT a Forestry Health Reserve Fund be established and the necessary by-law be prepared; and**

**THAT Committee of the Whole recommend that Council approve the Public Works Gypsy Moth Management Policy S801-14.**

**Background:**

During the September 3<sup>rd</sup>, 2019 Policy and Priorities meeting, Council directed staff to develop a Gypsy Moth Management policy and that no final policy decision would be made until after feedback is received following a Public Meeting held on October 23, 2019.

Staff received thirty seven (37) responses from the public. Twenty six (26) responses favoured Alternative 5; where the Town would spray public and private property, within and outside of the Urban Boundary, with infestation levels of at least moderate to severe, and that the cost of spraying would be distributed over the entire tax base.

The proposed Public Works Policy S801-14 for Gypsy Moth Management is closely aligned with Alternative 5. It was developed to provide a road map for staff to implement a gypsy moth management program, based on the analysis of egg mass survey results, and the most appropriate Integrated Pest Management (IPM) strategy, which depends upon a number of environmental and ecological variables.

IPM can be defined as “the maintenance of destructive agents, including insects, at tolerable levels by the planned use of preventive, suppressive, or regulatory tactics and strategies that are ecologically and economically efficient and socially acceptable”.

The Public Works Policy S801-14 for Gypsy Moth Management has been added as an attachment to the Town of Pelham Gypsy Moth Policy and 2020 Gypsy Moth Management Options report as Appendix A.

### **Analysis:**

In the fall of 2019, The Town of Pelham retained the services of Lallemand Inc./Bioforest to conduct egg mass surveys and prepare a report to provide staff with: 1) an assessment of the gypsy moth situation within the municipal boundary; 2) forecasts of likely defoliation in 2020; 3) short and long term management options applying a philosophy of IPM; and 4) specific recommendations for management in the affected areas.

The Town of Pelham received a draft report from Lallemand Inc./Bioforest in the last week of January; however, the final version was not available in time to include in this report.

The preliminary findings predict that both public and private trees in Fenwick and Fonthill, as well as rural properties south of Fenwick and northwest of Fonthill are at risk of severe defoliation in 2020. Egg mass counts in some areas range between 5000 and 213,000 egg masses per hectare.

Approximately 1185 hectares (ha) have been recommended for aerial spraying in 2020 consisting of 250 ha inside and adjacent to the Urban Boundary of Fenwick, 308 ha inside and adjacent to the Urban Boundary of Fonthill and 626 ha of property in the rural areas of Pelham. These numbers represent preliminary estimates only as spray blocks have not yet been developed. The cost of spraying 1185 ha is estimated at \$1,040,000.

The total budget approved for the 2020 Gypsy Moth Management program is \$150,000. Municipal property identified at severe risk of defoliation consists of 32.75 ha and has an estimated cost to treat of \$30,000. Design and administration of a treatment program including; post spray assessments, public education and fall egg mass surveys has an estimated cost of \$40,000. This leaves an estimated \$80,000 budget to treat heavily infested areas.

Options for Council to consider regarding Gypsy Moth Management in 2020 are as follows:

- 1) The Town takes no action on public or private trees and executes a strong communication and engagement program throughout the community to educate

the public on options to protect their trees. This would include public meetings and direct mailing options. There is an adequate budget allotment for this option.

2) The Town implements a targeted aerial spray program of approximately 33 ha of municipal property and approximately 90 ha of private property. Staff would work in conjunction with a forestry consultant to design a program that would have the greatest impact on the gypsy moth population, within the limits of the existing budget. Public Works Policy S801-14 would be used to guide the decision making process in the development of spray blocks, and the execution of the spray program. This option would also be supported by a strong public outreach and communication program as described in Option 1. This option can be completed utilizing the existing budget allotment.

3) The Town implements a large-scale, extensive aerial spray program within the urban boundaries, as well as throughout the rural area of Pelham that meet the criteria stated in the Gypsy Moth Management Policy. This option would also be supported by a strong public outreach and communication program as described in Option 1. The estimated cost of this option is \$1,040,000. Pursuing this option would require Council to approve a net tax increase of \$930,000 since \$110,000 is already budgeted in the 2020 budget for spraying.

The budget shortfall would require an adjustment to the 2020 Budget which will impact the tax levy and be applied to the general tax base, which effectively increases tax rates by 6.64% over 2019 as a special gypsy moth levy, in addition to the approved 5.95% increase after growth in the 2020 operating budget, for a total increase of 12.59%. For the average household, this would be a total increase of \$224 to their tax bill from 2019. Approximately \$106 represents the approved 5.95% tax increase and the \$118 represents the additional tax increase for the Gypsy Moth Infestation Spray Program for the Town.

The option to bill residents separately and possibly charging commercial property owners a higher rate than residential owners has been considered and it has been deemed impractical since the commercial properties only represent 2% of the tax properties. Administratively, it would be a very time consuming, manual process. Adjusting the 2020 budget and increasing the tax levy would be the most efficient collection method, and would be consistent with the manner in which other Town services are levied upon the taxpayers in Pelham.

In the event that Council wishes to pursue this option, staff recommends the following motion:

“THAT Council approves the recommendation to adjust the 2020 budget by

\$930,000 and increase the tax levy by an additional 6.64% on top of the 5.95% increase previously approved to support the Gypsy Moth spraying of severely invested areas in Pelham.”

4) The Town implements a targeted aerial spray program within or adjacent to the urban boundaries of both Fonthill and Fenwick that meet the criteria stated in the Gypsy Moth Management Policy. This option would also be supported by a strong public outreach and communication program as described in Option 1. The estimated cost of this option is \$500,000. The budget shortfall of \$390,000 would require an adjustment to the 2020 Budget which will increase the tax levy by approximately 2.8% bringing the total tax levy increase to 8.75% after growth and be applied to the general tax base.

### **Financial Considerations:**

The Public Works Gypsy Moth Management Policy S801-14 identifies how the periodic gypsy moth infestation is treated by the Town of Pelham as part of an overall Integrated Pest Management Strategy.

The Policy requires a Forestry Health Reserve Fund be created to fund programs related to the health of the forests and tree canopy within the Town of Pelham.

Future Gypsy Moth Management Programs will be funded through the Forestry Health Reserve with Council approval.

Financial Considerations for 2020 Gypsy Moth Management Options were discussed in the Analysis Section above. It is important to note that the exact cost of these options will not be known until a consultant can be retained through the Request for Proposal process to develop the spray blocks and administer the treatment program based on the Gypsy Moth Management Policy and finalized Gypsy Moth Monitoring Program Report.

### **Alternatives Reviewed:**

The alternatives reviewed for gypsy moth management options have been included in the analysis section.

### **Strategic Plan Relationship: Grow Revenue - Promote Cultural Assets and Protect Environment**

The tree canopy within the municipal boundary is vital to protecting the environment and the quality of life within the Town of Pelham, and is an asset that set us apart from neighboring municipalities.



**Consultation:**

Lallemand Inc./BioForest provided; 2019 population assessments, 2020 defoliation forecasts, treatment area estimates, potential management options and policy improvement recommendations.

**Other Pertinent Reports/Attachments:**

Appendix A – Public Works Gypsy Moth Management Policy S801-14  
Public Works Report – 2019-0053 Town of Pelham Gypsy Moth Policy Development

**Prepared and Recommended by:**

Jason Marr, P. Eng.  
Director of Public Works

**Reviewed by:**

Teresa Quinlin, MBA, CPA, CA  
Director Corporate Services & Treasurer

**Prepared and Submitted by:**

David Cribbs, BA, MA, JD, MPA  
Chief Administrative Officer



Policy Name: Gypsy Moth Management	<b>Policy No: S801-14</b>
Committee approval date:	-
Council approval date:	-
Revision date(s):	1/31/2020
Department/Division:	Public Works

## 1. Purpose

The overall purpose of this policy is to provide a process that addresses the periodic infestation of European Gypsy Moth experienced in the Town of Pelham.

The specific goals of this Gypsy Moth Management policy are to develop an integrated set of objectives and procedures that will combine to form a set of overall working guidelines that will:

- Maintain tolerable gypsy moth populations at any point in time, and make sure that outbreaks are controlled properly.
- Educate residents about the European Gypsy Moth to foster a thorough understanding of forest pests and their environments, as well as, understand the rationale behind the Town's decision making process with respect to gypsy moth management.
- Provide a policy that Town officials and the general public are confident is an effective and fair tool in responding to gypsy moth infestations.
- Establish a feasible gypsy moth monitoring network and egg mass survey program.
- Establish an intervention threshold criterion for implementing gypsy moth treatment efforts.
- Strategically allocate resources toward forestry & tree health.
- Reduce the workload and duplication of effort for Town staff in responding to gypsy moth concerns.
- Allow for the collaboration across municipal and regional boundaries to help strengthen gypsy moth management.

## 2. Policy Statement

It will be the policy of the Town of Pelham to protect the tree canopy within the Municipal Boundary against Tree Mortality caused by defoliation by the gypsy moth and hence, preserve and enhance the quality of Pelham communities.

## 3. Policy Constraints

The policy will be applied to all properties within the Town of Pelham with the exception of properties, or sections of properties being used for agricultural production or commercial business, as well as properties owned or operated by; the Niagara Region, the Niagara Peninsula Conservation Authority or the Province of Ontario unless otherwise approved by the Director of Public Works.

The policy may be affected by the availability of Town staff, financial resources, regulatory restrictions and requirements from other departments and agencies.

#### **4. Definitions**

*"Integrated Pest Management (IPM)"* means a multi-disciplinary, ecological approach to the management of pests based first on prevention and when needed, a control (biological, cultural, physical or mechanical intervention), saving registered pesticide application as a last resort.

*"Pest"*, means an organism that causes damage, is a nuisance or interferes with the health, environmental, function or aesthetic objectives of citizens.

*"Biological Controls"* means other organisms that prey specifically on a pest.

*"Pest Action Threshold"* means the number or density of a pest when management action should be taken.

*"Tree Mortality"* means the level of defoliation (>60%) where a tree is likely to die.

*"Treatment Buffer Zone"* means the area adjacent to a treatment plot that will be included for treatment to reduce re-infestation or gypsy moth migration into nearby properties.

*"Sequential Sampling"* means a sampling technique wherein the researcher picks a single or a group of subjects in a defined area, conducts a survey, analyzes the results then picks another group of subjects if needed and so on.

*"Commercial Property"* means a property that is being used for a commercial purpose and/or generates an income.

#### **5. General Provisions**

The goal of the gypsy moth control program is not to eradicate the pest, but to protect tree health by suppressing the population to acceptable levels. Due to the relationship between weather and egg survivorship and the unpredictability of gypsy moth outbreaks, an Integrated Pest Management (IPM) approach will be taken to manage their population. The IPM decision-making process results from an evaluation of treatment options available and an analysis of potential impacts.

##### **5.1 Treatment Threshold Criteria**

In order to preserve the Town of Pelham's tree canopy and prevent tree mortality resulting from Gypsy Moth infestation, the Threshold Criteria used to identify plots that require treatment within Municipal Boundary will be a minimum of 2500 egg masses per hectare.

#### **6. Annual Egg Mass Surveys**

Decisions and control strategies for the management of the gypsy moth population will be made on the most appropriate IPM strategy based on analysis of egg mass survey results. Egg mass surveys will be undertaken annually in the fall, to determine the egg mass densities within the developed Gypsy Moth

monitoring plots. (Appendix A) The information gathered during the surveys will be utilized in the development of a treatment program if the threshold criteria or special circumstances are met.

The number of surveying plots required to monitor gypsy moth populations fluctuates in times of high or low population densities. Sequential sampling plans increase the efficiency of the survey program by focusing in areas where intervention is most likely required. Areas with very low or high populations require the least amount of sampling, as a decision may be reached after sampling only a few plots. Plot sampling requirements may vary depending on land use for continually forested and urban/suburban habitats depending on gypsy moth populations.

## **7. Gypsy Moth Control Program**

### **7.1 Spray Block Development**

If the threshold criteria for treatment are met, treatment blocks will be identified utilizing the information gathered through the annual egg mass surveys. Once the survey data is compiled and analysed, spray blocks will be identified based on the most appropriate IPM strategy.

Spray blocks will be developed to include areas where gypsy moth egg mass densities exceed the threshold criteria of 2,500 per hectare. Spray blocks are developed in such a way to accommodate aerial spraying in a safe and efficient manner. Due to the application method it is not logistically possible for individual properties inside the spray block to opt out of the treatment. Authority delegated through By-Law 4106(2019) allows the Director of Public Works to implement a gypsy moth control aerial spray program when the threshold criteria is met.

Special circumstances such as proximity to selected treatment areas, or areas where high gypsy moth populations threaten nearby property where protection is greatly desired, may extend consideration of treatment to additional areas or Treatment Buffer Zones. Also, consolidation or expansion of proposed treatment areas may be attempted in the interests of program efficacy and efficiency.

Circumstances may warrant the consideration of areas with egg mass counts below 2500 egg masses per Hectare, on a lower priority basis, when Habitat Susceptibility and Land use factors are high and there is a clear indication that the gypsy moth populations, though low, are in increasing and are healthy. Generally, areas that in the past have experienced high and rapidly rising outbreak levels of gypsy moth would be candidate for such consideration to achieve effective and more efficient long term pest management.

### **7.2 Treatment Program Communication**

Prior to the implementation of any treatment program, staff will prepare a report outlining the results of the egg mass surveys, management recommendations, treatment costs, proposed spray blocks as well as the amended by-law to be presented to Council for approval.

Town of Pelham Staff will host a Public Information Centre (PIC) to present the purpose, objectives and implementation process of the treatment program. Program information will also be made available on the Town of Pelham's Website and social media feeds as well as public notices in local print media.

The Town of Pelham will notify landowners, whose properties are included within or adjacent to the spray blocks prior to May 1st by Canada post letter mail.

The Town of Pelham will provide information concerning the gypsy moth, including control measures on private properties to the residents of Pelham. Information provided will be made available at; all Municipal Facilities, Libraries, gypsy moth treatment program PIC, the Town of Pelham website, social media feeds and media releases. (Appendix B)

Further to the communication plans described in the previous paragraphs, the Town of Pelham shall adhere to section 79 of Ontario Regulation 63/09 under the Pesticides Act for alternative means of public notice of pesticide use.

### **7.3 Aerial Application for Gypsy Moth**

The treatment of gypsy moths shall be completed in an ecologically responsible manner. To protect other sensitive species, a number of factors are considered in determining the timing for aerial application of control agents including; foliage emergence, gypsy moth in-star development, weather conditions and manufactures' specifications.

Spray application will not be initiated until foliage has developed to no less than 30% of mature size, and caterpillars have reached 90% emergence and display evidence of feeding. Application must be made only during meteorological conditions that are suited to maximize spray deposit in the treatment areas and to minimize off target movement of the spray. Foliage must not be too wet prior to application and applied well in advance of any rain events. This may vary depending on manufacturers' technical information and product-specific recommendations.

### **7.4 Post Application Assessments and Communication**

Initial post-spray assessments are to be completed after each spray application to ensure that the treatment area was completely and correctly flown over. Efficacy assessments will be performed within 24 hours of the spray application utilizing an Accurate Deposit Assessment Methodology (ADAM) kit from Valent Biosciences or approved alternative.

Once the majority of gypsy moth caterpillars have finished feeding and begun pupation and before trees have had time to grow new leaves, defoliation surveys will be completed in a representative number of spray blocks as well as other locations where gypsy moth egg mass data was collected. This information will be utilized to design future egg mass surveys and estimate population migration.

Town of Pelham Staff will prepare and present a report to summarize the effectiveness of the treatment program including; graphical spray event data, post-spray assessments and defoliation survey.

### **7.5 Alternative Gypsy Moth Control Measures**

The Integrated Pest Management decision-making process includes an evaluation of treatment options and an analysis of potential impacts. Through the IMP approach, a number of alternative management options may be utilized based on; survey results, tree species, tree maturity and density, land use, location, ecological factors and the health of the gypsy moth population.

In locations where aerial spray application is not well suited, a number of other treatment options may be utilized. These may include but are not limited to: ground spraying, tree injection, burlap banding, or a “do nothing” approach if the impact of the infestation will be limited to a remote area.

## **8. Community Volunteer Program**

The Town of Pelham may develop and implement a volunteer based forest health monitoring program overseen by a qualified forestry consultant. Effective volunteer programs can have many positive results and increase awareness among the general public about tree health and invasive species. Raising interest in tree health issues in the community is imperative for the future conservation of the Town of Pelham's tree canopy. By enlisting and training members of the community to identify invasive species, and collect tree health data from their own lands and public property, volunteers can generate pertinent information that can be useful for municipal operations and help cultivate an awareness of tree health issues among Town of Pelham residents.

## **9. Gypsy Moth Management Funding**

The Town of Pelham will endeavour to strategically allocate resources toward the protection of tree health. The Gypsy Moth Management Policy identifies how the periodic gypsy moth infestations are treated by the Town of Pelham as part of an overall Integrated Pest Management Policy.

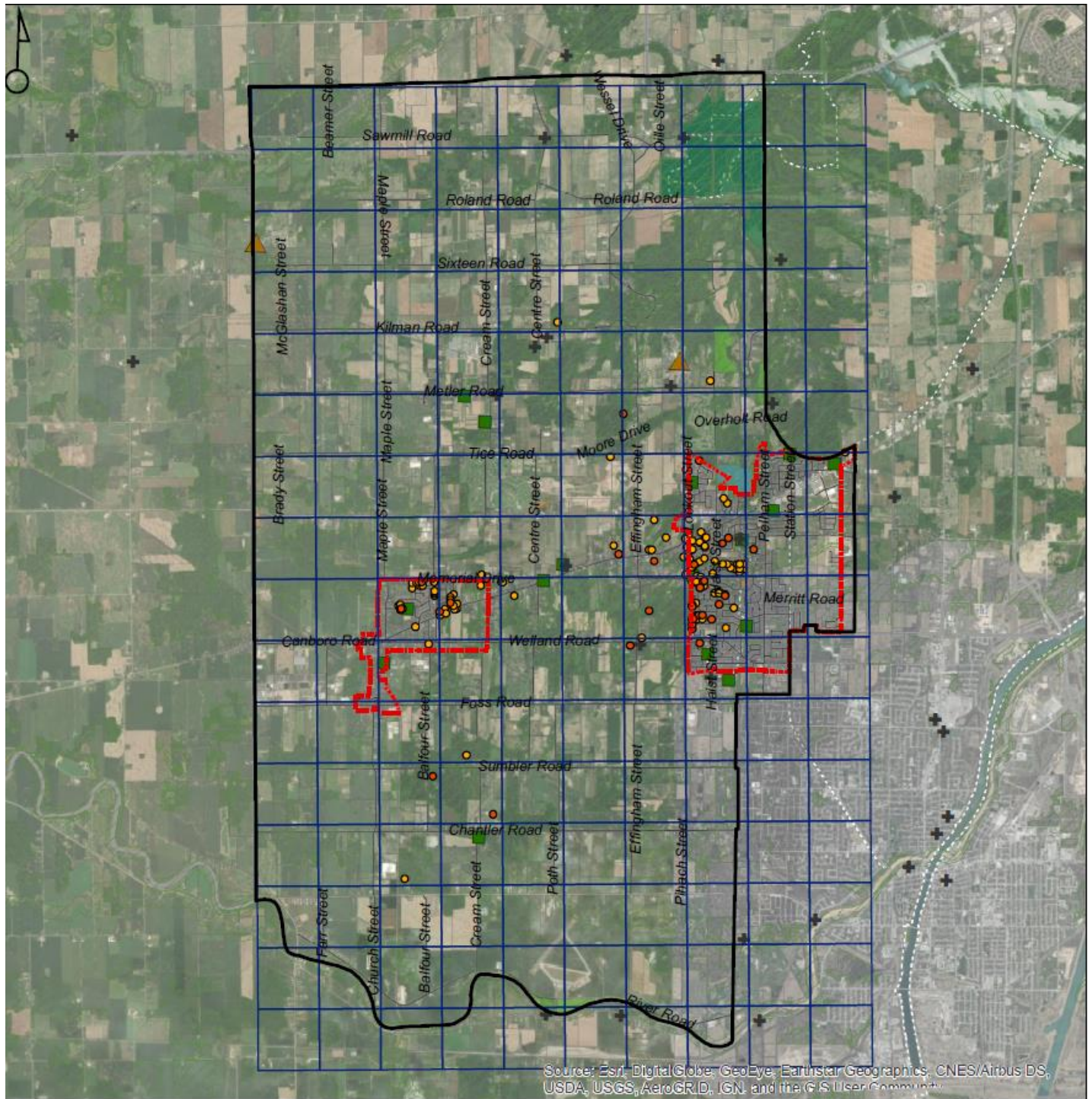
A Forestry Health Reserve will be established which will be used to fund programs related to the health of the forests and tree canopy within the Town of Pelham.

The Gypsy Moth Management Program will be funded through the Forestry Health Reserve with Council approval.

To help ease the costs associated with treatment programs the Town of Pelham may attempt to coordinate spray programs with neighbouring municipalities, conservation groups, agricultural and commercial operations and other governmental organizations.

## **APPENDIX A – Gypsy Moth Egg Mass Survey Plots**





## **APPENDIX B – Gypsy Moth Information**

# About Gypsy Moth

## Frequently Asked Questions

### ***What is European gypsy moth?***

*Gypsy Moth (Lymantria dispar)*

European Gypsy moth (EGM) is an invasive insect from Europe and Asia that established in North America in the late 1860's near Boston. Gypsy Moth caterpillars are 5 to 60 millimetres in length, dark and hairy, with five pairs of blue dots and six pairs of red dots on the back. They feed on a wide range of coniferous as well as deciduous trees, but show a preference to oak trees.

### ***Where does European gypsy moths come from?***

Gypsy moths are an invasive pest originally from Europe and Asia. They were brought to North America in the late 1800's to conduct experiments for silk production, but escaped captivity and have since established themselves across much of the northeastern portion of North America

### ***How does European gypsy moth cause damage to trees?***

Caterpillars begin by chewing small holes, but as they mature can completely strip a tree of its leaves depending on their age and population.

### ***How much damage can they cause?***

High levels of gypsy moth caterpillars can cause trees to experience severe loss of leaves, which could cause them to enter a state of decline and make them more susceptible to further harm from other insects, diseases, and weather fluctuations.

### ***What does the damage look like?***

Gypsy moth caterpillars chew small holes in the new leaves. As the caterpillars begin to grow, they eat more and the holes become larger until only the leaf veins remain. When population levels are high, gypsy moth caterpillars have the ability to strip trees of all of their leaves.

### ***What types of trees do these caterpillars affect?***

Gypsy moth are known to feed on hardwood trees such as apple, birch, cherry, elm, hickory, oak, willow, and maple species. Other deciduous trees, and even conifers such as pine or spruce, could be susceptible when populations are high.

### ***What is defoliation?***

Defoliation is the widespread loss of leaves on a tree and other plants.

### ***Why does it matter if trees lose a few leaves from hungry caterpillars?***

Tree damage can range from light to severe defoliation. As the caterpillars grow, they consume more and more leaves. As the growth cycle winds down, usually in late June, trees can look as if they have lost their leaves overnight. Under normal circumstances, defoliation caused by gypsy moth caterpillars won't kill a tree. Healthy trees should regrow their leaves two to three weeks after defoliation, or by early July depending on the year. However, when a tree uses energy to replace damaged leaves, it reduces the energy available for annual tree growth and to fight potential new diseases and other insect attacks.

The urban tree canopy provides health, social, environmental, and ecological benefits to communities. Trees help to:

- Improve air quality and reduce smog and pollution
- Provide shade
- Reduce energy demand for cooling in summer (shades buildings) and heat in winter (windbreak)
- Reduce the negative effects from urban heat (reducing the 'heat island' effect by shading paved surfaces and provides water vapor that cools the air)
- Prevent flooding and reduce peak storm water run-off volumes

- Increase property values and aesthetics
- Strengthens communities
- Improve emotional well-being and mental health (stress reduction)
- Increase outdoor activity and walkability, leading to improved health (e.g., cardiovascular health)

### ***Why are there so many gypsy moths in Pelham?***

Gypsy moth has been present in Pelham for at least 20 years. Their populations rise and fall in a cyclical manner. In 2008, an aerial spray was completed to mitigate high gypsy moth populations. Since then, the Town has attempted to monitor and managed these pests using a variety of treatment methods.

### ***Why are they such a nuisance?***

Besides defoliating trees, caterpillars can become quite a nuisance to homeowners. They can be heard munching on leaves and their droppings can create a mess on the surfaces below. As the caterpillars complete their feeding, they tend to crawl everywhere including up the sides of homes, on outdoor toys, decks and patio furniture in search of suitable hidden spots to pupate. Exposure to gypsy moth hairs, silken threads, and shed skins can cause skin rashes and upper respiratory tract irritation in some people.

### ***Do they have any natural predators?***

Gypsy moths do have natural predators: a fungus (*Entomophaga maimaiga*), a virus (*Nucleopolyhedrosis*) and a small wasp (*Encyrtidae* family). The fungus and virus can be very effective at naturally controlling populations however they require a cool wet spring to be effective. The wasp only kills eggs that are near the surface of an egg mass, but can't parasitize any of the eggs that are hidden beneath the eggs on the outer surface of the mass.

### ***What is Integrated Pest Management (IPM)?***

IPM focuses on the long-term prevention and mitigation of pests or their damage through techniques such as monitoring, biological control, habitat manipulation, and modification of cultural practices, such as the use of gypsy moth resistant tree varieties. A major component of this program consists of egg mass surveys in the fall and winter to predict defoliation levels for the following year. Following that, prescription and implementation of various control strategies can be undertaken.

### ***What can residents do to help?***

Residents can help by:

- Remove egg masses off of trees and other hard surfaces. Soak them in soapy water for a minimum of 48 hours.
- Install burlap skirts around tree trunks at beginning of June. Caterpillars will find shelter under the burlap, making it easy for residents to collect and dispose of them.
- Destroying pupae/cocoons.
- Consult with private arborist companies when larger trees require attention for control for gypsy moth.

Though effective, these control options are time sensitive. They must be implemented at the appropriate time to be effective. The City recommends these IPM techniques as well as their associated appropriate timing:

- **September to beginning of May:** Scrape gypsy moth egg masses off of trees and other hard surfaces leaves, tree trunks and branches. Soak them in soapy water for a minimum of 48 hours to destroy them.
- **May to Mid-August: Burlapping:** Install burlap wraps around tree trunks and then collect and destroy the caterpillars, pupae, adults, and egg masses.
- **End of June-Mid-August:** Collect, crush or otherwise destroy pupae/cocoons when you see them.
- **Beginning of May- Mid June:** Consider chemical treatments such as Btk-based products or TreeAzin; however, they are extremely time sensitive for them to be effective at controlling gypsy moth. It is highly recommended that you consult with a private arborist no later than the end of April if you are looking at having your trees treated/sprayed to allow the private arborist time to properly schedule your work. Once the caterpillars get too large (approximately mid-June is the cut off point for treatment), pesticide treatments are no longer effective at controlling gypsy moth and can be a costly mistake on the homeowner's part. Some private companies will conduct egg mass removal for your trees during the winter months. The earlier you can consult with an arborist, the better

## **AERIAL SPRAY**

### ***Why is the Town planning an aerial spray?***

The Town is facing a gypsy moth population rise that is affecting Pelham's tree canopy. Elevated levels of gypsy moth have caused severe defoliation of trees in certain areas of the Town. This has led to potential negative impacts on the overall health of many trees on both Town and privately-owned property.

While the Town will continue to implement ongoing IPM measures, it will also conduct an aerial spray in areas predicted for severe defoliation. Aerial spraying has proven in the past to be very effective in lowering gypsy moth populations. Although the aerial spray won't eradicate all traces of the insect, it will naturally lower populations to a more manageable level.

### ***Which areas are being sprayed?***

The spray will treat roughly XXXX hectares of private and public land. The aerial spray blocks, along with the other control measures can be seen XXXX

### ***What type of pesticide is being used?***

The Town of Pelham will be using a product that contains *Bacillus thuringiensis* subspecies *kurstaki* (Btk). The product is registered under the trade name Foray® 48B. Btk is a naturally occurring bacteria found in soil. Btk is not a chemical. Btk was successfully used by the City of Toronto in 2007, 2008, 2013 and 2017 to control gypsy moth populations. The Cities of Mississauga and Oakville have completed similar spray programs in the past. The City of Hamilton will be conducting an aerial spray program with this same product this spring as well.

### ***What organisms does Btk pesticide affect?***

Btk only works against organisms that go from egg to larvae to pupae to moth (lepidopterans). Btk does not affect adult moths and butterflies, including the monarch butterfly, as it is not in the caterpillar stage and feeding on plant material at this time of the year. Btk does not affect other insects, honeybees, fish, birds, or mammals.

### ***How does Btk work?***

Btk produces a protein that is toxic only to the larvae (caterpillars) of specific insect species. When ingested by susceptible insects, the toxic protein molecules break down the walls of the insect's stomach causing the insect to stop feeding. The insect usually dies within two to five days.

For Btk toxins to be activated, the alkaline conditions that exist only in certain insects' digestive systems must be present. The acidic conditions in the stomachs of humans and animals are not present and do not activate Btk toxins, which is why the pesticide is not toxic to humans and animals. Btk has been used in many countries without health impacts to individuals on medications or vulnerable populations.

### ***What is the formulation of the Btk product?***

The registered name of the pesticide that will be used by the City is Foray® 48B Biological Insecticide Aqueous Suspension. It is registered under the Pest Control Products Act (PCP # 24977). It is comprised of 3% Btk bacteria, 75% water and 22% food grade inerts. The term 'food grade inerts' refers to a special blend of additives that give the formulation protection against ultraviolet light and help make it stick to foliage. They do not pose any health risks. Btk remains effective for approximately one to four days before it breaks down in the presence of sunlight.

### ***What is the concentration of Btk?***

A small amount of liquid covers a large area: 4 litres will cover 1 hectare (2.5 acres). Comprehensive spray drift modelling has been done to ensure accurate and effective application.

### ***Who regulates Btk use in Canada?***

Btk has been approved by the Pest Management Regulatory Agency, an agency of Health Canada, for aerial use over urban areas.



### ***Is Btk safe?***

Btk is an effective pesticide that has been shown to successfully manage many lepidopteran species such as gypsy moth. It has been extensively studied by Health Canada and the US Environmental Protection Agency (EPA). Research shows that Btk poses minimal risk to human health when used as directed.

Btk is approved by Health Canada for aerial use over urban areas. It has been used by many countries over the last 30 years, including Canada and the United States. The City of Toronto has used Btk in multiple aerial spray programs in the past. Its use did not result in any reported health impacts to the general population.

The public is unlikely to experience any symptoms and no special precautions are necessary. Btk aerial spraying is also not expected to have adverse effects on vulnerable populations including children with asthma, people with weakened immune systems, pregnant women or the elderly. However, infrequently there may be some residents who are more sensitive and may experience skin, eye or respiratory irritation.

In addition to the Btk active ingredient, other ingredients called formulants have also been studied broadly and do not have any significant health risks. Formulants normally include water and other ingredients to make the product stick to leaves and needles of trees.

While the aerial spray will not eradicate the gypsy moth populations currently present, it will reduce populations to more manageable levels to protect tree canopies.

Another subspecies of *Bacillus thuringiensis* bacterium, called Bti, has been used to control mosquitos in surface water in the GTA for over a decade as part of the efforts to protect against West Nile Virus. Btk has been used successfully in aerial sprays as well as ground-based spraying for the past 10 years by the City of Toronto to control gypsy moth populations.

Aerial application of Btk has not shown to have any negative environmental effects. Once applied, Btk biodegrades quickly, (approximately 1 to 4 days), through exposure to sunlight and other micro- organisms.

The urban tree canopy provides social, environmental, and ecological benefits to communities. Trees improve air quality and reduce smog and pollution, provide shade, reduce energy demand for cooling in summer and heat in winter, prevent flooding, and promote physical health (improves walkability, improves cardiovascular).

### ***What personal precautions can be taken in preparation for aerial spraying?***

Members of the public are unlikely to experience any health effects, and no special precautions are necessary or required. Individuals who have concerns should take reasonable precautions to avoid exposure during an application period of the program.

While no special precautions need to be taken, the following measures may be considered by residents living in treatment areas:

- Whenever possible, remain indoors for 30 minutes after spraying to allow for the droplets to deposit onto the tree leaves.
- Bringing laundry, toys and pets indoors before spraying begins.
- Practice good personal and food hygiene (e.g., hand washing after outdoor activities, especially after gardening; leaving outdoor shoes at the door; washing all fruits and vegetables before eating or cooking).
- Covering lawn furniture, outdoor tables, pools, BBQs, play equipment and sandboxes and/or rinsing them off with water after spraying is finished.
- Minimize opening and closing windows and doors during the spraying.
- Shutting off the heating/cooling vents or selecting the recirculate setting.
- Contacting your family physician if you are concerned that a personal medical condition may be aggravated by the spraying.

### ***Does Btk spraying pose a risk to residents who might have sensitivities?***

Members of the public are unlikely to experience any symptoms and no special precautions are necessary or required. However, infrequently there may be some residents who are more sensitive and may experience skin, eye or respiratory irritation. Btk aerial spraying is not expected to have adverse effects on vulnerable populations including children with asthma, people with weakened immune systems, pregnant women or the elderly.

***What should I do if I experience an adverse reaction?***

If you experience an adverse reaction or worsening medical condition, speak to your physician or, in an emergency, call 9-1-1.

***Can gypsy moth affect my health directly?***

Extreme gypsy moth outbreaks have been associated with skin rashes and upper respiratory tract irritation in some people exposed to airborne gypsy moth hairs, silken threads, or shed skins.

There is a potential for some people to develop minor skin irritations or rashes when they come in contact with these insects. If this is a concern, it is recommended that you try and avoid contact whenever possible.

***Is Btk safe for animals?***

According to Health Canada, Btk is only effective during the larval (caterpillar) stage of the gypsy moth life cycle. Btk does not affect adult moths and butterflies, including the Monarch Butterfly, as it is not in the caterpillar stage at the time of the spray. Btk does not affect other insects, honeybees, fish, birds or mammals. There is also no impact on animals or pets if they are exposed to or ingest Btk.

***Where does Btk go in the environment?***

Research shows that Btk used in aerial spray programs has not been shown to have any negative environmental effects. Once applied, Btk biodegrades quickly, approximately 1-4 days, through exposure to sunlight and micro-organisms. There are no groundwater contamination concerns, as Btk does not travel through the soil beyond 25 cm.

***How long does Btk remain effective?***

Btk is applied to leaves when caterpillars are feeding. It breaks down quickly (approximately 1 to 4 days) when exposed to sunlight and micro-organisms

***Is there a certain season or window of time the spray has to happen within?***

The best time to first apply Btk is mid-May when caterpillars are small, hungry and feeding. The seasonal spray window is set for May 16<sup>th</sup> to June 15<sup>th</sup>, 2019. On the day of the sprays, the helicopters will begin spraying just before sunrise (5 A.M.) and will take approximately 2.5 hours to complete. Applications can occur any day of the week, including weekends. Once the leaves are a certain size, the caterpillars have reached almost 90% emergence and the caterpillars begin feeding, the spray window can be narrowed. Once it is determined that those factors are met, the weather conditions then need to be monitored.

The Btk application is weather dependent. Ideal application conditions consist of:

- Calm winds (1-16 km/h)
- High humidity (>40%)
- Temperatures between 2 and 25 degrees Celsius
- No precipitation within the spray window and ideally not for 24 to 48 hours after application

***What type of aircraft will conduct the spray?***

For this program, two helicopters with spray systems will fly approximately 15 metres above the treetops. It is anticipated to take 2 days to complete one application and there will be a total of two spray applications.

The spray zones were created using scientifically designed methods. Comprehensive spray drift modelling has been done to ensure accurate and effective application. All zones and their boundaries were critically reviewed by City staff and Zimmer Air.

***Why are only certain areas of Pelham getting sprayed?***

The spray zones were created using scientifically designed methods. Comprehensive spray drift modelling has been done to ensure accurate and effective application. All zones and their boundaries were critically reviewed by Town of Pelham Staff, our Forestry Consultant, and Aerial Spray Applicator.

The spray zone areas we have defined have been refined on the basis of scientific data. Areas that are being sprayed are those where there is no other IPM control option available that would reduce the populations significantly enough to meet acceptable thresholds.

Areas found where the Threshold Criteria was greater than 2500 Gypsy Moth Egg Masses per Hectare were considered as critical areas which are included in the spray. The spray zones were refined using extensive data gathered from these areas.

***What happens if the spray is cancelled?***

Bad weather or wind may cause the aerial spray to be postponed with little advanced notice. The Town will issue a communication to the public 48 hours before each treatment and provide up-to-date information online at <https://www.pelham.ca/en/living-here/gypsy-moth.aspx>, through the Town's social media channels (Twitter and Facebook) and through Email News Alerts. The spray may be cancelled up to 24 hours in advance if the weather conditions change.

***If the weather isn't co-operative and spraying can't be done – what are the Town's next steps?***

The Town will continue to monitor pest population levels and consider appropriate treatment methods.

***Why is spraying from the air seen as more effective than spraying from the ground?***

Evaluation of previous programs over the past few decades have shown that aerial sprays are highly effective for controlling many forest pests including gypsy moths. Large areas can be treated in just a few hours. Most droplets reach the ground within 10 minutes of application.

Aerial spraying can treat remote or difficult-to-access areas, providing even coverage throughout the target area. Also, the droplets can penetrate the crowns of even the tallest trees.

***How is the Town going to measure the success of the spray program?***

Success will be measured by evaluating tree health through the months following the spray (if the trees are green and covered with leaves versus completely defoliated). As well, egg mass counts will be conducted annually in the fall/winter.

Residents are encouraged to implement healthy tree practices and to consult with qualified arboricultural companies to develop healthy tree management plans for their own trees.

***If the spray isn't successful, what's next?***

We will monitor immediately following the first spray to determine initial results and will readjust if required for the second spray.

***Will spraying become an annual thing?***

We are confident this year's spray will be enough to bring the gypsy moth population back down below a tolerable threshold to prevent severe canopy damage from occurring. Spraying this spring is the best approach for the health of the trees, our environment, and residents.

Proactive prescribed treatments do not follow the approach of Integrated Pest Management as it is nearly impossible to determine if population levels of gypsy moth will require an aerial spray a year in advance. Decisions regarding whether to treat with an aerial spray will be left after extensive egg mass surveying has been completed to determine if treatment is warranted or not.



## **PREPARING FOR THE SPRAY**

### ***How will I know when the spray is happening?***

48 hours in advance of the spray, the Town will inform residents of the specific areas of the flight path, treatment plan, and any other relevant information.

- Notification signs will be posted along local roads to announce the approximate spray window.
- Social media will be used to update the public on current spray operations. Check out or follow the below social media platforms to receive updates.
- The public are encouraged to sign up for Aerial Spray Email News Alerts regarding the aerial spray at, <https://www.pelham.ca/en/living-here/gypsy-moth.aspx>
- For questions or for up-to-date information about what you can do to control gypsy moth on your property, aerial spray details like spray dates, times and locations visit <https://www.pelham.ca/en/living-here/gypsy-moth.aspx> where you can also sign-up for Aerial Spray Email News Alerts.
- Residents with questions or concerns related to the health impacts of aerial spraying with Btk should call Niagara Regional Public Health at 1 800-263-7248 or speak to their family physician.

### ***Should I cover items in my backyard?***

It is recommended to cover things you don't want sprayed like patio furniture, outdoor tables, play equipment and sandboxes or you can simply rinse them off with water after spraying is finished. The spray does not damage paints or finishes on automobiles, houses, boats or trailers. If it is left to harden, the spray can be removed with water but may require more effort. The sooner it is washed off, the easier it is to remove.

### ***Can my pool remain open?***

If possible, cover pools during the spray period. After the spraying has been conducted and the pool cover has been removed, consider testing the water to ensure chemistry balance in water chemistry prior to swimming in the pool. If the pool has not been covered during the spray, test the water to ensure chemistry balance in the water chemistry prior to swimming.

## **AFTER THE SPRAY**

### ***There is a film on my patio furniture; will it come off with water?***

The spray does not damage paints or finishes on automobiles, houses, boats or trailers. If it is left to harden, the spray can be removed with water but may require more effort. The sooner it is washed off, the easier it is to remove.

### ***Can I use my BBQ?***

If possible, prior to the spraying, close and cover your BBQ or bring it into a covered area. BBQs left open or uncovered should be rinsed with water prior to use. If left to harden, it may require more effort to remove.

### ***Is it safe to go swimming in my pool after the spray?***

Btk biodegrades quickly through exposure to sunlight. If possible, cover pools during the spray period. After the spraying has been conducted and pool cover has been removed, consider testing the water to ensure chemistry balance in water prior to swimming in the pool. If the pool has not been covered during the spray, test the water for chemistry balance prior to swimming.

### ***Can my dog be outside when the spray occurs? Is it harmful to pets?***

Individuals who live in the treatment areas should bring pets indoors before spraying begins. This will reduce pets bringing Btk indoors; However, Btk is not considered a risk to pets or animals.



**Subject:** The Town of Pelham's Enhanced and Optional Enhanced Waste Collection Services for the Niagara Region's new Waste Management Collection Contract

**Recommendation:**

**THAT, the correspondence received from Niagara Region (Catherine Habermehl, Director of Waste Management Services), dated December 10<sup>th</sup> 2019, regarding the "Confirmation of Pelham's Enhanced and Optional Enhanced Services for Niagara Region's New Waste Management Collection Contract" be received and;**

**AND THAT Committee receive and approve Report #2020-0018; and**

**AND THAT Committee recommends for Council to endorse the proposed recommendations from Town staff regarding the Town of Pelham's Enhanced and Optional Enhanced Waste Collection Services for the Niagara Region's new Waste Management Collection Contract.**

**AND THAT, Niagara Region be advised that the Town of Pelham requests to continue with its current Enhanced Services, as follows:**

- a) Two (2) Days-per-Week for Public Space Litter Bin and Public Space Recycling Bin Collection inside Designated Business Areas (DBA) and one (1) day-per-week for Public Space Litter Bin and Public Space Recycling Bin Collection outside DBAs, at an annual estimated cost of \$18, 825.60 (including Net HST);**
- b) Containerized Garbage Collection at Multi-Residential (MR) Buildings and Municipal Facilities (MF), at an annual estimated cost of \$14, 195.52 (including Net HST), and**

**AND THAT, Niagara Region be advised that the Town of Pelham will require the Optional Enhanced Services of:**

- a) In-Ground Collection at Municipal Facilities (i.e. Town Hall, the Meridian Community Centre (MCC), and Centennial Park), at an**

**estimated cost of \$122.11 (plus HST) per receptacle/stop for crane collection; and**

**AND THAT, Niagara Region be advised that the Town of Pelham is not interested in the Optional Enhanced Service of:**

**a) Bulky Goods Collection at MR buildings with seven (7) or more units and Mixed-Use (MU) properties with one (1) or more residential unit, at an annual estimated cost of \$41, 009.28 (including Net HST).**

### **Background:**

The Regional Municipality of Niagara (i.e. the 'Region') has requested the Town of Pelham (i.e. the 'Town') to confirm the respective Enhanced and Optional Enhanced Services that the Town wishes to have for the start of the Region's new Waste Management Collection Contract. The contract will commence on Monday, October 19th 2020. The enhanced collection services (i.e. street litter, front-end garbage, additional downtown litter or recycling, etc.) include additional services to the base collection services (i.e. every-other-week garbage, weekly recycling and organics, etc.) to each Local Area Municipality (LAM). The cost of both base collection and enhanced services, along with all processing, disposal and planning, and administrative net costs, are apportioned to the Town through a requisition for the Town's waste management levy.

### **Analysis:**

The Town of Pelham's 2019 waste management levy was \$1,204,753. This cost includes both base and enhanced services. The base services account for \$1,181,194 and the enhanced services account for \$23,559. Currently, the Town's existing enhanced services include public space curbside recycling and street litter bin collection in Designated Business Areas (DBA), containerized garbage collection at multi-residential (MR) buildings and municipal facilities (MF), and enhanced disposal waste costs.

In respect to the Region's new upcoming waste management collection contract, the Region obtained pricing for the Town's new waste management costs, as well as, the Town's requested Enhanced and Optional Enhanced services related to waste management. There were a number of factors, which contribute to an overall increase in costs from the previous contract, including: labour, insurance, fuel, and vehicle/technology costs. Municipalities across the Province have experienced price increases ranging from 20% to 114%.

The estimated waste management levy based on the new contract for 2020 is \$1,342,681. This includes the base waste collection services plus the requested enhanced services the Town has been receiving (including litter bin collection at various locations and containerized garbage collection for 9 Multi-Residential and Municipal Facilities). The base services are estimated to account for \$1,309,660 and the enhanced services account for \$33,021. In total, this represents an 11.5% increase for the 2020 calendar year for the same services provided in 2019. The Region has already made included the above cost increases in the 2020 waste management levy to the Town.

The prices submitted by the Region's contractor are subject to a diesel fuel price adjustment at the contract commencement date, to offset fluctuations from the time of the Region's RFP submission. Also, there will be additional price increases in subsequent years to account for inflation based on the Consumer Price Index (CPI) and diesel fuel price adjustments. These increases are included in the Region's waste management contract and will be included as part of future tax levy's to the Town.

The Optional Enhanced Services to provide in-ground collection at the MCC, Pelham Town Hall and Centennial Park would be in addition to the above costs. Based on the 2019 collection schedule it is estimated that the cost of this optional enhanced service would be approximately 25,000 – 30,000 per year. Starting in 2021, these costs would be included as part of the waste management tax levy; however, in 2020 there would be an additional cost which would impact the Town's operating budget. The Region's new waste management contract is scheduled to start on October 19<sup>th</sup>, 2020. There would be an increase in the operating budget of approximately \$2,326 to complete the in-ground collection at the above facilities from October 19<sup>th</sup>, 2020 through to December 31<sup>st</sup>, 2020 using the Region's contractor.

The summary of pricing for Enhanced and Optional Enhanced Services, along with the total number of bins that are currently serviced by the Region, can be found in Appendix 1 of this report.

**Purpose:**

The purpose of this report is to seek Council's approval for the proposed Enhanced Services and Optional Enhanced Services, which are to be included in the Niagara Region's upcoming waste management collection contract. In respect to the current Enhanced Services, the Town of Pelham requests to continue with the following services:

a) Two (2) Days-per-Week for Public Space Litter Bin and Public Space Recycling Bin Collection inside Designated Business Areas (DBA) and one (1) day-per-week for Public Space Litter Bin and Public Space Recycling Bin Collection outside DBAs.

b) Containerized Garbage Collection at Multi-Residential (MR) Buildings and Municipal Facilities (MF). The Town is currently servicing three (3) MR Buildings through the Region's waste management levy. The properties are identified as follows: 190 Hwy 20 West, 200 Hwy 20 West, and 1600 Pelham Street.

The Optional Enhanced Services offered by the Niagara Region, and requested by the Town include:

a) In-Ground Collection at Municipal Facilities only (i.e. Town Hall, the Meridian Community Centre (MCC), and Centennial Park), excluding MR, Industrial, Commercial and Institutional (IC&I), and Mixed-Use (MU) Properties. Though the current cost to service the in-ground containers with the existing contractor at MF is economical, once the material is removed from the in-ground containers, it is not sorted by their recycling stream (i.e. organics, plastic and glass, paper and cardboard and garbage). The Region has confirmed that the new contractor in their upcoming waste management collection contract does sort the respected material once removed from the in-ground container and also brings the material to the respected locations (i.e. landfill, recycling centre, etc.). Town staff contacted another waste management company within the Niagara region that services in-ground containers and sorts the material respectively, however, it is not recommended to go with this company since the costs provided by the Region are more economical.

In addition to the confirmed Enhanced Services and Optional Enhanced Services, Town Staff recommend not proceeding with the Optional Enhanced Service of:

a) Bulky Goods Collection at MR buildings with seven (7) or more units and Mixed-Use (MU) properties with one (1) or more residential unit. This type of service has never been provided to residents, by the Town, and is not recommended by Town staff to offer this service. The Region has confirmed that there has been no requests for this service to be provided within the last 5 years.

### **Financial Considerations:**

In respect to the current Enhanced Services offered by the Region to the Town are as follows:

a) Two (2) Days-per-Week for Public Space Litter Bin and Public Space Recycling Bin Collection inside Designated Business Areas (DBA) and one (1) day-per-week for Public Space Litter Bin and Public Space Recycling Bin Collection outside DBAs, at an annual estimated cost of \$18,825.60 (including Net HST).

b) Containerized Garbage Collection at Multi-Residential Buildings (MR) and Municipal Facilities (MF), at an annual estimated cost of \$14, 195.52 (including Net HST).

The cost for the Optional Enhanced Services offered by the Niagara Region, and requested by the Town include:

a) In-Ground Collection at Municipal Facilities (i.e. Town Hall, the Meridian Community Centre (MCC), and Centennial Park), at an estimated cost of \$122.11 (including Net HST) per receptacle/stop for crane collection. Based on the number of pickups in 2019, it is anticipated that to service Town Hall, the annual estimated cost will be \$1,200 (plus HST), the MCC will have an annual estimated cost of \$25,000 (plus HST), and Centennial Park will have an annual estimated cost of \$1,100 (plus HST). The approximate annual cost, therefore, to service all in-ground collection at municipal facilities is estimated at \$27,300 (plus HST).

The Town's current contractor services the in-ground containers at \$79.50 per waste receptacle, \$67.50 per recycling receptacle, and \$64.00 per cardboard receptacle, and \$115.00 per organics receptacle. In 2019, the cost to service Town Hall was approximately \$780.00 (plus HST), the MCC had an estimated cost of \$14, 680.00 (plus HST) and Centennial Park had an estimated cost \$667.00 (plus HST).

In total, the cost to service all of the in-ground containers at the respective locations in 2019 was \$16, 133.50 (refer to Appendix 2 for a further breakdown on the total cost and total number of pickups per location in 2019). Though the cost to service the containers is more economical with the Town's current contractor, the existing contractor does not sort respective the material by the various recycling streams once removed from the in-ground containers.

Town Staff contacted another company that services in-ground containers and also sorts the material respectively, however, the cost of this alternative service provider is more expensive than the Regional contract quote.

In addition to the confirmed Enhanced Services and Optional Enhanced Services, the Town is not interested in the Optional Enhanced Service of:



a) Bulky Goods Collection at MR buildings with seven (7) or more units and Mixed-Use (MU) properties with one (1) or more residential unit, at an annual estimated cost of \$41,009.28 (including Net HST). This type of service has never been provided to the residents, by the Town, and is not recommended by Town staff to offer this service.

### **Alternatives Reviewed:**

Council could choose to not accept the enhanced services being offered by the Region under the upcoming Waste Management Contract. With this alternative staff would have to explore other options of providing Litter Bin collection, containerized garbage collection at Municipal Facilities and In-ground collection at municipal properties from another contractor or look at performing some of the services in-house.

This course of action is not recommended by Staff due to the lack of Staff resources available to perform these additional tasks and based on pricing received from third party contractor's. In addition, it has been determined that the current process of picking up and disposing of garbage and recycled goods for the in-ground collection systems maintained by the Town is not being sorted prior to disposal.

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

Properly sorting waste materials provides environmental and economic benefits to both the Town of Pelham and Niagara Region.

### **Consultation:**

Consultation with Niagara Region Waste Management Staff was completed in the preparation of this report.

### **Other Pertinent Reports/Attachments:**

Appendix 1 – Summary of Pricing for Enhanced and Optional Enhanced Services

Appendix 2 – Breakdown of Costs in 2019 to Service In-Ground Containers at Municipal Facilities by the Town's Current Service Provider

### **Prepared and Recommended by:**

Deanna Allen  
Climate Change Coordinator

Jason Marr, P. Eng.  
Director of Public Works

**Prepared and Submitted by:**

David Cribbs, BA, MA, JD, MPA  
Chief Administrative Officer

# **Appendix 1 – Summary of Pricing for Enhanced and Optional Enhanced Services**

<b>Requested Enhanced Service</b>	<b>Total Number of Bins</b>	<b>2019 Annual Price (incl. Net HST)</b>	<b>Submitted Annual Price <sup>(1)</sup> (incl. Net HST)</b>
<b>Two (2) Days-per-Week for Public Space Litter Bin Collection <u>Inside</u> Designated Business Areas (DBAs)</b> <ul style="list-style-type: none"> <li>• Collect two (2) days-per-week (i.e. Tuesday and Thursday).</li> <li>• Collection will be completed before 9:00 a.m.</li> </ul> <b>Public Space Litter Bin Collection <u>Outside</u> DBAs</b> <ul style="list-style-type: none"> <li>• Collect one (1) day-per-week, on designated collection day.</li> </ul>	30	\$4,925.02	\$13,992.00
<b>Two (2) Days-per-Week for Public Space Recycling Bin Collection <u>Inside</u> DBAs</b> <ul style="list-style-type: none"> <li>• Collect two (2) days-per-week (i.e. Tuesday and Thursday).</li> <li>• Collection will be completed before 9:00 a.m.</li> </ul> <b>Public Space Recycling Bin Collection <u>Outside</u> DBAs</b> <ul style="list-style-type: none"> <li>• Collect one (1) day-per-week, on designated collection day.</li> </ul>	41	\$1,637.40	\$4,833.60
<b>Containerized Garbage Collection at Multi-Residential (MR) Buildings and Municipal Facilities</b> <ul style="list-style-type: none"> <li>• Collection frequency varies by location.</li> </ul>	9	\$6,814.34	\$14,195.52

<b>Optional Enhanced Service</b>	<b>2019 Annual Price (incl. Net HST)</b>	<b>Submitted Annual Price <sup>(1)</sup> (incl. Net HST)</b>
<b>Bulky Goods Collection at MR and MU Properties</b> <ul style="list-style-type: none"> <li>• EOW call-in curbside collection of designated bulky goods from MR buildings with seven (7) or more units and MU properties with one (1) or more residential unit, which receive the Region's Base curbside collection of garbage OR containerized garbage collection service</li> </ul>	n/a	\$41,009.28
<b>In-Ground Collection at MR, IC&amp;I and MU Properties</b> <ul style="list-style-type: none"> <li>• Collect garbage, Blue and Grey Box/Cart, and Green Bin/Cart materials from in-ground containers (for</li> </ul>	n/a	\$122.11 per stop (crane coll'n) \$101.76 per stop (front-end coll'n)

Optional Enhanced Service	2019 Annual Price (incl. Net HST)	Submitted Annual Price <sup>(1)</sup> (incl. Net HST)
example, MOLOK, Earth Bins) at MR, IC&I and MU properties, public space litter and recycling bins.		

Note:

- 1) Pricing submitted by the contractor is subject to a diesel fuel price adjustment at the contract commencement date, to offset fluctuations from the time of the RFP submission. Annually thereafter, starting one (1) year after the contract commencement date, per annum prices are subject to a Consumer Price Index (CPI) adjustment and diesel fuel price adjustment.

**Appendix 2 - Breakdown of Costs in 2019 to Service In-Ground Containers at Municipal Facilities (i.e. Centennial Park, Town Hall, and the MCC) by the Town's Current Service Provider**

Type of and Required Cost to service Container		Location		
		Centennial Park	Town Hall	MCC
	Recycle (\$67.50)	\$270.00	\$270.00	\$4,522.50
	Waste (\$79.50)	\$397.50	\$397.50	\$5,247.00
	Cardboard (\$64.00)	N/A	N/A	\$4,224.00
	Organics (\$115.00)	N/A	\$115.00	\$690.00
<b>Total</b>		<b>\$667.50</b>	<b>\$782.50</b>	<b>\$14,683.50</b>
		<b>\$16,133.50</b>		

Total Number of Pickups per In-Ground Container		Location		
		Centennial Park	Town Hall	MCC
	Recycle (\$67.50)	4	4	67
	Waste (\$79.50)	5	5	66
	Cardboard (\$64.00)	N/A	N/A	66
	Organics (\$115.00)	N/A	1	6
<b>Total</b>		<b>9</b>	<b>10</b>	<b>205</b>
		<b>224</b>		

**Subject:** Summerfest Committee Terms of Reference

**Recommendation:**

**THAT COMMITTEE receive Report #2020-0015 and recommend to Council:**

**THAT Council approve the revised Summerfest Terms of Reference**

**Background:**

The Summerfest Committee Terms of Reference is currently constituted as follows:

Four members from the community at large;  
One representative from the Pelham Active Transportation Committee;  
Up to two representatives from the Pelham Business Association;  
Up to two representatives from the Welland/Pelham Chamber of Commerce;  
One representative from the Mayor's Youth Advisory Council (ex officio);  
One Town of Pelham Councillor (ex officio);  
Director of Culture, Recreation & Wellness, or designate (as resource to Committee);

In discussion with the Chair of the Pelham Business Association, the Committee was advised that the PBA Board will be moving ahead with a resolution to dissolve the organization in the near future and will no longer be in a position to provide representatives to the Summerfest Committee. In light of this, the Summerfest Committee request that the number of members from the community at large be increased by 2 in order to retain current members representing the PBA.

Additionally, given the level of involvement in the event by local Service Clubs, the Committee feels that representation from Service Clubs would be beneficial and request that up to 2 representatives be added.

**Analysis:**

The Summerfest event continues to grow and evolve each year and requires many hours of planning across a broad range of roles. As a Working Committee, the

members contributed 617 hours of their time attending Committee meetings, personal hours working on their area of responsibility and the event itself in 2019. In order to continue to deliver this award winning event without overburdening the volunteer Committee, the proposed revisions to the Terms of Reference will establish 2 additional Committee members and retain valuable and experienced current members.

**Financial Considerations:**

None

**Alternatives Reviewed:**

The deletion of the 2 representatives from the Pelham Business Association without any other changes would reduce the Committee size and severely impact its ability to deliver this event.

**Strategic Plan Relationship: Build Strong Communities and Cultural Assets**

Summerfest's mission is to be a family oriented, admission free community celebration which seeks to promote a vibrant, healthy, sustainable community, enhancing the quality of life of residents, promote local businesses and foster a sense of community.

**Consultation:**

Summerfest Committee; Clerk's Department

**Other Pertinent Reports/Attachments:**

2020 2<sup>nd</sup> Amended Summerfest Terms of Reference

**Prepared and Recommended by:**

Sally Jaeger, Special Events and Festivals Programmer

Vickie vanRavenswaay, RRFA  
Director of Recreation, Culture and Wellness

**Prepared and Submitted by:**

David Cribbs, BA, MA, JD, MPA  
Chief Administrative Officer

**Strategic Goal:** Build strong communities and cultural assets

**Departmental Reporting:** Recreation, Culture and Wellness

### **Goals**

- Encourage strong economic and tourism, through the creation of a home-town festival that focusses on celebrating all that is Pelham
- Promote active lifestyles by opening streets to pedestrian traffic creating a public gathering place
- Engage all sectors of the community, such as service clubs, businesses, agriculture, sports organizations, arts, cultural, etc. in developing and promoting the festival
- Assist in the preparation of an annual budget for approval by Town Council and to canvas for donations, sponsorships and upper tier financial support to underwrite the festival

### **Membership**

Membership shall consist of the following:

- ~~Four~~ **Six** members from the community at large;
- One representative from the Pelham Active Transportation Committee;
- ~~Up to two representatives from the Pelham Business Association;~~
- Up to two representatives from the Welland/Pelham Chamber of Commerce;
- **Up to two representatives from local Service Clubs;**
- One representative from the Mayor's Youth Advisory Council (ex officio);
- One Town of Pelham Councillor (ex officio);
- Director of Culture, Recreation & Wellness, or designate (as resource to Committee);

All members are considered voting members with the exception of ex-officio members.

Members shall be appointed by by-law and the term of office shall be consistent with the Term of Council. Applications will be reviewed by Council in accordance with the Public Appointment Policy.

Vacancies shall be replaced by Council appointment.

Any committee member missing three (3) consecutive meetings without reasonable cause or explanation will be deemed to have resigned.



## Meeting Protocols

The following meeting protocols shall apply:

- Quorum for meetings of the committee shall be determined according to the Town's Procedural By-law, and declared by the chair. Approval of any motion shall require 50% plus one of the voting members in attendance at the meeting.
- If quorum is not attained within 15 minutes of the scheduled start time of the meeting, no actions or recommendations emanating from a meeting have any force or effect.
- Minutes shall be recorded and retained by the staff designate, and copies shall be forwarded to Town Council for information after committee approval.
- The Committee reports directly to the Town Council via minutes of its meetings, presentations as requested and/or as deemed necessary, and through the provision of a quarterly report to Town Council.
- The committee will appoint a chair who will serve throughout the appointment term.
- Recommendations for Council shall be forwarded in resolution form, under the signature of the Chair.
- Meeting protocols shall be conducted in accordance with the Municipal Act.
- All meetings shall be open to the public and closed session meetings shall only be permitted under the provisions of the Municipal Act, and if so convened shall not be held in the absence of the staff appointee. Meeting dates shall be posted on the Town's website.
- Sub-Committees may be formed as necessary and will determine their own meeting times and dates.
- Members missing three consecutive meetings without reasonable cause or explanation will be deemed to have resigned and the staff liaison shall inform the Town Clerk to request applications be sought to fill such vacancy.

## Financial Reporting

Financial reporting will be administered by the Town of Pelham Corporate Services Department.

Amended/ Approval: **February 18, 2020**