

Subject: 2020 Gypsy Moth Aerial Spray Program

Recommendation:

BE IT RESOLVED THAT Council receive Report # 2020-0039 for information;

AND THAT Council consider amending By-Law No. 4106(2019) to allow for the implementation of an aerial spray program in 2020;

AND THAT the blocks identified in Report # 2020-0039 be aerially sprayed for the Gypsy Moth in 2020;

AND THAT the Town holds two (2) Public Open Houses to communicate the spray blocks and address the concerns of residents with respect to the Gypsy Moth during the month of April.

Background:

Whereas Council directed staff through the March 2, 2020, Public Works Report No. 2020-0021 to conduct a gypsy moth aerial spray program utilizing the approved budget of \$150,000, this report serves to inform Council on the proposed aerial spray treatment areas and the overall management of the pest in 2020.

The Town of Pelham has experienced severe gypsy moth infestations in the past, and implemented control measures to reduce their populations to acceptable levels. The most recent aerial spray programs utilizing *Bacillus thuringiensis* 'kurstaki' (Btk) were completed in 2018 and 2019.

Under the *Municipal Act*, the Town has authority to provide any service or thing that the Town considers necessary or desirable for the public, and to pass by-laws respecting the economic, social and environmental well-being of the town, as well as, the health, safety and well-being of persons. In 2019, By-Law No. 4106(2019) was approved providing the Director of Public Works the authority to implement a gypsy moth aerial spray program on both public and private lands within the Town of Pelham. The By-law and corresponding council report identified the spray blocks

to receive aerial spray treatment.

After the 2019 aerial spray program, Council directed staff to develop a Gypsy Moth Management Policy, and approved an additional expenditure for the purposes of completing egg mass surveys to determine if control measures in 2020 were required.

A Public Meeting was held on October 23, 2019, to gain public input for the development a gypsy moth management policy. Responses from the public favoured the Town implementing a gypsy moth control program including public and private property, within the municipal boundary, when infestation levels became moderate to severe and that the cost of the program be distributed over the entire tax base. Staff developed a policy taking into consideration the survey results, public input, and Integrated Pest Management (IMP) strategy.

Committee of the Whole received the Public Works Gypsy Moth Management Policy (S801-14) at its February 18th meeting. The policy was approved by Council on March 2nd, 2020.

At the March 2nd meeting Council also approved the extension of Contract No. 2019-PW-19 to Lallemand Inc./Bioforest which includes: 1) The development of spray blocks with the aerial spray applicator; 2) Hold two (2) Public open houses regarding gypsy moth biology; 3) Pre-aerial spray larval emergence and leaf development assessments; 4) Aerial spray daily weather monitoring; 5) Post-aerial spray efficacy assessment (ADAM kit); 6) Defoliation surveys of host species once feeding has ceased; 7) Technical report of findings; 8) Develop and coordinate a forest health volunteer program. The costs of these services are approximately \$35,000.

Analysis:

Lallemand Inc./Bioforest worked in conjunction with Zimmer Air Services, and Public Works staff to develop aerial spray blocks to fit within the available spray budget. Consideration was given to the Gypsy Moth Management Policy, as well as, the 2020 defoliation forecast, and a number of other decision criteria.

The identified spray blocks have been attached to this report as Appendix A.

The total number of hectares to be sprayed through the 2020 Town of Pelham Gypsy Moth Aerial Spray Program is limited based on the available budget, and application cost estimates from Zimmer Air Services. The identified spray blocks

have been designed to have the greatest impact on preventing defoliation and protecting the health of the most vulnerable trees in accordance to the Gypsy Moth Management Policy and IPM strategy. Due to the level of infestation and program size limitations, the threshold for treatment consideration was raised from 2500 egg masses per hectare to 5000 egg masses per hectare for the 2020 spray program.

The focus on this year's program was protecting mature trees, of preferred species, within or adjacent to the Urban Boundaries of Fonthill, and Fenwick, as well as, the corridor along Canboro Road that links the two villages. Trees that make up the urban canopy were prioritized over rural woodlots due to the additional stress placed on trees in an urban environment. Other factors were also considered including, the prioritization of municipal property and parks, and past infestation and defoliation of trees.

After analyzing the egg mass density and defoliation data, a total of 118.7 ha were selected to be included in the 2020 Gypsy Moth Aerial Spray Program. Because of the density of dwellings within the spray blocks, they would fall under the definition of a "Built Up Area" requiring Transport Canada Ministerial Authorizations, as well as the use of Twin Engine Helicopters with approved equipment certified to carry out aerial applications. The cost of spraying utilizing this type of aircraft is estimated at \$876.00/ha. The cost of spraying 118.7 ha is \$104,000. There are additional costs of \$4,400 associated with mobilizing and providing ground support for the helicopter. In addition, it is estimated that the administration costs for the program is approximately \$35,000. The total estimated cost of the program including; administration, aerial application of Btk, and helicopter mobilization (including ground support) is approximately \$143,400. It is assumed that the costs associated with advertisements and public outreach will also be included as part of the \$150,000 approved gypsy moth budget.

To allow the 2020 Gypsy Moth Aerial Spray Program to be implemented, and to allow for the aerial application of Btk to manage the gypsy moth population on both public and private lands, the existing Gypsy Moth By-law 4106 must be amended to include the spray blocks identified as attached in Appendix A.

A key component to the overall 2020 gypsy moth management strategy is communication. Two public open houses will be held in April to communicate details of the 2020 Aerial Spray Program, including; 1) the identified spray blocks, 2) Gypsy Moth biology, 3) infestation information and 4) Control methods for property owners. The first open house is scheduled on April 14th, 2020, in the Accursi Room at the MCC, between 6pm and 8pm. The second open house is scheduled on April 17th, 2020, at Fire Station 2 between 6pm and 8pm.

In addition to the public open houses program information will be communicated on the Town Website, through pamphlets at municipal facilities, media releases and print articles in the local paper. Further, residents within and adjacent to the spray blocks will be notified by mail or hand delivered notice prior to May 1st as per the Gypsy Moth Management Policy. Lastly, information signage will be set up along roadsides coming into the Town at a number of high volume locations to provide the dates and times of spraying and required road closures.

Financial Considerations:

The proposed 2020 Gypsy Moth Aerial Spray Program and administration is able to be completed within the approved 2020 budget allotment of \$150,000.

A technical report including the post-aerial spray efficacy assessment and defoliation surveys of host species once feeding has ceased will be presented to Council for consideration in preparation of 2021 budget process.

Alternatives Reviewed:

As Council will recall, 2020 Gypsy Moth Management Alternatives were presented and debated at the March 2, 2020 Regular Meeting of Council. Although minor changes to the identified spray blocks may be required, major changes to the program at this juncture are not recommended.

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

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

Consultation:

Lallemand Inc./Bioforest Urban Forestry Consultant
Zimmer Air Services Pilot

Other Pertinent Reports/Attachments:

Appendix A – Identified Gypsy Moth Spray Blocks
Public Works Gypsy Moth Management Policy S801-14
2019 Gypsy Moth Monitoring Program Report (BioForest)
Public Works Report No. 2020-0017

Public Works Report No. 2020-0021

Public Works Report – 2019 Town of Pelham Gypsy Moth Outbreak

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