

Subject: 2020 Town of Pelham Gypsy Moth Aerial Spray Efficacy Report**Recommendation:**

BE IT RESOLVED THAT Council receive Report #2020-0115 for information;

AND THAT Council considers the continuation of the Gypsy Moth Management Program in 2021.

Background:

In 2020 Council approved the Gypsy Moth Management Policy S802-03 to address the periodic infestation of the European Gypsy Moth experienced in the Town of Pelham.

This report serves to fulfill the requirements of the Policy S802-03 to inform Council on the effectiveness of the treatment program and present a post spray assessment and defoliation surveys of the treated areas.

Earlier in 2020, the Town of Pelham contracted Lallemand Inc./BioForest (BioForest) to aid in the development of an aerial spray program, and post spray assessment services. The detailed assessment of the 2020 treatment program, prepared by BioForest, has been included as an attachment to this report (Appendix A).

Analysis:

The Town of Pelham treated 130.5 hectares in the urban areas of Fenwick and Fonthill, as well as a corridor along Canboro Road. The areas identified for spraying were treated with two applications of Foray 48B (*Bacillus thuringiensis* var. *kurstaki* [Btk]) and applied at a rate of 4.0L/ha. The first application took place on May 27, and the second application took place on June 4/2020.

The post treatment surveys showed that the program was effective in

reducing the defoliation of trees within the spray blocks. Of the 100 trees that were evaluated, 94% had less than 5% defoliation. None of the trees had more than 25% defoliation, and only 1% of the branches surveyed had more than 25% defoliation.

While the treatment program effectively met the objectives of the Gypsy Moth Management Policy S802-03 within the spray blocks, many properties outside of those areas have experienced severe defoliation of their trees. For the purpose of comparison, seven sites that were not sprayed in the 2020 program (but were forecasted to experience severe defoliation by the 2019 egg mass surveys) were also evaluated. The survey results at these sites showed that the majority of branches (57%) and trees (51%) exceeded 50% defoliation.

Staff have continued to receive reports from citizens regarding gypsy moth infestations in all areas of the municipality outside of the spray blocks, including large rural properties and woodlots, and urban residential areas of both Fonthill and Fenwick.

Staff recommend that the Gypsy Moth Management program continue as per Policy S802-03, and previously communicated in Public Works Report 2020-0021. Continuation would mean that egg mass surveys will be completed in January of 2021 to determine the level of infestation. This would be done by utilizing the survey plots created in 2020.

Financial Considerations:

The cost of the gypsy moth management program in 2020 was approximately \$143,000 (excluding applicable taxes). This included; \$114,750 for aerial spray services, \$22,900 for treatment coordination and monitoring, as well as \$5,400 for mail outs and print media communication. The approved budget was \$150,000. Program savings were realized with the cancelation of public open houses and the forest health volunteer program due to the covid-19 pandemic.

The egg mass surveys were completed in early 2020 but were a 2019 budget item. The total cost of the 2019-2020 egg mass surveys and treatment program was \$164,500.

It is anticipated that a budget of \$170,000 will be required in 2021 to

operate a management program similar in scope to 2020 including public open houses and a volunteer program.

Alternatives Reviewed:

As Council will recall, Policy S802-03 was approved for the management of the European Gypsy Moth in 2020. The policy was based on the principals of Integrated Pest Management (IPM) and provides a process to address the periodic infestations of the gypsy moth, including communication to Council regarding the efficacy of the program.

As staff are following the policy, no further alternatives were considered in the preparation of this report.

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.

Other Pertinent Reports/Attachments:

Appendix A - Bioforest Report – 2020 Gypsy Moth Aerial Spray Program
Public Works Report 2020-0021
Public Works Report 2020-0039
Public Works Report 2020-0050
Gypsy Moth Management Policy S802-03

Consultation:

Lallemand Inc/BioForest provided; 2020 Gypsy Moth Aerial Spray Program Report.

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