



Procedure: Spongy Moth Management	Procedure No: PW-IS-01
Revision No. 2	
Revision date(s):	3/06/2023
Department/Division:	Public Works Beautification

1. Purpose

The goals of this Spongy Moth Management Procedure are to:

- Maintain tolerable spongy moth populations at any point in time, and make sure that outbreaks are controlled properly.
- To protect the tree canopy within the Municipal Boundary against tree mortality caused by defoliation by the spongy moth.
- Educate residents about the spongy moth to foster a thorough understanding of forest pests and their environments.
- Establish a feasible spongy moth monitoring network and egg mass survey program.
- Identify an Invasive Species Action Threshold (ISAT) criterion for implementing spongy moth control measures.

2. Procedural Constraints

The procedure 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.

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

3. Prevention

The spongy moth was first detected in Ontario in 1969 and has been a serious problem throughout southern Ontario since 1985. As of 1996 the spongy moth has inhabited the southern third of the province making prevention or eradication impossible.

4. Inspections and Monitoring

Once an infestation has been identified, egg mass surveys will be undertaken in the fall, to determine the egg mass densities within the developed spongy moth monitoring plots. (*Appendix A*) The information gathered during the surveys will be utilized in the development of a treatment program if the Invasive Species Action Threshold (ISAT) criteria or special circumstances are met.

The number of surveying plots required to monitor spongy 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 spongy moth populations.

5. Spongy Moth Action Threshold

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

6. Spongy Moth Control Measures

6.1 Treatment Block Development

If the ISAT criteria for treatment are met, treatment blocks will be identified utilizing the information gathered through the annual egg mass surveys.

Treatment blocks will be developed to include areas where spongy moth egg mass densities exceed the ISAT criteria of 2,500 per hectare. Treatment 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 treatment block to opt out of the application. Authority delegated through By-Law 4106(2019) allows the Director of Public Works to implement a spongy moth control aerial spray program when the threshold criteria is met.

Special circumstances such as proximity to selected treatment blocks, or areas where high spongy 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 blocks 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 spongy 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 spongy moth would be candidate for such consideration to achieve effective and more efficient long term pest management.

6.2 Treatment Program Communication

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

Spongy moth management program information will 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 treatment blocks prior to May 1st by Canada post letter mail.

The Town of Pelham will provide information concerning the spongy moth, including control measures on private properties to the residents of Pelham. Information provided will be made available at, all Municipal Facilities, the Town of Pelham website, social media feeds and media releases.

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.

6.3 Aerial Application of Control Agents

The treatment of spongy 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, spongy 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.

6.4 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 spongy 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 spongy 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.

6.5 Alternative Spongy Moth Control Measures

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 spongy 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.

APPENDIX A – Spongy Moth Egg Mass Survey Plots (2019-2023)



