

Date: August 11th 2021

To: Members of Tiny Township Council

Re: LDD Management

I was quite impressed with the Paul Zimmer presentation to the July Committee of the Whole meeting as he addressed some key points with respect to aerial spraying of Btk and overall LDD management.

- Although it is stated that the LDD cycle is 7-10 years, major infestations such as we recently experienced likely occur every 20-30 years.
- It is impractical to effectively combat an infestation with spot spraying
- Aerial spraying of larger areas can be cost effective if the municipality coordinates it
- Many progressive municipalities have adopted an LDD Management Policy which incorporates some level of aerial spraying
- The spraying contractor is required to maintain liability insurance and have the municipality as a named insured
- there have been no recorded cases of municipalities in Ontario being exposed to liability for enacting an aerial spray program
- Municipalities can pass a bylaw that allows for spraying for the sake of the common good
- Btk is safe and approved for use when properly applied
- Aerial spraying is only employed where there is no practical alternative of accessing the LDD caterpillar when they start to feed.

We believe that by incorporating an LDD Moth Management Policy, the chaos experienced over the past three years will not be repeated. A small annual investment in a Forestry Health Reserve will provide a basic fund to be drawn upon should another infestation occur in the not so near future.

I took it upon myself to do a little investigation and found that the Town of Pelham has an LDD Moth Management Policy and Bylaw which I converted to documents for the Township and forwarded to Council last year. The policy gives guidance to Council and staff on when and what control measures need to be undertaken. Obviously, Council did not agree but I would suggest they reconsider given the situation this year.

Highlights include:

1. Purpose:

The overall purpose of this policy is to provide a process that addresses the periodic infestation of European LDD Moth experienced in the Township of Tiny. The specific goals of this LDD 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 LDD moth populations at any point in time, and make sure that outbreaks are controlled properly.
- Educate residents about the European LDD Moth to foster a thorough understanding of forest pests and their environments as well as understand the rationale behind the Townships decision making process with respect to LDD moth management.

- Provide a policy that Township officials and the residents are confident is an effective and fair tool in responding to LDD moth infestations.
- Establish a feasible LDD moth monitoring network and egg mass survey program.
- Establish an intervention threshold criterion for implementing LDD moth treatment efforts.
- Strategically allocate resources toward forestry & tree health.
- Reduce the workload and duplication of effort for Township staff in responding to LDD moth concerns.
- Allow for the collaboration across municipal and county boundaries to help strengthen LDD moth management.

2. Policy Statement:

It will be the policy of the Township of Tiny to protect the tree canopy within the Municipal Boundary against Tree Mortality caused by defoliation by the LDD moth and hence, preserve and enhance the quality of life in our communities.

3. Policy Constraints:

The policy will be applied to all properties within the Township of Tiny 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 County of Simcoe or the Province of Ontario unless otherwise approved by the Director of Public Works. The policy may be affected by the availability of Township staff, financial resources, regulatory restrictions and requirements from other departments and agencies.

4. General Provisions

The goal of the LDD 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 LDD 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.

4.1 Treatment Threshold Criteria

In order to preserve the Township of Tiny's tree canopy and prevent tree mortality resulting from LDD Moth infestation, the Threshold Criteria used to identify plots that require treatment within Municipal Boundary will be a minimum of 2,500 egg masses per hectare.

5. Annual Egg Mass Surveys

Decisions and control strategies for the management of the LDD 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 LDD 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 LDD 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 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 LDD moth populations.

6. LDD Moth Control Program

6.1 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 LDD 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 (TBD) allows the Director of Public Works to implement an LDD moth control aerial spray program when the threshold criteria is met. Special circumstances such as proximity to selected treatment areas, or areas where high LDD 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 2,500 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 LDD moth populations, though low, are increasing and are healthy. Generally, areas that in the past have experienced high and rapidly rising outbreak levels of LDD 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 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. Township of Tiny 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 Townships Website and social media feeds as well as public notices in local print media. The Township will notify landowners, whose properties are included within or adjacent to the spray blocks prior to May 1st by Canada Post letter mail. The Township will provide information concerning the LDD moth, including control measures on private properties to the residents of Tiny. Information provided will be made available at all Municipal Facilities, website, social media feeds and media releases. Further to the communication plans described in the previous paragraphs, the Township 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 for LDD Moth

The treatment of LDD 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, LDD moth in-star development, weather conditions and manufacturers' 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 LDD 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 LDD moth egg mass data was collected. This information will be utilized to design future egg mass surveys and estimate population migration. Township 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 LDD 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 LDD 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.

7. Community Volunteer Program

The Township 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 residents about tree health and invasive species. Raising interest in tree health issues in the community is imperative for the future conservation of the Townships 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 Township residents.

8. LDD Moth Management Funding

The Township will endeavour to strategically allocate resources toward the protection of tree health. The LDD Moth Management Policy identifies how the periodic LDD moth infestations are treated by the Township as part of an overall Integrated Pest Management Policy. A Forestry Health Reserve Fund will be established which will be used to fund programs related to the health of the forests and tree canopy within the Township. The LDD Moth Management Program will be funded through the Forestry Health Reserve with Council approval. To help ease the costs associated with treatment programs the Township may attempt to coordinate spray programs with neighbouring municipalities, conservation groups, agricultural and commercial operations and other governmental organizations.

Summary

LASHA is not proposing that the entire Township requires spraying and believes once the infestation is addressed there will be several terms of Council before this issue will need to be addressed again. But as a forward moving municipality which has now experienced this situation at least twice, knows it will happen again in 20 or 30 years so we need to plan for it now. Putting \$25K per year into a Forestry Health Reserve will provide a substantial nest egg for addressing future issues whether it be LDD or some other invasive species.

In light of what has transpired over the past three years we urge Council to adopt the recommendations put forward. I would also request that this letter be on the agenda of the next meeting of Council.

C. Stradling, President

on behalf of the Board of Directors of the Lafontaine Area Shoreline Homeowners Association.

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