



TOWN OF
HALTON HILLS
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MEMORANDUM

TO: Mayor Bonnette and Members of Council

FROM: Mark Covert, Director of Public Works

DATE: September 14, 2022

MEMO NO.: TPW-2022-0002

SUBJECT: Lymantria Dispar Dispar Moth Update

PURPOSE OF THE MEMORANDUM:

The purpose of this memorandum is to provide Council with an update on the Lymantria Dispar Dispar Moth infestation.

BACKGROUND:

The spongy moth (Lymantria Dispar Dispar or LDD), formerly known as gypsy moth, is an invasive insect that can cause moderate to severe defoliation of certain types of trees. This defoliation, which occurs during the caterpillar (or larval) stage, can negatively affect vulnerable trees. High populations of spongy moth caterpillars also bring nuisance impacts such as frass (droppings), as well as allergic reactions in some people when coming in contact with the caterpillar.

Spongy moth outbreaks follow a boom-and-bust cycle, occurring about every 7 to 10 years, wherein populations reach epidemic proportions, only to collapse again. Spongy moth populations within Halton Hills increased noticeably in 2020 and again in 2021, resulting in many inquiries from residents. As a result, Town staff began working with Credit Valley Conservation (CVC) and Conservation Halton (CH) on spongy moth monitoring and response planning. The Town ultimately contracted CVC to provide a report to estimate defoliation severity for 2022 and provide recommendations. In addition to surveying in late 2021 for spongy moth egg masses in Town trees, CVC also consulted with neighbouring conservation authorities to obtain a regional understanding of spongy moth population forecasts for 2022.

While the CVC survey identified high egg mass numbers in several areas of Halton Hills, there were also signs that a spongy moth population collapse was possibly on the horizon due to viral and fungal pathogens, as well as parasitic and natural predators

which act to control outbreaks. Extended days of extreme cold temperatures can also kill overwintering larvae in exposed egg masses.

On March 21, 2022, following completion of the CVC report, Council approved a 2022 LDD Moth Response Plan through Transportation and Public Works Report No. TPW-2022-0012. The Plan did not include costly and/or aggressive mitigation efforts, as there was minimal defoliation of Town trees observed in 2021 and trees typically withstand a few years of defoliation. The Plan was intended to advance the Town's awareness and preparedness in case the outbreak continued with increasing severity.

COMMENTS:

During the late spring and early summer of 2022, there was anecdotal evidence that fewer caterpillars were emerging. Town staff monitoring for spongy moth found only minor evidence of caterpillars, and virtually no calls were received from residents reporting problematic infestations on Town or private trees. As such, some components included in the 2022 LDD Moth Response Plan came to be unwarranted.

The Table below details the Plan components and actual actions taken by Town staff due to the observed spongy moth population collapse:

2022 LDD Moth Response Plan Component	Action Taken in 2022
1. Enhanced public communication and education.	Staff partnered with CVC on two virtual workshops on spongy moth and native trees through the Halton Hills Public Library Lecture Series. Community awareness was increased through The Current e-newsletter, Town website and social media.
2. Deployment of moth traps on Town trees, as in prior years, to minimize reproduction.	No action taken. Minimal caterpillars and virtually no inquiries from residents requesting adult moth traps negated this benefit.
3. Pilot limited ground spraying of bio-pesticide on small to medium feature trees within Town parks and/or facility grounds, as appropriate.	Limited ground spraying of high value feature trees was performed by Staff. It is difficult to determine effectiveness due to the general population collapse.
4. Pilot the offering of free burlap kits (i.e. length of burlap, string, instruction sheet) to residents for use on private and/or Town trees. Burlap is very effective at capturing caterpillars.	Approximately 600 burlap kits were provided to residents. Most recipients were provided with 2 or 3 kits.
5. Perform a survey of actual defoliation in 2022 to better understand any potential need for increased response actions in 2023 or beyond (i.e. to track tree stress from potential repeated defoliations).	Reduced action taken. Contracted CVC to perform an abbreviated defoliation survey (further comments below).
6. Perform another egg mass survey in fall 2022 to forecast potential defoliation in 2023.	No action taken. The population collapse has negated the need for this component in 2022.

In light of the apparent spongy moth population collapse, the Town contracted CVC to perform an abbreviated defoliation survey (Appendix A) to confirm staff observations and to provide professional advice on the current status of the spongy moth population in the region. In August 2022, CVC staff surveyed several sites within Halton Hills and found tree canopies at all sites surveyed to be overwhelmingly intact. These findings confirmed the anecdotal evidence that spongy moth populations had indeed collapsed in the Halton Hills area and based on these findings, further management of spongy moth at this time is not recommended by CVC.

CONCLUSION:

The spongy moth outbreak which peaked in Halton Hills in 2021 did not continue into 2022 due to collapse of the population; however, outbreaks will occur again in the future. Staff will continue to cooperate with CVC, CH and other regional agencies to identify when spongy moth levels again start to rise. At that time, staff will advise Council accordingly to consider appropriate response activities.

Reviewed and approved by,

Bill Andrews, Commissioner of Transportation & Public Works

Chris Mills, Chief Administrative Officer