



Aquatic Consulting Services

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989-689-0223

November 29, 2023

Mr. Mark Klumpp, Supervisor
Morton Township
290 W Main St/PO Box 2
Mecosta, MI 49332
(231) 972-7138

Dear Mr. Klumpp:

We have completed the spongy moth surveys, maps, and report for the 2024 season in Morton Township, Mecosta County, within the Tri-Lakes Association survey area. I have included JPG and PDF map files of the results for you to review and to post on the city website as needed. Both JPG and PDF files are printable for your purposes although the .PDF file will likely be more user friendly on a website. I will provide your GIS personnel with .SHP files for use in a GIS mapping system. I have also included a short report on the conditions in each recommended spray block. An 18 x 24 inch map may be sent in a separate package for display purposes, if desired.

I am pleased to report that, during our survey, we found spongy moth populations in all of the previously infested areas were significantly reduced. In some areas, we found no new egg masses with several areas seeing >80% reduction. This result is certainly the goal of spongy moth suppression programs, but I do need to explain the factors I suspect may have been at play in this reduction. The application of *Bacillus thuringiensis kurstaki* (Btk) was definitely a driving force in the observed reduction, but complete eradication is usually not possible with Btk application alone. When we see this type of reduction, there are often interacting factors that combine to cause population collapse, especially latent environmental factors. There are three major environmental controls that limit spongy moth population buildups; a fungus called *E. maiamiga*, a spongy moth virus called NPV, and a class of egg parasitoid wasps. We suspect that these factors combined with suppressive spray has caused the observed population collapse. This comes with a caveat; we are still seeing potentially damaging spongy moth populations in other areas in Michigan. In fact, we took on new clients this season experiencing higher infestations than we ever observed in Morton Township. We have also seen nearly eradicated remnant spongy moth populations rebound to problem levels within 2 years. The total acreage recommended for spray in spring 2024 is 306 acres. There are a few areas with highly suppressed infestations that were not recommended but should definitely be monitored. Overall, I anticipate we will make further gains next season, but encourage Morton Township to continue with a monitoring program.

I will hold off on digitizing the spray blocks for the pilot's use until you have had a chance to review the maps. Once we get closer to spray time and you have selected an aerial applicator, I will provide the pilot with spray maps and digitized files.

Thank you for the opportunity to work for Morton Township this season. Please let me know if I can help you with anything further at this time. 989-689-0223 or spongymoth@aquaticremedies.com.

Sincerely,

Neal Swanson
Owner/Biologist