

Guide to Conducting a Private Gypsy Moth Suppression Program

Purpose/Objective

The gypsy moth has been a destructive forest and tree pest in Pennsylvania since 1932. Infestations are cyclic and regional, so different portions of the state may be affected during each cycle. Counties, municipalities and landowner/homeowner associations have the option of organizing suppression programs aimed at protecting their trees and minimizing nuisance. The following guidelines are intended to provide a framework for conducting efficient and effective aerial spray programs, while also minimizing misuse of insecticides.

To help facilitate a program, a project coordinator should first be designated. The coordinator assists in assessing the need for treatment, implements an application and collections process, and acts as a liaison between property owners and the spray contractor.

Assessing the Need for Treatment

Does the property contain species favored by gypsy moth?

The following is a listing of common tree species arranged by gypsy moth feeding preference:

- *Favored – High*: Fed upon by all size larvae – alder, apple, aspen, basswood, beech, birches (gray, white, and river), boxelder, hawthorn, larch, oaks (all species), willows, and witch-hazel.
- *Favored – Moderate*: Fed upon by only large larvae – chestnut, eastern hemlock, and all species of pine and spruce.
- *Favored – Low*: Only fed upon by large larvae when preferred foliage is not available – birches (black and yellow), butternut, cherry, cottonwood, elms, black gum, hackberry, hickories, hornbeam, maples, pear, sassafras, sweetgum, and walnut.
- *Unfavored*: Rarely fed upon – ashes (all species), catalpa, dogwood, American holly, honey locust, horsechestnut, juniper, locust, striped maple, mulberry, persimmon, eastern red cedar, sycamore, and tulip poplar.

Do egg mass levels warrant a treatment program?

It is very important that the estimate of egg mass densities be based upon new, current-year egg masses only. Experience has shown that 250 healthy gypsy moth egg masses per acre is the threshold at which noticeable defoliation begins to appear. Consideration should be given that larvae blow-in may occur in surrounding areas upwind of heavily infested areas.

Hiring a Contractor

An aerial applicator can help to determine what is best for each situation by: assessing the need for treatment, selecting the right insecticide, timing and project planning, and determining the area to be treated.

Important considerations before hiring a contractor include:

- Their proximity to the area(s) considered for treatment (this can impact cost)
- Availability
- Insecticide options (*Bacillus thuringiensis* subspecies *kurstaki* and/or *Tebufenozide* are most commonly used)
- Cost comparisons

A List of Aerial Applicators Licensed to Work in PA is provided on the DCNR website (below).

Additional resources can be found at:

<https://www.dcnr.pa.gov/Conservation/ForestsAndTrees/InsectsAndDiseases/GypsyMoth/Pages/default.aspx>