



# Northampton County 2016 Gypsy Moth Suppression Application

## Individual request for treatment

Submission of this application form in no way obligates Northampton County or the Department of Conservation and Natural Resources to conduct pesticide spraying on any property. The application only allows your property to be evaluated by the Northampton County Gypsy Moth Coordinator to determine if it meets state criteria into the program.

### LANDOWNER'S CHECKLIST

*\*Please fill out completely: Failure to complete **All** sections may result in the exclusion of your property from this program.*

**NAME:** \_\_\_\_\_ **Phone Number:** \_\_\_\_\_

**Mailing Address:** \_\_\_\_\_

**Physical Address:** \_\_\_\_\_

**Email:** \_\_\_\_\_

*\*Please provide clear directions to your home from the nearest road.*

*If we cannot locate your home, your property will not be included in the spray program.*

**Municipality:** \_\_\_\_\_

The property you would like treated must meet the following criteria:

1. There must be a residence on the property.
2. Residence must be within 200 feet of the forest.
- \* Scattered, ornamental trees and hedge rows are not considered forest.

In addition, your property may not qualify if *any* of the following exist:

Property is commercial; adjacent properties are not participating; tree species are not favorable to gypsy moths and adjacent property owner(s) are opposed to aerial application of insecticide.

Please answer YES or NO to the following questions:

1. Have you contacted your neighbors to include their properties in the treatment request? \_\_\_\_\_
2. Are you willing to serve as a spray block coordinator? \_\_\_\_\_
3. Will you allow a field technician to enter your property without an appointment? \_\_\_\_\_

*\*This application **MUST** be returned by **September 1<sup>st</sup>** in order for the property to be considered for treatment.*

**There will be no extension of the September 1st deadline.**

**Return this completed application to the Penn State Northampton County Extension office**

**14 Gracedale Avenue Greystone Building Nazareth, PA 18064**

**Email: NorthamptonExt@psu.edu Fax: 610-746-1973 Phone : 610-746-1970**

### OFFICIAL USE ONLY

Qualified: Yes / No

Reason: \_\_\_\_\_

Access ID: \_\_\_\_\_

Field Visit Date: \_\_\_\_\_

Spray Block #: \_\_\_\_\_

Date Received: \_\_\_\_\_

## APPENDIX B

# BT Insecticide Information Bulletin

*Bacillus thuringiensis* Berliner (Bt) is a naturally occurring rod-shaped bacterium that causes disease in certain insect larvae. One variety of this organism affects the larvae of many moths and butterflies while other varieties affect fly and beetle larvae. Strains of the variety *kurstaki* are grown under controlled conditions and are then formulated into a biological insecticide for control of many forest and agricultural pests, including the gypsy moth (*Lymantria dispar*).

Formulations of Bt registered by EPA for gypsy moth control contain dormant bacterial spores along with crystals of a toxic protein, called delta-endotoxin, that the bacteria produce. Gypsy moth caterpillars (larvae) must eat these spores and crystals for the Bt to work. Once eaten, the crystals dissolve in the alkaline gut of the caterpillar and cause paralysis of the digestive system. Feeding usually ceases at this point. Cells in the gut wall then break down allowing dormant spores to invade the body cavity. If the caterpillar has not died by this time, the spores germinate and multiply in the body cavity causing a lethal infection. In small larvae the action of the crystal alone is usually fatal, but in larger larvae it is the later infection by the spores that causes death.

Successful gypsy moth control with any insecticide depends on proper spray timing, good spray weather, and thorough spray coverage. Because Bt is a living organism subject to mortality-causing factors such as desiccation and ultraviolet light, its residual effect is much shorter than most chemical insecticides. As a result, timing, weather, coverage, and population level are more critical for Bt than for chemicals. Under ideal conditions, Bt remains active on the foliage of treated trees for 7-14 days and will kill the caterpillars that ingest it. Unfortunately, conditions are not always ideal and, as a result, larval control with Bt averages below 80 percent. Therefore, when gypsy moth populations are healthy and building, a single application of Bt cannot be consistently relied upon to give population reduction and total nuisance abatement. However, if the user is willing to accept limited defoliation and the associated caterpillars, Bt normally provides foliage protection (70+ percent) adequate to reduce tree stress and related mortality. Plus, it will do this with the highest known degree of safety to human health and the environment of any insecticide currently on the market.

Many formulations of Bt are currently registered by the U. S. Environmental Protection Agency (EPA) for gypsy moth control and are sold under various trade names. FORAY® is one of the more common brands of Bt registered for use on forests and trees.

PENNSYLVANIA DEPARTMENT OF CONSERVATION & NATURAL RESOURCES  
BUREAU OF FORESTRY  
DIVISION OF FOREST PEST MANAGEMENT  
400 Market Street, 6<sup>th</sup> Floor, P.O. Box 8552  
Harrisburg, PA 17105-8552  
(717) 783-2066

## INFORMATION BULLETIN

### PRIVATE RESIDENTIAL GYPSY MOTH SPRAYING

The Pennsylvania Department of Conservation and Natural Resources, Bureau of Forestry, annually conducts an aerial gypsy moth suppression project for private residential landowners throughout Pennsylvania. This program is conducted and cost shared in cooperation with participating counties or other local municipalities and receives partial funding from the USDA Forest Service. To qualify for this program, your property must meet the following requirements, and you must be willing to assume the responsibilities listed.

#### OBJECTIVE

DCNR's sole objective under this program is to prevent gypsy moth caused defoliation in treated forest residential areas from exceeding 30% on 80% or more of the highly favored host trees.

Due to the limitations of the insecticides available and the establishment of gypsy moth throughout Pennsylvania, it is not economically feasible or biologically possible to eradicate gypsy moth from any part of the Commonwealth. In addition, the nuisance problem caused by larval gypsy moth populations may not be reduced to the satisfaction of all landowners, even though the foliage protection objective is met.

#### PROPERTY REQUIREMENTS

**Tree Cover** – Only forested private residential sites containing trees 25 feet or more in height qualify for this program. These sites must have at least 50 percent of the surface area, when viewed from above, covered by the crowns of these trees. Twenty percent or more of this crown cover must be made up of tree species which are highly favored by the gypsy moth. Highly favored species include apple, aspen, basswood, beech, birches (gray, white, and river), boxelder, hawthorn, larch, oaks (all species), willows, and witch hazel. The site must have a dwelling located within or no more than 200 feet from the forest. The spray block to protect this site will be designed to provide treatment to all forested areas within 500 feet of the dwelling and, in so doing, must include at least 23 acres of forest. The spray block will be designed in this manner to facilitate aerial spraying regardless of how large or small the landowner's property actually is. Spray blocks will not be custom designed to accommodate property boundary lines. Neighboring residential properties where all the landowners desire treatment will be combined into a single block whenever possible.

Residential properties with only scattered ornamental trees and shrubs, private uninhabited woodland tracts, or any property with trees that are readily accessible to ground spray equipment do not qualify for this program. Also, areas that contain any nontarget organisms that would be adversely affected by spraying or areas which are unsafe for aerial spraying because of obstructions or terrain will not be considered.

**Egg Mass Density** – The proposed treatment areas must contain at least 250 healthy, current-season gypsy moth egg masses per acre or, if there are less than 250 egg masses per acre, there must be a reasonable expectation that high numbers of gypsy moth larvae will be blown into the area next spring. Only areas within one air mile of a heavily infested ridge qualify in the latter respect.

The landowner can measure egg mass density by randomly establishing 1/40-acre circular plots (radius = 18.6 feet) and counting all of the egg masses including those under rocks and those high in the trees (use binoculars). Multiply the plot count by 40 to get the per-acre equivalent. As many egg masses as possible should be touched to ensure that they are from the current season. Egg masses from previous seasons, while often very viable looking in appearance, will feel soft and mushy to the touch. The current-season egg masses should not be removed and destroyed until after December 1 when the cooperator and DCNR field evaluations will be completed.

Areas that have very small egg masses (less than dime size), regardless of the number, often do not qualify for the program because the gypsy moth population will most likely succumb to natural mortality agents shortly after they emerge in the spring.

#### LANDOWNER RESPONSIBILITIES

**Request for Treatment** – The private residential landowner with qualifying forest and egg mass density must initiate a request for treatment with the program coordinator designated by the cooperating county—no requests can be made directly through DCNR. This person can be reached by calling the county commissioners' office. Requests must be made from June 1 to July 31 annually (some counties extend this deadline to August 30)—a request must be made each

year the landowner experiences a problem. Adjacent landowners within a qualifying area should get together and submit a united request.

**Spray Block Coordinator** – To qualify for treatment, one of the landowners within a proposed spray block must agree to serve as the spray block coordinator (SBC). The SBC will be responsible for distributing notification letters to and collecting landowner assessments (see below) from all spray block residents. With some training from DCNR and the cooperator, the SBC will be used to monitor future gypsy moth population buildups and to initiate future requests for treatments in a timely manner.

**Landowner Assessments** – Many cooperators require the landowners within an approved spray block to pay a per-acre fee which is issued to partially or wholly pay the cooperator's required cost-sharing to DCNR. The total landowner assessment for the block must be paid by the cooperator's deadline or the entire block will be dropped from the program on December 1.

The cooperator will refund a landowner's payment only if the property is dropped from the program because of nonpayment of the total assessment for the block, a neighbor's objection to spraying, or the property does not meet program requirements.

## **INSECTICIDE**

A biological insecticide, *Bacillus thuringiensis* var. *kurstaki*, is the spray material that DCNR will use on private residential lands under this program. DCNR will select the rate of application based upon gypsy moth population density and health with the highest rate used on the heaviest and healthiest populations. Because Bt is a biological insecticide whose effectiveness can be affected by weather conditions during and after application as well as insect population levels, DCNR does not guarantee the degree of control. A second biological insecticide, Gypchek, may be used in cases where Bt is not appropriate because of the presence of lepidopteran species of concern that could be impacted.

## **LANDOWNER'S CHECKLIST**

If you can answer yes to all of these questions, your property can qualify for the Pennsylvania cooperative gypsy moth suppression project.

	YES	NO
Is your county or local municipality cooperating in the cooperative gypsy moth suppression program?	___	___
Does your area contain at least 23 acres of forest with at least 50 percent crown cover made up of at least 20 percent highly favored species?	___	___
Is your house within the forest or no more than 200 feet from it?	___	___
Does your area contain an average of at least 250 healthy egg masses per acre or a reasonable potential for blow-in?	___	___
Have you contacted your neighbors to include their properties in the treatment request?	___	___
Are you or a neighbor willing to serve as a spray block coordinator?	___	___
Are the funds available to pay the entire landowner assessment for the area?	___	___
Was a timely request for treatment made with the program coordinator?	___	___

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES  
BUREAU OF FORESTRY  
DIVISION OF FOREST PEST MANAGEMENT  
400 Market Street, 6<sup>th</sup> Floor  
Harrisburg, PA 17105-8552**

April 2013

## Aerial Applicator Business List

5-1-15

Ag Air LLC  
Thomasville Airport - 2 Airport RD  
Po Box 39  
Thomasville PA 17364-0039  
717-792-1776

Bruce's Flying Service Inc  
5561 Hyw 216 S  
Arlington GA 39813  
229-725-4150

Coastal Air Service Inc  
7424 Coastal Dr  
Panama City FL 32404-4015  
850-769-6117

Dynamic Aviation Group Inc  
1402 Airport Rd  
Bridgewater VA 22812-3534  
540-828-6070

Earl's Spray Service  
2530 W Redstone Rd  
Breckenridge MI 48615  
989-842-5916

Fisher's Ag Service  
4579 Township Rd 126  
Cardington OH 43315-9511  
419-947-1833

Haddock Flying Service Inc  
1111 Gourdin Rd  
Salters SC 29590-3576  
843-687-3630

Helicopter Applicators Inc  
1670 York Rd  
Gettysburg PA 17325  
717-337-1370

Helicopter Minit-Men Inc  
3136 Trabue Rd  
Columbus OH 43204-3663  
614-486-9309

Industrial Helicopters LLC  
1915 Renaud Dr  
Scott LA 70583  
337-233-3356

Joe Brigham Inc DBA/ JBI Helicopter Services  
720 Clough Mill Rd  
Pembroke NH 03275-3814  
603-225-3134

Kritter Cropdusting Inc  
20634 Mt Pony Rd  
Culpeper VA 22701-7644  
703-507-2554

Liqua-Grow Turf Inc  
2624 Baltimore Pike  
Hanover PA 17331-9620  
717-632-0029

M G Carmichael Cropduster  
378 Parkhurst Siding Rd  
Presque Isle ME 04769-5037  
207-764-7209

## Aerial Applicator Business List

5-1-15

Rebecca Lynn Flying Svc Inc  
61 Maple Ln  
Livingston NY 12541  
518-537-7433

Rotor Blade LLC  
3133 Highmarket St  
Georgetown SC 29440-4607  
843-545-9123

Summit Helicopters Inc  
595 Cougar Dr  
Cloverdale VA 24077  
540-992-5500

T & M Aviation Inc  
9 Jimmy Vorhoff Dr  
Abbeville LA 70510  
337-893-9074

Tallman Aerial Spraying John D Tallman  
1701 Peters Mountain Rd  
Dauphin PA 17018  
717-921-2476

Triple F Flying Inc  
912 Austin Trail  
Benton PA 17814-8257  
570-458-5509

Vaughn's Flying Service, Inc  
1750 Speirs Rd  
Caro MI 48723-8200  
989-672-7700