

**PENNSYLVANIA
COOPERATIVE GYPSY MOTH SUPPRESSION PROGRAM
COOPERATOR PARTICIPATION MANUAL
- COUNTY COOPERATOR -**

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I. INTRODUCTION

Purpose

The Pennsylvania Department of Conservation and Natural Resources (DCNR), Bureau of Forestry, Division of Forest Pest Management, in conjunction with the United States Department of Agriculture (USDA) Forest Service, and various county cooperators, annually conducts an aerial spray program for suppression of gypsy moth (*Lymantria dispar*) on public and private forested residential lands and certain other private forested lands at the request of the landowner or land manager. This *Cooperator Participation Manual - County Cooperator* (CP Manual) addresses the procedures to be followed and the obligations of the County Cooperator to participate in the program. Separate manuals for Other Agency and Forest Stewardship Cooperators are available for those portions of the program.

Objective

The objective of this program is to protect targeted forest residential, forest recreational, and other high-use or high-value forested areas from serious damage by limiting tree defoliation caused by gypsy moth larvae to less than 30 percent on 80 percent 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.

Insecticide

DCNR will select the insecticide, rate of application, and dosage to be utilized in the suppression project consistent with DCNR policy and local, state, and federal regulations. DCNR's policy is to utilize only the biological insecticides *Bacillus thuringiensis* var. *kurstaki*, commonly referred to as Bt, or GYPCHEK (the gypsy moth virus insecticide). The application rate and dosage for Bt and GYPCHEK will be determined by DCNR. GYPCHEK is only used when there is a lepidopteran species of concern in or near a proposed treatment block. DCNR does not guarantee that Bt or GYPCHEK will always meet the objectives of the program, and Cooperators and landowners voluntarily participate knowing that defoliation may still occur and that not all larvae will be killed.

Cooperator

DCNR requires that the county government serve as the Cooperator for the purpose of proposing and cost-sharing the treatment of private residential, local government-owned, and certain nonprofit, private organization-owned lands.

Elected officials of an eligible county must enter into a Cooperative Agreement with DCNR, commit funds and resources of the County to the program, and appoint a Gypsy Moth Program Coordinator to perform required duties.

Participation in the program by the County is entirely voluntary. However, DCNR will not conduct a suppression program on private, county, or municipal lands without the participation of a County Cooperator. Separate arrangements or agreements between DCNR and individual municipalities, townships, civic associations, homeowner associations, or private individuals will not be considered under the County Cooperator portion of the suppression program.

Letter of Intent

The responsible officials of a cooperating County must submit a letter of intent (see Appendix K) to the DCNR office in Middletown by July 15 prior to each year of participation, indicating their desire to participate in and, if treatment is necessary, to cost-share the program according to the procedures detailed in this CP Manual.

Cooperator's Cost-Sharing

To participate in the suppression program, the Cooperator must agree to fund a portion of DCNR's total per-acre costs and to pay its share to DCNR by January 15 preceding treatment. This per-acre cost-share will be determined annually by DCNR based upon available state funds, federal funds, and projected program costs. DCNR will announce the per-acre cost-share amount by July 15, the year preceding treatment.

Cooperators commonly fund their cost-share utilizing any combination of the following: County funds, Municipal/Township funds, and/or landowner assessments.

Regardless of how funds are generated, the Cooperator must have its cost-share funding collected by November 15. This is necessary so that DCNR has an accurate acreage figure by early December to include in the Cooperative Agreement with the Cooperator and in the gypsy moth aerial suppression project contract bid specifications. The Cooperator must enter into a Cooperative Agreement with DCNR and prepay its cost-sharing funds to DCNR by January 15.

If acreage must be added to a proposed block by DCNR because an adequate treatment zone was not included or because the block was improperly drawn, this additional acreage must be cost-shared by the Cooperator.

Landowner Assessment

If a Cooperator relies on landowner assessments to generate cost-share funds, the Cooperator must ensure that funds are in-hand by November 15 and all acreage adjustments necessitated by nonpayment are made before December 1. A Cooperator may add an application fee and/or administrative fee to an assessment to recover all or a portion of the Cooperator's costs for participating in the program. These fees are at the discretion of the County and are not a requirement to participate in the program.

A suggested method for assessments is for the Cooperator to bill individual landowners or a designated spray block coordinator as soon as the Cooperator completes its evaluation of the requested treatment area and before the proposal is completed. However, the Cooperator should make it known to the landowner that all spray blocks must be approved by DCNR. Payment of those bills must be required by no later than November 15 at which time each block with an unresolved payment problem must be adjusted or deleted from the list of approved spray blocks. Other landowners within such a block should be afforded the opportunity to make payment for the delinquent landowner.

If the Cooperator chooses to collect the landowner assessment at a later date, the Cooperator is responsible for funding any approved acreage for which there is a nonpayment problem. No

acreage will be deleted or any block modified after December 1 because of nonpayment by a landowner. By December 1, the Cooperator is making a firm commitment to the acreage agreed upon between DCNR and the Cooperator.

Payees whose properties were dropped or not approved based upon the DCNR evaluation must have their payment refunded prior to January 1. A conscientious effort by the Cooperator in evaluating the areas requested for treatment to ensure their compliance with the standards set forth in this manual will negate the necessity for refunds. The Cooperator needs to inform all landowners whether or not their land was approved for treatment.

If Commonwealth of Pennsylvania lands (State Forest, State Park, State Game lands, etc.) are included within a spray block as part of the treatment buffer, the Cooperator must assume the per-acre cost-share for treating those lands. **Do not** bill the Commonwealth or any of its Departments, Agencies or Commissions. Federal lands can not be included in any treatment buffer, and will only be treated at the request of the responsible federal agency. If a Cooperator is charging a Township or Municipality all or a portion of the cost-share funds, the Cooperator must inform the Township or Municipality to not send invoices to the Commonwealth for lands included in a spray block buffer zone.

Cooperative Agreement

All commitments in this manual will be incorporated by reference into a binding Cooperative Agreement between DCNR and the Cooperator in which the Cooperator will consent to fund the acres approved at the designated per-acre cost-sharing rate. This agreement will be sent to the Cooperator in December and must be signed and returned to DCNR by January 15.

Some of the items to be included in the agreement are:

- Acreage approved by DCNR to be treated in the County.
- Cost-share rate and the total funding amount involved.
- Property owner's notification certification.
- Insecticide(s) to be used.
- Public Relations.

Adding/Deleting Acreage

Once the agreement is signed, no acreage may be added except as specified below.

Additional acreage may only be considered for treatment if, through an oversight on the part of DCNR or the Cooperator, proposed qualifying acreage was deleted from or not added to the list of approved spray blocks. If the mistake was the fault of DCNR, the additional acreage may be added to the project if the Cooperator is willing to pay DCNR the designated per-acre cost-share amount for the additional acreage. If the mistake was the fault of the Cooperator, the additional acreage may be treated under DCNR's contract with the aerial applicator if the Cooperator is willing to pay the Commonwealth of Pennsylvania the total cost for the additional acreage.

NO NEW ACREAGE, based on the above situations, may be added after January 15.

No acreage will be deleted unless a landowner submits a written objection form to the Cooperator. Be advised, that landowners submitting very late objection forms could result in an entire spray block being dropped from the project. **It is the responsibility of the Cooperator to notify all landowners within a proposed spray block about the spray program and provide them with the opportunity to object to the spraying. Failure to comply with this requirement will result in the entire block being dropped from the spray program.**

II. PERSONNEL

County Gypsy Moth Program Coordinator

The Cooperator must assign and delegate responsibility to a permanent employee to serve as the Gypsy Moth Program Coordinator for the County. The Coordinator will handle the local workload, coordinate activities with DCNR, and, with the exception of signing the Letter of Intent and the Cooperative Agreement, accomplish all other duties required of the Cooperator as described in this CP Manual. The Cooperator must ensure that the Gypsy Moth Program Coordinator is granted adequate time, help, and resources to develop and implement a quality program and spray block proposal. The Gypsy Moth Program Coordinator must have the ability to conduct necessary field and computer work of the type designated in this manual so that he/she can properly evaluate requests for treatment and submit an accurate proposal to DCNR. DCNR will provide training enabling the Gypsy Moth Program Coordinator to comply with required aspects of the program. All wages, benefits, and expenses for this employee are the responsibility of the Cooperator and/or the Coordinator's employer.

If desired, the Cooperator may contract with a private consultant or other professional entity to serve as Gypsy Moth Program Coordinator. All such expenses involved are the responsibility of the Cooperator.

The Cooperator must provide to DCNR the office telephone number of the County Gypsy Moth Program Coordinator which will be posted on the DCNR Forestry web site.

Spray Block Coordinator

If the County is faced with the potential for large, recurring suppression projects, it is recommended that the Cooperator solicit volunteers to serve as spray block coordinators (SBC) from each of the proposed spray blocks, and, when established, the qualifying treatment areas and permanent spray blocks (see **Qualifying Treatment Areas Database** section). These SBCs can be used to help collect landowner assessments and to distribute public notification letters in the currently proposed spray blocks. In addition, when qualifying treatment areas or permanent spray blocks are established, the SBCs can be used to monitor gypsy moth infestation levels. Training and informational updates for the SBC can be handled through an annual meeting in conjunction with the AFPMS and/or a newsletter prepared by the Cooperator.

DCNR Personnel

Various DCNR employees are involved in the implementation of this program and in providing assistance to the Cooperator and County Gypsy Moth Program Coordinator at different steps in the process. These positions and their roles include:

Program Supervisor

- Development of statewide program
- Preparation of cooperative agreements

- Preparation of aerial application contracts and bid specifications
- Preparation of Biological Evaluations and Environmental Assessments
- Preparation of annual statewide Work, Safety and Security Plans
- Coordination with PEMA and FAA Flight Service

Field Project Supervisor

- Coordination and supervision of statewide program operations

Area Forest Pest Management Specialist (AFPMS)

- Initial and annual update training for the Gypsy Moth Program Coordinator
- Annual assessment of Gypsy Moth Program Coordinator's performance
- Assistance at public meetings
- Assistance with training spray block coordinators
- Interpretation of program procedures
- Evaluation of proposals
- Coordination of the operational phase of the spray project
- Notification of Hypersensitive persons listed in the Pennsylvania Department of Agriculture Pesticide Hypersensitivity Registry

District Forester (DF)

- Relations with local government officials

District Program Leader (DPL)

- Assistance in annual update training for the Gypsy Moth Program Coordinator
- Assistance at public meetings
- Monitoring insect and foliage development
- Monitoring insecticide application
- Coordinates District Block Monitors during aerial spray operations

A list and map showing the appropriate DCNR contacts for the Cooperator are provided in Appendix A.

III. ASSESSING NEED FOR TREATMENT

News Releases

The Cooperator must issue news releases in June or early July to inform the public about the local gypsy moth situation and any proposed suppression project for the following year. If a suppression project is planned, these releases must also be used to inform the public regarding the standards which must be met for a landowner to be included in the project, to solicit requests for treatment, and to advise the public regarding the deadlines for those requests. A combination of available news media including radio, television, and newspaper should be utilized for this purpose.

Public Meeting / Public Notice

It is required that a county public meeting be held if a suppression project was not held the previous year. If a Public Meeting was held in the previous year a Public Notice of Participation in two publications of local circulation may be substituted for a Public Meeting. This process will be conducted by the Cooperator during the summer (June/July) to inform the public of the project as well as afford an opportunity to assess public sentiment with regard to the proposed project. The AFPMS and/or DCNR staff will assist at public meetings. DCNR personnel must be given at least two weeks advance notice of scheduled meetings. In compliance with the federal Americans With Disabilities Act, be sure to include language similar to the following in your meeting announcement:

If you are a person with a disability and you wish to attend the public meeting scheduled for (time/date/location) and you require an auxiliary aid, service, or other accommodation to participate in the proceedings, please contact (name) directly at (telephone number) or through the Pennsylvania AT&T Relay Service at 1-800-654-5984 (TDD) to discuss how (county name) County may accommodate your needs.

The contact person given in the announcement must be a person who can actually make the decision regarding the requested accommodation.

The Cooperator must record any significant issues or concerns that arise at the public meeting or as a result of the Public Notice of Participation and report these along with the date, location, names, and attendance to the DCNR Division of Forest Pest Management main office in Middletown, PA no later than one week after the meeting is held.

Requests for Treatment

The Cooperator must only consider requests for gypsy moth suppression from the landowners, responsible officials, or land managers of private residential, public water supplies, local government-owned, and certain private, nonprofit, organization-owned (e.g., Boy/Girl Scouts, churches, and hunting clubs) lands. **No area may be proposed without such a request.** The Cooperator may not unilaterally designate lands for treatment without the permission of the affected landowners. Requests from tenants of such areas may not be considered unless they have the approval of the landowner. When a request for treatment of private residential land is received, every effort must be made on the part of the Cooperator to include all qualifying residential landowners within the immediate vicinity of the requestor since it is more effective, both biologically and financially, for the individual landowners to be part of a larger treatment block. The Cooperator is encouraged to solicit the cooperation of the requesting landowner in notifying neighbors in the immediate area and to encourage them to request treatment.

Public Request Deadline

The Cooperator must set a reasonable deadline beyond which requests for treatment will no longer be accepted from the public. The deadline must be well publicized and uniformly enforced so that equitable treatment is extended to all residents of the County. The actual date of the deadline is at the discretion of the Cooperator but should be no earlier than July 31 and no later than August 30. The earliest deadline should be established when a large project is anticipated so that adequate time for field evaluation is available. **Cooperators that utilize Landowner Assessments, should set earlier deadlines to accommodate a timely billing process.**

IV. REQUIREMENTS FOR QUALIFYING AREAS

Forest Definition

Any spray block proposed for treatment under this program must contain an area that meets the following definition of susceptible forest:

A susceptible forest is a wooded area 23 acres or more in size where the trees are 25 feet or more in height and 50 percent or more of the surface area, when viewed from above, is covered by the tree crowns (referred to as tree canopy). Twenty percent or more of this crown cover must be made up of tree species highly favored by the gypsy moth.

Any block that does not contain a forested area as defined above will not be accepted for treatment. **There are no exceptions or any waivers to this requirement. Do not submit proposed treatment areas that do not meet this requirement.** Residential or other properties with only scattered ornamental trees and shrubs, or only contain a few large shade trees are not acceptable. However, residential or other qualifying properties, even if they do not contain trees directly around the residence, are acceptable if located 200 feet or less from a susceptible forest. Careful attention to this qualification on the part of the Cooperator will save a considerable amount of time and effort in later evaluations. If the Cooperator has doubts about determining acceptability, he or she should contact the AFPMS before submission of their proposal.

Favored Tree Species

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 witchhazel.
- **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.

Areas That Qualify

The Cooperator's evaluation is the first critical step in determining spray block eligibility. A conscientious effort saves time and expense later by eliminating areas that obviously do not qualify. Failure to make this effort or routinely submitting proposed spray blocks without a field evaluation will result in the Cooperator being prohibited from participation in future projects.

Proposed treatment areas must be in one of the following four categories to be considered:

- **Forested Residential** – Includes communities, roadside strips with dwellings, treatment zones around threatened communities, and individual dwellings.
- **Forested Recreational (Publicly-Owned)** – Includes developed parks, picnic areas, and roadside rest areas.
- **Forested Special-Use (Noncommercial)** – Includes historic and natural sites, private nonprofit campgrounds and picnic groves, private hunting and fishing clubs (around clubhouse), and public or university-owned experimental forests and areas where sizable investments have already been made for reforestation or production of timber. Such timber production areas will only be included if they meet the standards currently in place for the treatment of State Forest lands. Private forest lands having a Forest Stewardship Plan are covered under a different program and participation manual. Please contact the DCNR Bureau of Forestry for information about this program.
- **Public Water Supplies** – Includes only a treatment area of 500 feet or less around an open municipal water supply (reservoir or spring) — no feeder stream spraying will be included.

Program Intent

The intent of this program is to provide forest protection to any permanent or seasonal residence and other qualifying areas. Commercial properties, even if publicly owned, are excluded from the program. This includes a commercial campground, golf course, ski slope, resort, and hotels/motels, etc. An exception would be a commercial residential operation, such as an apartment complex or mobile home park that qualifies as a residential area. However, a park or forested common area provided for the tenants of such areas by the operators would not qualify and would not be treated unless it fell into the 500-foot treatment zone provided around the forested residential area (see **Treatment Area** section).

A seasonal dwelling is defined as a permanently located structure which is used periodically for housing separate from one's primary residence and which is owned individually or jointly for the use of the owner(s) and is not leased or rented to others. It must be located and constructed in such a manner that it cannot be readily moved or dismantled. Travel trailers, truck campers, tents, and similar devices are not considered seasonal dwellings under this program. Dilapidated structures in an obvious state of disrepair, even though occasionally used for housing, do not qualify for treatment. Time-sharing facilities, whether single or multiunit, owned or rented, are not eligible because of their commercial nature. Seasonal commercial rental properties are also ineligible.

Areas Excluded

The following areas will not be considered for treatment:

- **Uninhabited and/or Undeveloped Forestland** – Includes private, uninhabited woodland tracts and any other undeveloped or uninhabited forestland including scenic areas and areas with trails that do not fall into the forested special-use category described above. DCNR will not consider such treatment even if the property owner offers to pay for the spraying.

- **Yard and Street Trees** – Includes villages, communities, or other areas where the trees are scattered and accessible to treatment by ground-spraying equipment or by non-spraying methods. Treatment of these trees is the responsibility of the property owner. Such areas and areas containing trees planted primarily for shade or ornamental purposes are not considered forested unless they meet the definition of a susceptible forest provided above.
- **Collapsing Gypsy Moth Populations** – Includes areas where biological collapse of the insect population is imminent. Such areas will not suffer serious tree defoliation. See the **Population Health** section for details.
- **Objectors** – Includes any property where the property owner is opposed to having the property treated with an insecticide. Details on identifying objectors and the method for deleting such property are provided in the **Objectors to Spraying** section.
- **Safety Risks** – Includes any area where the physical risks to conducting a safe aerial spraying operation are deemed unacceptable either by DCNR or the Cooperator.
- **Non-Target Effects** – Includes any area where the effect of spraying non-target organisms or any other ecosystem component is determined to be unacceptable by DCNR or other responsible government agencies. All proposed treatment blocks are reviewed for environmental concerns by the Pennsylvania Natural Heritage Program. Treatment blocks may be redrawn, deleted, or be treated with the gypsy moth virus insecticide, GYPCHEK, based on the site-specific environmental review and recommendations of the responsible agency.
- **Label or Statute Restriction** – Includes any area where such spraying is precluded by insecticide label restrictions or any applicable federal or Commonwealth of Pennsylvania statutes.

Qualifying Treatment Areas Database

As time permits, the AFPMS, in cooperation with the Cooperator, will identify residential, recreational, or special-use areas that could potentially qualify as treatment areas within the Cooperator's geographical area of responsibility. This information can be gathered from historical records, updated with current program data, and supplemented with surveys as time permits. Whenever possible, a permanent spray block can be drawn for each of these potential treatment areas according to the standards given in this manual. This database will be valuable for handling treatment requests in future projects and will minimize the time required of the Cooperator and DCNR for future evaluation work.

V. BIOLOGICAL ASSESSMENT

Egg Mass Numbers

Experience has shown that 250 healthy gypsy moth egg masses per acre is the threshold at which noticeable defoliation begins to appear. Therefore, for a residential or recreational area to qualify for treatment, there must be either a minimum of 250 healthy (medium to large size) gypsy moth egg masses per acre or, if less than 250 healthy egg masses per acre, a reasonable expectation that high numbers of larvae will be blown into the area. Areas in valleys within one mile of heavily infested ridges may qualify in the latter case. Justification, including an assessment of populations on the ridges, must be provided with the proposal.

Be aware that initial outbreak populations with large and healthy egg masses may not be adequately controlled with Bt.

Other qualifying areas, including, but not limited to, publicly owned timber management areas and public water supplies, must have a minimum of 500 healthy egg masses per acre or a severe blow-in potential (subject to the same justification procedure as above).

Blow-In Potential

If there is the potential for significant dispersal of newly hatched caterpillars from nearby heavily infested areas into the proposed spray block, a justification must be included with the proposal. This justification must be supported with current year's defoliation data and/or egg mass counts made in the nearby area. Sources of wind-dispersed larvae are generally recognized as being heavy, building populations on higher elevations within one air mile of the proposed block.

New vs. Old Egg Masses

It is very important that the estimate of egg mass densities be based upon new, current-year egg masses only. In-the-field training for the Cooperator is very helpful in developing the skill necessary to make this determination. Being familiar with the previous season's population density, having knowledge of any overwinter mortality of last year's eggs, and touching egg masses are essential in order to make this assessment. Touch is perhaps the most definitive technique for separating old from new egg masses. When evaluating an area that contains a two-year-old or older infestation, as many reachable egg masses as possible must be touched and the ratio between old and new masses determined. This ratio can then be applied to the egg masses which are observable but out of reach, thereby providing an accurate estimate of new egg masses for the proposed blocks.

Population Health

Although gypsy moth population health can be determined accurately only through laboratory analysis of the eggs, the Cooperator can make a fair assessment of population health by becoming familiar with the biology and population dynamics of the insect. In-the-field training with the AFPMS is very helpful in this respect. When the vast majority of new egg masses observed are dime size or smaller, chances are the population is stressed and subject to collapse the following year from a naturally occurring virus. If this situation is observed, note it, and include a comment with your proposal. Normally, healthy building or static populations will have egg masses which range in size from nickel to quarter or larger. As a general rule, the larger the egg mass the healthier the population.

Survey Data Plots

One-fortieth-acre circular plots (radius = 18.6 feet) placed at random within the proposed spray block must be used by the Cooperator to make a reasonably accurate estimate of the egg mass population density, egg mass size, and tree species composition. As a training aid when first starting to conduct surveys, the Cooperator must, with instruction from the AFPMS, lay out 1/40-acre plots using a center stake and a pre-measured rope, chain, or tape. After gaining experience, the evaluator can estimate the plot size and only have to recalibrate his or her mental gauge at the beginning of each season. Measuring the distance of the surveyor's steps is another method for measuring the radius of the survey plot (e.g. two steps equal five feet).

Use the following guideline to determine the number of survey plots to be used in each potential spray block:

BLOCK SIZE (ACRES)	NUMBER OF PLOTS
23-50	3
51-100	4
101-200	6
Over 200 acres, add one plot for each 100 acres	

Only the current year's egg masses within the plot are counted. Use of binoculars for egg masses high in the trees is required. The 1/40-acre plot count is multiplied by 40 to give a per-acre estimate. All plots are then averaged, and the appropriate egg mass range for the entire block is calculated. If the egg masses are not evenly distributed throughout the proposed spray block, make a note as to where heavy concentrations of egg masses are located. These "hot spots" must be averaged out over the entire block and considered along with the plot data in determining the appropriate egg mass range for the block.

Estimate the percentages of white oak, chestnut oak, red oak, and other highly favored tree species within the plot, and record this information (e.g. 35% white oak and 10% chestnut oak).

VI. SPRAY BLOCKS

The following information is used to design spray blocks for inclusion in the proposal submitted by the Cooperator to DCNR. By following these instructions, the Cooperator can ensure that the proposal submitted has been prepared using the correct established procedures. This will help minimize the workload on Cooperator and DCNR personnel and will maximize the service provided to the public. Training is available by contacting the appropriate AFPMS listed in Appendix A. The Cooperator should not submit proposed treatment areas that do not meet the established criteria.

Spray Block Submission

All spray blocks must be designed in digital form using the current DCNR approved software. Computer hardware is the responsibility of the Cooperator.

Maps and Aerial Photographs

DCNR will provide digital aerial photographs or topographic maps for use by the Cooperator. Likewise, the Cooperator must make available for use on the project any digital geographical information which it has, such as tax maps, 911 maps, and aerial photographs. DCNR utilizes a standardized GIS coordinate system that may require re-projection of cooperator data. The appropriate AFPMS will assist the Cooperator in utilizing this type of information.

Treatment Area

To provide a treatment area around a dwelling or other eligible facility, a minimum 500 foot treatment buffer of forest area must be provided. For example, a spray block containing 23 forested acres provides protection for a single dwelling on a solidly forested site for a distance of 500 feet on all sides (a 1000' x 1000' square-shaped block). However, not all dwellings or other

facilities impacted by the gypsy moth are set in the middle of a forest, or, for that matter, are immediately adjacent to the forest. Protection can be provided in such cases subject to the following exceptions:

- If the dwelling or facility is located more than 200 feet from the forest, it does not qualify for the program.
- If the dwelling is within 200 feet of the forest, but not located in the forested area, the treatment buffer may be expanded to beyond 500 feet to meet the 23 acre minimum block size.
- Proposed Treatment Areas should not fall within 250 feet of any public/private school or commercial properties, to include, but not limited to, hotels/motels, shopping centers, industrial facilities, golf courses, etc. The purpose of this exclusion is to minimize spray-drift from reaching unsuspecting people in high use areas. The AFPMS will work with the Cooperator to design a logistically appropriate spray block on a case-by-case basis when schools and commercial properties necessitate a no-spray exclusion zone.

Commonwealth of Pennsylvania lands (State Forest, State Park, State Gameland, etc.) can be included to provide an adequate treatment area around the facility being protected. However, the Cooperator must assume the share of costs for these lands—do not send a bill to the Commonwealth. Federal lands can not be included in the treatment area unless approved by the responsible federal agency.

New Dwellings

New dwellings may be accurately located using aerial photos or GPS and included in the proposal.

Size

Because of the economics and application limitations involved in the aerial application of insecticides, spray blocks proposed for this program must contain at least 23 acres of forest. Do not submit proposed spray blocks smaller than 23 acres. There is no upper limit on block size as long as the entire proposed block meets the criteria set-forth in this manual.

Hazards to Aerial Navigation

Although the Cooperator is not required to do a detailed survey of the proposed treatment area for the presence of hazards to aerial navigation (e.g., towers, antennas, power lines, and similar structures), any such hazard observed should be located and noted if observed during the course of surveying the block. The Cooperator should inform requesting landowners living near or under power lines and towers that it will not be possible to safely treat these areas.

Location

Due to the expense and additional logistics involved in treating isolated spray blocks, a single block of 50 acres or less located more than five air miles from other spray blocks may not qualify for the program. However, the Cooperator should check with neighboring Cooperators and the AFPMS before dropping an isolated block (it is possible that they have proposed blocks in the vicinity).

Block Access

DCNR must have ground access to all blocks for evaluation and other activities. If such access is unduly restricted by a gate or other means, the site does not qualify for the program. If a residential community has restricted access (gate, security, etc), the Cooperator must make arrangements with the community for DCNR to have access to the site for evaluation before,

during and after spray operations. If DCNR personnel are denied access to the block during spray operations, the block will not be sprayed until access is granted.

Drawing the Block

The most efficient way for a spray aircraft to treat an area is by flying parallel swath lines. Therefore, spray blocks (i.e., polygons) should be drawn, as much as possible, in a square or rectangular shape to encompass the area to be treated (i.e. spray block boundaries should have straight lines, except as noted below). Insofar as possible, blocks must be drawn following the forest boundary. Large, open areas greater than 5 acres in size should not be included in the block. Any open areas included within the block boundaries will be counted as sprayable acres. Large open bodies of water can not be sprayed and must be excluded from the proposed spray block.

Readily identifiable physical features, such as roads, pipelines, and streams, may be used for one or two sides of the block if doing so provides adequate buffer for the property being protected and does not compromise the ability of the pilot to effectively spray the block. Roadside strip blocks may be drawn following the contour of the road.

DCNR will redraw any Cooperator-proposed spray block when, in its opinion, such redrawing will facilitate aerial application or improve property protection even though this may add acres to the Cooperator's proposal. **Any block that is redrawn should be reviewed by the Cooperator and the AFPMS to determine if the correct area is being treated; and it is the responsibility of the Cooperator to ensure that all qualifying landowners requesting treatment are included in the final proposed spray block.**

Priority Assignment

Each spray block must be assigned the single highest priority possible from the three choices (A, B, or C) listed below. For example, a spray block which contains a public water supply and several houses and contains at least 250 healthy egg masses per acre would be a Priority A block. Funding or logistical limitations may require a prioritization of blocks to be treated.

- A. Multiple-dwelling forested residential area, publicly owned or nonprofit recreational area, or community buffer zone which currently contains at least 250 healthy egg masses per acre or a high potential for larval blow-in.
- B. Single-dwelling forested residential area which has either a minimum of 250 healthy egg masses per acre or a high potential for larval blow-in.
- C. Other qualifying special-use or public water supply areas which did not have a severe gypsy moth problem the previous year, but which currently contains at least 500 healthy egg masses per acre or a high potential for larval blow-in.

Numbering the Blocks

All blocks will be numbered by the current DCNR approved software and will be renumbered by DCNR when they are combined into the statewide project. This designation will be the final operational identifier.

Calculating Acreage

The current DCNR approved software will calculate and record the acreage for each proposed spray block. Final acreages are calculated by **rounding the acreage in each block to the nearest whole acre** (e.g. 99.876 acres is rounded up to 100 acres; and 99.375 acres is

rounded down to 99 acres). The total proposed spray acreage for the County will then be determined by totaling the sum of each spray block.

VII. SUBMITTING THE PROPOSAL

The Cooperator must work closely with the AFPMS throughout the project development period. The Cooperator must submit specific items regarding its spray program proposal to the appropriate AFPMS by the dates specified below. **DCNR will return all or any portion of a proposal that is not properly prepared or is incomplete.** Additional time to correct a proposal must be negotiated with, and is at the discretion of, the responsible AFPMS.

October 1: Initial Proposal Submission

- Submit the following to the AFPMS responsible for your area (see map and list in Appendix A):

- A copy of the proposal shapefile
- A letter or e-mail from the Cooperator indicating:

Total number of acres proposed
Total number of blocks proposed

A statement as to whether or not any municipal water supplies are proposed for treatment. Indicate the block number and the name of the water authority.

If the Cooperator is proposing treatment around an open municipal water supply, it must include a copy of a letter from the water authority requesting the treatment. This letter must include acceptance of the possibility of a small amount of insecticide drift into the water. Only the biological insecticides Bt or GYPCHEK will be used for such treatment.

Note: Cooperators utilizing Landowner Assessment should adjust due dates appropriately to ensure timely submissions of proposals to DCNR.

November 1: Final Proposal Submission

Submit the following to the AFPMS responsible for your area (see map and list in Appendix A) no later than November 1:

- A copy of the final proposal shapefile
- A letter or e-mail from the Cooperator indicating:

Final total number of acres proposed
Final total number of blocks proposed

VIII. PROPERTY OWNER NOTIFICATION

Unapproved Areas

The Cooperator must notify property owners who requested treatment but whose property did not meet the qualifications for an approved spray block after the area was surveyed during the summer months. This notification must be done before January 1 so that the property owner has time to make arrangements with a private applicator. DCNR will provide the Cooperator with a list of aerial applicators licensed and willing to spray for gypsy moth in Pennsylvania.

This information is posted on the DCNR web site:

http://www.dcnr.state.pa.us/forestry/gypsymoth/gypsymoth_applicators.aspx

The Cooperator can provide this information to landowners requesting this type of assistance. Any landowner assessment fees which the property owner paid must be returned at the time of notification.

Approved Areas

It is the responsibility of the Cooperator to notify the public in their county about the gypsy moth spray program.

The Cooperator must individually notify all residents and landowners within designated spray block boundaries of the impending spraying. These notifications must be conducted via U.S. Mail, Bulk Mail, personal delivery service, or electronic mail by February 28.

Cooperators may also utilize Home Owner/Civic Association Block Coordinators, Spray Block Coordinators, and Townships to assist with notifying residents and landowners within treatment areas. A listing of notified individuals must be maintained by the Cooperator and provided to DCNR. **All residents and landowners within designated spray blocks must be given the opportunity to object to the spray program.**

Failure to notify or make a reasonable attempt to notify all residents and landowners within a spray block, or to ignore an objector's no-spray request, could possibly make the Cooperator liable for any subsequent legal action on the part of the property owner. **If DCNR discovers that notifications have not been made, the Cooperative Agreement will be cancelled and spray operations in the county delayed or cancelled.**

A sample text of a notification letter is in Appendix F. In addition, Appendix D contains information explaining the spray program. The letter will contain instructions for property owners to have their property deleted from spraying (see Objector to Spraying Form in Appendix J). The Cooperator must send a sample copy of the notification letter to the DCNR Division of Forest Pest Management office in Middletown, PA and to the AFPMS.

Public Notice

At a minimum, Public Notice(s) must be placed in two publications of local circulation between April 1 and 15 by the County Cooperator to notify the general public in the County of the impending suppression activities.

Sample text of a public notice is in Appendix G. All the information contained in the sample is required, but the Cooperator may add any additional information deemed pertinent. The Cooperator must send a copy of the public notice(s) to the DCNR Division of Forest Pest Management main office in Middletown, PA and to the AFPMS.

Record of Notification – The Cooperator must retain records of the notification process, including any property owner mailing list generated, for three years and make this information available for inspection by DCNR.

Insecticide Leaflet

Informational leaflets on Bt and GYPCHEK will be provided by DCNR to the Cooperator upon request. Sufficient quantities will be provided to include one with each notification letter. Samples of the leaflets are included in Appendices B and C.

IX. OBJECTORS TO SPRAYING

Verifying Objectors

After receiving notification by the County, any landowner who files an objection-to-spraying request must be contacted by the Cooperator to determine the reason for the objection and an attempt to resolve the objection should be made by the Cooperator. If the objection is not resolved, the Cooperator must immediately notify the appropriate AFPMS of the exact location of the objector's property. As long as the objection is not related to paying for the spraying (see **Objections to Paying** section below), the spray block will be adjusted by DCNR to minimize the effect on other property owners (see next section—**Objector Buffers**).

Objector Buffers

Property owners who object to spraying may elect to have their property deleted from a spray block. DCNR will provide no more than a 250 foot no-spray zone around the objecting landowner's property. The exact size and shape of the no-spray zone will be determined by DCNR on a case-by-case basis with operational logistics and safety determining the final exclusion zone. Every effort will be made to limit the amount of insecticide drift on to the objecting landowner's property. Also, ample notification of the application time will be supplied to the objecting landowner. The landowner must return a completed and signed Objector to Spraying Form to the Cooperator within 10 days of receipt. The Cooperator must supply a GIS polygon or GPS coordinates of the objector's property boundaries. The Objector to Spraying Form is included in Appendix J and must be submitted to the AFPMS by March 15 along with the GIS polygon or GPS coordinates.

Persons Impacted by Objectors

DCNR reserves the right to alter or delete an affected spray block from the Cooperator's approved proposal if too many objectors occur within a proposed spray block. When this situation occurs, notification must be provided by the Cooperator to any landowners who are dropped from an approved spray block because of an objection to spraying. Please note, if an objector is made known to DCNR at too late of a date, the entire spray block may be deleted from the program.

Objections to Paying

Refusal to pay for the spraying is not an acceptable objection to treat a proposed spray block. This issue must be resolved by the Cooperator no later than December 1 so that the acreage is not included in the Cooperative Agreement or the Aerial Spray Contract Bid Specifications. DCNR will not drop or adjust multi-landowner spray blocks after December 1 for reason of landowner nonpayment.

X. PUBLIC RELATIONS

News Releases

During March and April, in an effort to promote good public relations, the Cooperator must seek cooperation from the local news media in releasing information on the program and areas proposed for spraying. During the actual spraying, daily news releases or notifications via county web sites are recommended to advise the public of spraying schedules. DCNR will also maintain a gypsy moth suppression program web page indicating the counties to be treated, currently being treated, and counties where spraying has been completed.

School Advisories

By April 15 the Cooperator must send a written notification to all public school districts and private primary, elementary, and secondary schools located within its area of responsibility of the impending spraying. School officials must be made aware of the approximate dates and time of spraying, the insecticide to be used, precautions to be followed to avoid exposing students to spray (i.e., scheduling of field trips, schoolyard activities, and students waiting for buses), and action to be taken if exposure to the insecticide does occur. The school officials must also be provided with the names and telephone numbers of contact persons at the appropriate forest district office (see sample advisory in Appendix H). Information on school locations and the contacts made by the Cooperator must be forwarded to the AFPMS and the DCNR Division of Forest Pest Management main office in Middletown, PA.

Local Government Officials' Advisory

By April 15 the Cooperator must notify all local government (county, township, city, borough, or town) officials within its area of responsibility, and within whose jurisdiction spraying will be conducted, of the impending spraying. This notification must include the approximate date of spraying and the name of the insecticide to be used. The notification may be by written correspondence or electronic mail (see sample advisory in Appendix I). Copies of this advisory must be provided to the AFPMS and the DCNR Division of Forest Pest Management main office.

XI. PROGRAM DEADLINES

The following deadlines **must** be met by the Cooperator and DCNR to ensure the success of the program; to allow DCNR sufficient time to prepare an Environmental Assessment; and to satisfy other federal and state regulations. Any deviations from these deadlines by the Cooperator must be approved, in advance, by the responsible AFPMS. Such approval does not change subsequent deadlines.

June-July	County Cooperator conducts public information program through news media and, if necessary, holds public meeting.
July 15	Commonwealth of PA announces County per-acre cost share. Letter of intent due from County Cooperator to FPM main office.
July-November 15	Cooperator performs field work, delineates proposed spray block boundaries, and prepares a formal suppression program proposal.
October 1	County Cooperator submits proposed acres to FPM main office and AFPMS. County Cooperator begins collection of landowner assessments.
November 1	County Cooperator submits final proposal to AFPMS
November 15	AFPMS review of County proposals completed County Cooperator completes collection of landowner assessments.
December 1	County Cooperator has completed acreage adjustments for all blocks because of nonpayment of landowner assessments.
December 20	DCNR sends Cooperative Agreement to Cooperator for signing; DCNR sends Invoice to Cooperator for payment. Copies to be sent to County Gypsy Moth Coordinator.
January 1	County Cooperator notifies property owners who requested a survey and did not qualify and return any landowner assessments paid.
January 15	Signed Cooperative Agreement returned from Cooperator to FPM main office. County Cooperator cost-share payments due to FPM main office.
December 1 - February 28	Notification letters mailed or personal notifications conducted by County Cooperator to property owners within approved spray blocks. Listing of notified individuals sent to FPM main office and AFPMS.
March 15	Provide Objectors to Spraying Forms and GIS coordinates to AFPMS
April 1 to 15	Public Notice; copy sent to FPM main office and AFPMS.
April	County Cooperator publicizes the impending spraying through press releases, web site, etc.
April 15	School advisories issued by County Cooperator and copies sent to AFPMS and FPM main office. Local government officials' advisory issued by County Cooperator and copies sent to FPM main office.
Late April-Early June	Gypsy Moth Suppression Program Air Operations (spraying).

XII. APPENDICES

List of Appendices

Appendix A.....	DCNR Contact Persons
Appendix B.....	Bt Insecticide Information Bulletin
Appendix C	Gypchek Insecticide Information Bulletin
Appendix D	Private Residential Gypsy Moth Spraying Program Information Bulletin
Appendix E.....	Checklist for Determining Spray Block Eligibility
Appendix F.....	Individual Landowner Notification Letter Sample
Appendix G	Public Notice Sample
Appendix H	School Advisory Letter Sample
Appendix I.....	Local Government Officials Advisory Letter Sample
Appendix J	Objector to Spraying Form
Appendix K.....	Cooperator Sample Letter of Intent