



## ARLINGTON COUNTY, VIRGINIA

<p><b>County Board Agenda Item Meeting of January 26, 2008</b></p>
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**DATE:** January 4, 2008

**SUBJECT:** Adopt the plan for Arlington County's 2008 Gypsy Moth Suppression Program that includes aerial spraying of 791 heavily infested acres with the insecticide *B.t. (Bacillus thuringiensis)* through participation in the Virginia Department of Agriculture and Consumer Services' (VDACS) Cooperative Gypsy Moth Suppression Program.

**C. M. RECOMMENDATION:**

1. Approve the plan as proposed through the Virginia Department of Agriculture and Consumer Services' (VDACS) 2008 Cooperative Gypsy Moth Suppression Program to aerially spray 791 heavily infested acres in Arlington with the insecticide *B.t.* to prevent significant defoliation of trees by gypsy moths.
2. Establish a treatment program based upon voluntary participation that permits property owners and/or tenants within proposed spray areas to have their properties excluded from treatment.
3. Establish a buffer zone of 200 feet (the maximum size for rotary winged aircraft permitted by VDACS Aerial Treatment Guidelines) that is not sprayed from the air around excluded/nonparticipating properties.
4. Spray properties within buffer zones surrounding nonparticipating households from the ground with *B.t.* whenever possible.

**ISSUES:** This is the first time since 2001 that spraying for gypsy moths is being proposed, due to a resurgence of infestation levels. The proposal follows the same procedures that have been used in past spray efforts since the program began in 1985. The biological insecticide proposed for treatment (*B.t.*) has been used in 13 previous spray efforts in Arlington, and is the only material used since 1991.

**SUMMARY:** Gypsy moth infestation levels in Arlington have risen dramatically during the past year. After remaining at very low levels since 2001 (the last time that spraying was necessary), the gypsy moth caterpillar population reached outbreak proportions in some northern portions of the County during the spring of 2007, with some isolated defoliation of trees along Military Road. This increase was also experienced throughout many parts of Northern Virginia and Maryland. In order to minimize the risk of significant damage to trees, staff is recommending the aerial application (by helicopter) of the insecticide *B.t.* over 2 areas, totaling

<p>County Manager: _____</p>
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<p>County Attorney: _____</p>
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<p>Staff: Jamie Bartalon, Department of Parks, Recreation and Cultural Resources</p>
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791 acres during the spring of 2008 (**Attachment I**). If approved, treatment would be contracted and administered through the VDACS' Cooperative Gypsy Moth Suppression Program. Fairfax County, Prince William County and the City of Alexandria are also proposing gypsy moth aerial treatments this spring.

Staff also recommends that, as in the past, participation in the program should be voluntary and a 200 foot "buffer zone" that is not sprayed from the air should surround the properties of nonparticipating households. Neighboring properties within this buffer zone should then be sprayed from the ground with *B.t.*

**BACKGROUND:** Gypsy moth caterpillars are leaf-eating insects that attack a wide variety of trees, but are especially attracted to oaks. When not controlled, gypsy moth populations can build to extremely high levels, and trees over large areas may be stripped of their leaves in the spring. After persisting for many years at very low population levels, gypsy moth caterpillar infestations increased dramatically in Northern Virginia and Maryland last year.

Gypsy moth suppression efforts throughout Virginia are part of a cooperative program involving local governments, the Virginia Department of Agriculture and Consumer Services (VDACS), and the U.S. Forest Service. In mid-November, Arlington County submitted a Treatment Proposal to VDACS for the aerial application of the insecticide *B.t.* over 2 areas, totaling 791 acres during the spring of 2008. If approved, VDACS will agree to cost-share 50/50 on the cost of aerial spraying, contract for an aerial applicator, and provide technical assistance during aerial spray operations. The actual cost of the state's spray contract for 2008 will not be known until February or March. At this time staff estimates that the cost of aerial spraying will be approximately \$40 per acre (based upon past prices). Arlington County will receive an invoice for its portion (50%) of the cost of aerial spraying in June.

Based upon the above information, the expected cost to Arlington County for gypsy moth aerial spraying in FY 2008 is estimated to be \$15,820 (791 acres X \$40/acre X 50%). Cost-share funding is not available for spraying from the ground. If such spraying (from the ground) of properties surrounding nonparticipants is approved as recommended, the estimated cost will be \$6,000. The estimated combined cost to Arlington County for aerial spraying and spraying from the ground would then be \$21,820 in 2008.

In addition to gypsy moth suppression materials and techniques, Arlington County must also notify VDACS of its policy regarding voluntary or mandatory participation in the treatment program and the size of buffer zones surrounding nonparticipants (if a voluntary program is adopted). The following recommendations are consistent with policies employed since Arlington's gypsy moth treatment program began in 1985:

1. Arlington County's treatment program should remain voluntary. The properties of residents wishing not to participate in the program should be excluded from aerial treatment.
2. A buffer zone of 200 feet should surround each nonparticipant's property. This is the maximum size buffer zone for rotary winged aircraft permitted by the VDACS Aerial Treatment Guidelines. In order to avoid drift of insecticide onto the nonparticipant's property, neighboring properties within such buffer zones would not be sprayed from the air.

3. Excluded properties within buffer zones should be sprayed from the ground whenever possible. If the rate of nonparticipation is similar to past years, approximately 30 to 40 acres would require spraying from the ground.

**DISCUSSION:** Arlington County uses an Integrated Pest Management (I.P.M.) approach to gypsy moth suppression. This requires monitoring of the pest's population to determine what type of treatment (if any) is necessary in a particular area. Such a program uses insecticides only when the infestation is so severe that trees would otherwise be damaged. Since 1991, the biological insecticide *B.t.* has been used for all County gypsy moth spray programs in Arlington. Between 1986 and 1990, the insecticide Dimilin was also used to treat extremely heavy infestations.

**Attachment II** lists the number of acres sprayed and the types of insecticides used since Arlington County began spraying for gypsy moths in 1985. This year is the first time since the spring of 2001 that aerial spraying is being proposed in Arlington to prevent significant defoliation of trees.

Monitoring of gypsy moth infestation levels is accomplished by counting the number of gypsy moth egg masses at survey sites in susceptible areas throughout the County. Egg mass surveys are conducted from late July until mid-November. By averaging the number of egg masses found at each site, staff determines the number of egg masses per acre in a particular area. When egg mass density exceeds 250 egg masses per acre, trees may be in danger and that area is proposed for treatment. A density of 250 egg masses per acre is also required by VDACS for residential areas to qualify for aerial treatment through the State's Cooperative Gypsy Moth Suppression Program.

*Proposed Treatment Areas in 2008* - Based upon the results of egg mass surveys conducted throughout the County during the fall, staff is proposing to spray 2 areas, totaling 791 acres, with the insecticide *B.t.* in the spring of 2008. The areas proposed for treatment are located north of Lee Highway (Route 29) and east of North Glebe Road (Route 120) as shown in **Attachment I**. Infestation levels in the proposed areas will exceed the 250 egg mass per acre treatment threshold established by VDACS. The average egg mass density in Area 1 is 2,526 egg masses per acre, and in Area 2 the average is 2,410 egg masses per acre.

Although gypsy moth egg masses were found in "spotty" locations throughout Arlington, the 2 areas proposed for treatment are the only locations that have consistently high numbers and qualify for treatment under Virginia Cooperative Gypsy Moth Suppression Program guidelines. As in the past, spraying of the proposed area would occur by helicopter in late April or early May, after gypsy moth caterpillars hatch from their eggs, but before they grow too large and resistant to *B.t.*

*Other Jurisdictions* – Neighboring jurisdictions are also experiencing heavy gypsy moth infestation levels and have proposed aerial spraying through the Virginia Department of Agriculture and Consumer Services Cooperative Gypsy Moth Suppression Program. The following is a summary of acreage proposed for spraying during the spring of 2008:

Arlington County	791 acres
Alexandria	106 acres

Fairfax County	3,533 acres
Prince William County	3,158 acres

*The Insecticide B.t.* - The insecticide recommended for use, *B.t.*, is made from a naturally occurring bacterium (*Bacillus thuringiensis*) that is commonly found in soils. Though *B.t.* is effective against gypsy moths, it is not harmful to people, pets or wildlife (including most insects). Only leaf-eating caterpillars that are present at the time of application are susceptible to *B.t.* It is the insecticide most commonly used in Arlington's gypsy moth control program since treatments began in 1985. *B.t.* is sprayed by helicopter when gypsy moth caterpillars are very young and susceptible (usually late April or early May). It exerts its effects after the young gypsy moth caterpillars eat leaves that have been coated by the spray. *B.t.* decomposes naturally within several days after application, and leaves no residuals in the environment.

*Public Comment* – The deadline for written public comment to VDACS regarding gypsy moth treatment in Virginia was December 15, 2007 (as set by VDACS). Comments received by that time will be addressed in the VDACS 2008 Gypsy Moth Suppression Environmental Assessment. A notice was placed in a local newspaper announcing a December 12 public meeting to discuss Arlington County's 2008 Gypsy Moth Suppression proposal, and giving the deadline for public comment to VDACS. A press release was also issued and information (including the meeting announcement and a map of the proposed treatment areas) was e-mailed to residents of affected civic associations and other residents who volunteered to help distribute information to their neighbors. One written comment was received regarding Arlington's 2008 Gypsy Moth Suppression Proposal to VDACS. The comment "supported the program as proposed".

*Public Notification* - The public notification process prior to gypsy moth spraying includes individual notification letters mailed to residents living in or near the spray area, as well as notification of the general public through the news media. During mid-February, letters will be sent to both property owners and tenants residing within the treatment area. The letter will describe the gypsy moth problem, the necessity to spray and the insecticide to be used. It will also announce a public meeting/open house where staff will answer questions and discuss details of the program. If participation in the program is voluntary (as it has been in the past), the letter will also outline the procedure for having properties excluded from the spray program, and the deadline for doing so (March 15). A similar letter will be sent to owners and tenants residing within 200 feet of the spray area, stating that aerial spraying will be occurring nearby.

A second set of letters will be mailed to the properties described above in mid-April to remind residents that aerial spraying will occur within the next several weeks. The letters will also give more detail about spray operations, what to expect, any precautions that should be taken, and steps to monitor and help control remaining gypsy moth caterpillars after the spray. At this time, residents are also notified of any change in their property's spray status (as may occur if they or a nearby neighbor have requested to have their property excluded from the spray program).

Press releases, radio announcements and updates on Arlington County's Government Cable TV station and the County's web site will also be used to inform the general public of treatment plans and schedules.

*Voluntary Participation* - Staff recommends that participation in the Cooperative Gypsy Moth Suppression Program should be voluntary, as it has been in all of Arlington's previous gypsy moth control efforts. In a voluntary program, property owners and/or tenants may arrange to have their property excluded from the spray program. In such cases, staff also recommends that a 200-foot buffer zone should be established on all sides of the excluded property. Aerial spraying would not take place within this 200-foot buffer.

The 200-foot buffer zone surrounding nonparticipating households serves to minimize the chance of insecticide drifting onto the excluded property. However, this often raises concerns among neighboring households who want to have their property sprayed, but have been excluded from the program due to their neighbor's request for nonparticipation. In order to provide gypsy moth treatments for properties within buffer zones, staff recommends spraying the same insecticide (*B.t.*) from the ground, using a separate County-held contract. This has been the procedure followed during all of Arlington's past gypsy moth treatment efforts.

**FISCAL IMPACT:** There is currently \$18,000 available from FY 2007 Closeout and the remaining \$3,820 will be made available from the Department of Parks, Recreation and Cultural Resources' base budget.