

# 2012 Gypsy Moth Treatment Proposed Action

## **Introduction/Location of Proposed Treatment Areas**

The United States Department of Agriculture (USDA) Forest Service in cooperation with the Virginia Department of Agriculture and Consumer Services (VDACS) is proposing to treat approximately 18,884 acres in two separate treatment blocks within Smyth and Tazewell Counties, Virginia for the control of the gypsy moth. (See the attached Vicinity maps). All 18,884 acres would receive a treatment with mating disruption pheromones. These acres include 18,335 acres of private land and 549 acres of National Forest System (NFS) lands. All of the proposed blocks are within the geographic area of lands managed by the Mount Rogers National Recreation Area (NRA).

The areas to be treated are named for the Quadrangle Map (USGS Quad map) on which the majority of the treatment area falls. The names do not imply that the geographic features for which the quadrangle maps are named fall within the treatment area. (i.e. The Nebo treatment area is on the Nebo quad map, but does not contain the town of Nebo.)

The following describes the locations of the five blocks (also see the attached location maps):

**Nebo** - Approximately 1,622 acres of private land and 489 acres of NFS land (total 2,111 acres) in Smyth County would be treated with mating disruption. Open roads within the block include State Roads (SR) 42 and 621.

**Broadford** - Approximately 16,713 acres of private land and 60 acres of NFS land (total 16,773 acres) in Smyth and Tazewell Counties would be treated with mating disruption. Open roads within the block include SR 91, 601, 607, 675, and 772.

## **Purpose of and Need for Proposal**

**History of Gypsy Moth Spread and Control Measures:** The gypsy moth is an exotic insect, accidentally introduced from Europe into Massachusetts in 1869. Gypsy moth spread has been slow when compared to most invasive pests. This is illustrated by the fact that only about 30% of the susceptible habitat in the U.S. is infested 141 years after the initial establishment occurred. However, accelerating spread rates in the last four decades led the USDA to look at how that rate of spread could be reduced. In the past 20 years, gypsy moths have defoliated over 4.5 million acres of forest in Virginia alone. The USDA Forest Service has a responsibility to protect forests from gypsy moth damage and to protect neighbors by minimizing spread.

Following a successful pilot project that concluded in 1998, Congress funded full implementation of the gypsy moth “Slow The Spread” strategy (STS). The STS project demonstrated that the rate of spread of the gypsy moth can be reduced by approximately 60% through comprehensive monitoring and management of recently established populations in the area where gypsy moth populations transition from continuous to isolated (Leonard et al, 1998). The benefits of reducing the rate of spread of the gypsy moth exceed the costs of treatment and monitoring by a ratio greater than 3 to 1 (USDA, 1995, p.II-12). The Forest Service has the lead

for cooperatively implementing STS along with state and other federal partners located along the leading edge of gypsy moth populations.

The national strategy for managing the gypsy moth includes suppression in generally infested areas, eradication in the areas that are not yet infested, and STS in the transition areas (Sharov et al, 2002). The areas proposed for treatment in this analysis are within the transition area. Typically the populations found in the transition area are recently established and still at low-density. The optimum time to treat these infestations is before they increase, coalesce and spread into non-infested areas. Without intervention, these populations will continue to grow and contribute to a faster rate of spread south and west into non-infested areas.

The proposal on where to implement STS is technology-based and data-intensive. Every year about 80,000 pheromone traps are set out across the states that encompass the front of the gypsy moth infestation. The current and previous year's trap data are fed into a model which selects apparent colonies, checks to see if the boundary of the colony is sufficiently delineated, then calculates a priority index for each colony. This index is based on the colony's location, growth rate, density, and degree of isolation. Infestations with a priority index higher than 2.30 are usually recommended for some type of treatment. Entomologists and a variety of resource specialists review this data along with historical data and past treatment information, and propose a treatment tactic that is appropriate for the site. The treatment proposed here is mating disruption on 8,789 acres. These acres include 3,533 acres of private land and 5,256 acres of national forest lands.

There is a separate proposal by VDACS to treat approximately 108,000 acres of private lands located in Buchanan, Floyd, Halifax, Patrick, Pittsylvania, Russell, Washington, and Tazewell counties and the city of Danville. All acres proposed for treatment would utilize a mating disruption treatment. They are mentioned here for public notification purposes only and their treatment is not part of this analysis except in the context of cumulative impacts.

For questions about these treatment areas and other private land issues, please contact Larry Bradfield of VDACS. His telephone number is 540-394-2507. His office address is 1580 North Franklin Street, Suite 7, Christiansburg, VA 24073.

**Consistency with the Forest Plan:** Goal 14 of the Jefferson National Forest Land and Resource Management Plan (Forest Plan, page 2-25) states "Contribute to maintenance or restoration of native tree species whose role in forest ecosystems is threatened by insects and disease. Management activities will reduce the impacts from non-native invasive species." Specifically for gypsy moth, Forest-wide standards include:

FW-79: Integrated Pest Management is used to protect resources from damage caused by the gypsy moth. (Forest Plan page 2-26)

FW-80: Slow the Spread actions are allowed to slow the gypsy moth's rate of spread from the areas where it is established. (Forest Plan page 2-26)

**Infestation in the Proposed Treatment Areas:** For several years now, locations on the Mt. Rogers NRA have been intensively monitored with pheromone traps to delineate the extent of

the gypsy moth population as described above. Results from monitoring indicate that populations are present and increasing in both density and area for all locations.

The treatment areas (18,884 acres) exceed the priority index threshold of 2.30 and are proposed for treatment using mating disruption. Mating disruption is effective in managing low-density, relatively isolated gypsy moth populations. As described in detail under the “Proposed Action” section of this document, mating disruption does not impact other species of insects. These proposed treatment blocks fall within several Management Prescription (Rx) areas in the Forest Plan. Each Management Prescription has a title that tells the primary focus of management. Management Prescription areas included in this proposal are: Rx6C-Old Growth Forest Communities Associated With Disturbance; Rx8A1-Mix of Successional Habitats in Forested Landscapes, Rx0B-Custodial Management – Small, Isolated Land Areas.

All of these prescription areas contain standards that allow for the proposed treatments. They are listed here, followed by the page number in the Forest Plan where the standard is located: 6C-005 (page 3-82), 8A1- 007 (page 3-115), 0.B-005 (page 3-3).

## Proposed Action

**Treatment areas:** To help slow the spread of gypsy moth we are proposing treatments in areas as outlined in Table 1.

TABLE –1

Treatment Area Name	Treatment	Maximum Proposed Dose (ai/ac.)	Area Size (acres)	Acres by Ownership	
				Private	National Forest
Nebo	Mating Disruption	15g	2111	1622	489
Broadford	Mating Disruption	15g	16773	16713	60
Total			18884	18335	549

**Mating Disruption:** The following information on mating disruption was provided by the USDA Forest Service, Forest Health Protection office, in Asheville, NC, last modified in 2009. Pheromones are chemicals produced by insects to communicate with one another. In the case of the gypsy moth, the female releases a sex pheromone when she is ready to mate. The pheromone attracts the male moths that follow the scent to its source – the female. A synthetic pheromone much like the real gypsy moth pheromone has been produced in the laboratory. This synthetic pheromone is formulated into controlled release dispensers that are scattered over the forest canopy using aircraft. The dispensers slowly release the pheromone into the environment over a 2-3 month period when gypsy moths would be mating. The males become disoriented because the air is filled with pheromone and

they cannot distinguish the real female pheromone from the pheromone released by the dispensers. This process is called mating disruption and is effective at controlling low-density populations of the gypsy moth. The applications would occur in mid to late June 2011 prior to the emergence of the gypsy moth breeding adults.

- Disparlure (chemical name: cis-7, 8-epoxy-2-methyloctadecane) is the name of the sex pheromone produced by the female gypsy moth to attract the male for mating. Disparlure is also synthesized and used in the cooperative USDA Forest Service STS project to control low-density gypsy moth populations.
- Disrupt II<sup>®</sup> (Hercon Environmental, Emigsville, PA) is the name of a plastic laminate flake formulation that contains disparlure as the active ingredient. It is 17.9% active ingredient (pheromone) by weight and is registered with the Environmental Protection Agency to control low density populations of gypsy moth (EPA Reg. No. 8730-55 Prior to application the flakes are mixed with a sticker (Gelva Multipolymer Resin Emulsion 2333) to ensure they will stick at all levels in the forest canopy or on foliage where gypsy moths are found. Both Disrupt II and Gelva have been studied and are not believed to pose any risk to humans or the environment.).
- SPLAT-GM (ISCA Technologies, Riverside, CA) is the name of a polymer matrix formulation that contains disparlure as the active ingredient. It is 13% active ingredient (pheromone) by weight and is registered with the Environmental protection Agency for use on low-density gypsy moth populations (EPA Reg. No. 80286-4)
- The products would be applied at a dose of either 15 grams or 6 grams of active ingredient per acre. The 15 gram dose is equivalent to an application rate of about ½ cup of Disrupt II flakes or 1 cup SPLAT-GM droplets distributed per acre. Proportionally, the 6 gram rate is less than ¼ cup of flakes per acre or 1/3 cup of SPLAT-GM droplets distributed per acre.

Field studies and operational use of mating disruption show that it effectively suppresses mating in low-density gypsy moth populations, and therefore controls populations. Its use has been integral in the STS project. Mating disruption is species specific to gypsy moth with no known effects on other lepidoptera (moth or butterfly) species or any other species.

The public will be notified of the proposed treatment dates and times through local newspapers. Signs about the treatment will also be placed along roads and trails at major entry points to the treatment areas. These signs will inform people of the type of treatment and the time span in which application may occur.

Threatened, Endangered and Sensitive (TES) species will be addressed through the Biological Evaluation (BE) process.

## **Scope of Analysis and Decision to Be Made**

The scope of this analysis is limited to the proposal for treatment of two blocks totaling 18,884 acres of intermingled NFS and private lands located in southwest Virginia as part of the STS program. It does not relate to other STS, suppression or eradication treatment activities outside the scope of this EA conducted by the FS or VDACS on other public and private Virginia lands.

Those activities are covered by other EAs and decisions.

The proposal to treat NFS lands requires Maureen Hyzer, Forest Supervisor for the George Washington/Jefferson National Forest, USDA Forest Service, to be the responsible official. The proposal to spend federal money for treatments on private lands requires the Regional Forester of the Southern Region, Liz Agpaoa, to be the responsible official.

The two decisions are expected to be issued in March of 2011. When the decisions are made, we will promptly mail the appropriate decision notices and analysis documentation to those who participated in the process and to those who have requested a copy of the decisions.

An interdisciplinary team of Forest Service resource specialists and VDACS personnel have begun work on a site-specific environmental analysis of the proposed action. The analysis will be carried out in accordance with the National Environmental Policy Act. Comments received in response to this notice will be used by the team in identifying significant issues related to the project, developing alternatives to the proposed action and guiding the environmental analysis.

We encourage your participation. Responding to this request for comments is your opportunity to participate. Please be as specific as possible in your comments. Comments may be submitted by either:

- Mailing electronically to our office at: [comments-southern-georgewashington-jefferson@fs.fed.us](mailto:comments-southern-georgewashington-jefferson@fs.fed.us)
- Mailing hardcopy to the attention of Russ MacFarlane, 5162 Valleypointe Pkwy, Roanoke, VA, 24019.

In accordance with 36 CFR 215.6(a)(3), individuals or organizations wishing to be eligible to appeal must provide the following information:

- 1) Your name and address.
- 2) Title of the Proposed Action.
- 3) Specific comments (215.2) on the proposed action, along with supporting reasons that the Responsible Official should consider in reaching a decision.
- 4) Your signature or other means of identification verification. For organizations, a signature or other means of identification verification must be provided for the individual authorized to represent your organization.

Comments must be postmarked or received within 30 days beginning the day after publication of this notice in the Roanoke Times (Roanoke, VA). We anticipate publication of this notice on December 13, 2011. Oral or hand-delivered comments must be received within our normal business hours of 8:00 a.m. to 4:30 p.m.

For more information, visit [www.fs.fed.us/r8/gwj/projects\\_plans/projects](http://www.fs.fed.us/r8/gwj/projects_plans/projects). For questions relating to treatments on private lands, contact Larry Bradfield (540) 394-2507 or by e-mail at [Larry.Bradfield@vdacs.virginia.gov](mailto:Larry.Bradfield@vdacs.virginia.gov). Or contact Russ MacFarlane, at the above address or by phone at (540) 265-5168.

## **Preliminary Issues**

Based on past scoping and environmental documents for the treatment of gypsy moths using mating disruption, no significant issues are expected that would create new alternatives.

## **Preliminary Alternatives**

- 1. The Proposed Action as stated above.**
- 2. No Action** – In this alternative, no action would be taken to slow the rate of spread of the gypsy moth in the general forest areas on the Mount Rogers National Recreation Area. The populations would continue to be monitored by pheromone trapping.