2018 Gypsy Moth Slow the Spread 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 4,673 acres in one treatment block within Smyth and Grayson Counties, Virginia for the control of the gypsy moth. (See the attached map). All 4,673 acres would receive a treatment with mating disruption pheromones. These acres include approximately 85 acres of private land and 4,588 acres of National Forest System (NFS) lands. Approximately 3,752 acres of the NFS lands are within the congressionally designated Lewis Fork Wilderness. The NFS lands within the proposed block are within the geographic area managed by the Mount Rogers National Recreation Area (NRA) of the George Washington and Jefferson National Forests.

The area to be treated is named the Mount Rogers Block and does include the summit of Mount Rogers. The Mount Rogers Block is located approximately 10 miles south of Marion, Virginia and is centered on NFS lands on the north flank of Mount Rogers with privately owned lands along the northern edge of the block. No incorporated towns are located within the proposed treatment area. Open roads within the block include State Route 600, which forms the western boundary of the Lewis Fork Wilderness. The treatment area includes a portion of Lewis Fork and the headwaters of several small streams feeding into Big Laurel Creek. Approximately 2 miles of the Appalachian National Scenic Trail (Forest Rail 1), 1.1 miles of the Virginia Highlands Trail (FT-337), 3.4 miles of the Mount Rogers Trail (FT-166) as well as several other trails are located in the proposed treatment block.

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 144 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 more than 70% through comprehensive monitoring and management of recently established populations in the area where gypsy moth populations transition from continuous to isolated. The benefits of reducing the rate of spread of the gypsy moth exceed the costs of traditional suppression treatment and monitoring by a ratio greater than 3 to 1 (USDA. 1995. p.11-12). 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 area proposed for treatment in this analysis is 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 65,000 pheromone traps are set out across the 11 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 2.80 are usually recommended for some type of treatment. The priority index for the Mount Rogers Block is 4.98, well above the 2.80 threshold indicating a high priority population requiring treatment to ensure the continued success of the STS program. 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 4,673 acres. These acres include 85 acres of private land and 4,588 acres of NFS lands.

There is a separate proposal by VDACS to treat approximately 18,850 acres of private lands located in Russell, Tazewell and Washington Counties, VA. All of those acres proposed for treatment would also utilize a mating disruption treatment. They are mentioned here for public notification purposes only and their treatment is not part of this analysis.

For questions about those treatment areas and other private land issues, please contact Larry Bradfield of VDACS at 540-394-2507. Mr. Bradfield’s office address is 1580 North Franklin Street, Suite 7, Christiansburg, VA 24073.

Infestation in the Proposed Treatment Area: For several years now, locations on the Mount 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 in the Mount Rogers area. Based on this information the Mount Rogers Block is 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.

Portions of central and southwest Virginia, including the George Washington and Jefferson National Forests, have been along the leading edge of the overall spread of gypsy moth since the inception of the STS program, with STS treatments occurring on and near NFS lands, including several Wildernesses, most years since 2006.

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)

The Mount Rogers Block falls within several Management Prescription (Rx) areas described in the Forest Plan. Each Management Prescription has a title that indicates the primary focus of management. Management Prescription areas included in this proposal are: Rx1A – Designated Wilderness; Rx4K3 – Mount Rogers Crest Zone Special Area, Rx4K4 – White Top Mountain Special Area, and Rx7B – Scenic Corridors. In addition, the Appalachian National Scenic Trail Corridor Management Prescription (Rx4A) is embedded within Rx1A and Rx4K3 in this area.

All of these prescription areas contain standards that allow for the proposed treatment. They are listed here, followed by the page number in the Forest Plan where the standard is located: 1A-008 – 010 (page 3-7), 4A-004 (page 3-21), 4K3-009 (page 3-52), 4K4-006 (page 3-58), 7B-006 (page 3-90).

**Proposed Action**

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

<table>
<thead>
<tr>
<th>Treatment Area Name</th>
<th>Treatment</th>
<th>Maximum Proposed Dose (ai/ac.)*</th>
<th>Area Size (acres)</th>
<th>Acres by Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mount Rogers</td>
<td>Mating Disruption</td>
<td>6 grams</td>
<td>4,673</td>
<td>85</td>
</tr>
</tbody>
</table>

National Forest Wilderness Other National Forest

3,752 836

*ai = active ingredient

**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 application would occur in mid to late June 2018 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® (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 Mulpolymer 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 Organic (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) and is certified for organic production.

- The products would be applied at a dose of 6 grams of active ingredient per acre. The 15 gram dose is equivalent to an application rate of about 2/3 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 would be notified of the proposed treatment dates and times through local newspapers. Signs about the treatment would also be placed along roads and trails at major entry points to the treatment area in advance of actual treatment. 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 one block totaling 4,673 acres of intermingled NFS and private lands located in southwest Virginia as part of the STS
program. It does not include 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 analyses and decisions.

The Regional Forester of the Southern Region is the responsible official who will review the analysis and make the decision. The Regional Forester is the responsible official for two reasons: (1) The use of aerially applied pesticides on approximately 3,752 acres of congressionally designated wilderness requires a Regional Forester decision, and, (2) The authorization for expenditure of federal funds in the treatment of approximately 85 acres of privately held lands also requires a Regional Forester decision.

Based on past experience with similar projects the level of analysis expected is an environmental assessment (EA) and the project, if approved, would be implemented in June of 2018.

Concurrent with this environmental analysis process and as recommended by agency policy, a Minimum Requirements Analysis (MRA) utilizing the Minimum Requirements Decision Guide (MRDG) tool is being conducted for Regional Forester consideration and approval to ensure that this proposal meets agency Wilderness stewardship requirements under The Wilderness Act.

**Public Involvement**

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. We are requesting your comments on this proposal. Comments received in response to this notice will be used by the team to identify issues and focus the analysis.

We encourage your participation. Responding to this request for comments is your opportunity to participate. Specific written comments as defined by 36 CFR 218.2 should be within the scope of the proposed action, have a direct relationship to the proposed action, and must include supporting reasons for the responsible official to consider. It is the responsibility of all individuals and organizations to ensure that their comments are received in a timely manner. The opportunity to comment ends 30 days following the date of publication of the legal notice in *The Roanoke Times* (Roanoke, VA).

Comments received in response to this solicitation, including names and addresses of those who comment, will be considered part of the public record on these proposed actions and will be available for public inspection. Comments submitted anonymously will be accepted and considered; however, anonymous comments will not provide the agency with the ability to provide the respondent with subsequent environmental documents.

Specific written comments must be submitted to: Ken Arney, Acting Regional Forester, c/o Russ MacFarlane, 5162 Valleypointe Parkway, Roanoke, VA, 24019, 540 265-5145 (fax), 540 265-5100 (telephone). The office business hours for those submitting hand-delivered comments
are: 8:00 am to 4:30 pm Tuesday through Thursday, excluding holidays. Electronic comments must be submitted in a format such as an email message, plain text (.txt), rich text format (.rtf), or Word (.doc, .docx) to comments-southern-georgewashington-jefferson@fs.fed.us.

Pursuant to 36 CFR 218.7(a)(2), this proposed project implements the land management plan and is subject to the administrative reviews process at §218 subparts A and B. An objection period, if required, will follow the regulation found in §218.7. For objection eligibility (§218.5), only those who have submitted timely, specific written comments during any designated opportunity for public comment may file an objection. Issues to be raised in objections must be based on previously submitted specific written comments regarding the proposed project and attributed to the objector, unless the issue is based on new information that arose after a designated opportunity to comment (§218.8(c)).

Please state “2018 Gypsy Moth STS” in the subject line when providing electronic comments, or on the envelope when replying by mail.

For more information, visit 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 GypsyMoth.VDACS@vdacs.virginia.gov. For questions related to the treatment of NFS lands contact Russ MacFarlane, at the above address or by phone at (540) 265-5168.