



United States Department of the Interior

NATIONAL PARK SERVICE

Blue Ridge Parkway
199 Hemphill Knob Road
Asheville, North Carolina 28803

IN REPLY REFER TO:

L7617 (PIN 981)

FINDING OF NO SIGNIFICANT IMPACT

***GYPSY MOTH TREATMENT
RIDGE DISTRICT***

**Bedford, Botetourt, Floyd, Franklin, and Rockbridge Counties,
Virginia**

**Blue Ridge Parkway
USD1, National Park Service**

INTRODUCTION

The gypsy moth is a European insect accidentally released in eastern Massachusetts in late 1869. The gypsy moth caterpillar alters ecosystems and disrupts people's lives when they reach outbreak proportions. The feeding caterpillar defoliates trees, shrubs, and other plants. Heavy defoliation weakens trees and increases their vulnerability to other insects and diseases that may kill them. Defoliation and subsequent tree mortality alter wildlife habitat, change water quality, and reduce aesthetic, recreation, and property values of woodlands and forests. During gypsy moth outbreaks, some people experience allergic reactions resulting in short-term skin, eye, and respiratory irritations caused by. Masses of caterpillars and frass (fecal excrement) during outbreaks are, at a minimum, unpleasant and can be quite disturbing to some people.

The Blue Ridge Parkway is known for its scenic vistas and natural areas that can be viewed from the roadway, overlooks, and numerous picnic and camping areas along the parkway drive. The defoliation and subsequent mortality of roadside trees by gypsy moth larvae result in hazardous trees that must be removed. Action is needed to suppress this non-native pest in areas of potential severe defoliation. Suppression prevents or minimizes heavy defoliation of trees by reducing outbreak populations of the gypsy moth in areas where the insect is already established. The gypsy moth is a regulated pest and the United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service, the USDA Forest Service (USFS), and all state departments of agriculture monitor the spread of this insect.

Since the gypsy moth was accidentally introduced, it has steadily expanded its range west and southward and is now established in about one-third of the potentially susceptible habitat in the United States. The Gypsy Moth Slow-the-Spread (STS) pilot project (1993-1999) demonstrated that the rate of spread of the gypsy moth could be reduced by approximately 60% through

comprehensive monitoring and management of recently established populations in the transition area. The benefits of reducing the rate of spread of gypsy moth exceed the costs by a factor of more than three to one.

SELECTED ALTERNATIVE

The National Park Service (NPS) has chosen to select the Preferred Alternative (Alternative 5) from the Environmental Assessment (EA), which is the combination of Alternatives 2, 3, and 4. Under the selected alternative, *Btk*, Gypchek® or pheromone flakes will be used to treat areas depending upon specific situations. Along the leading edge of the gypsy moth infestation the use of pheromone flakes will be effective at low population densities. When population levels are moderate to large then the use of *Btk* is more effective. In areas where sensitive natural resources exist the use of gypcheck will have less of an impact than *Btk*. However, gypcheck is not as effective as *Btk* when egg mass densities exceed 1,000 egg masses per acre.

A combination of *Btk*, Gypchek®, and pheromone flake treatments are proposed under the Integrated Pest Management (IPM) approach because all are effective in reducing gypsy moth populations under different conditions. Parameters such as egg mass density, egg mass length, occurrence of sensitive and rare species, and threats to visitor safety from hazardous trees are all considered when selecting appropriate treatments. The Blue Ridge Parkway's 1992 *Gypsy Moth Integrated Pest Management Plan* provides guidance on treatment selection. Use of the proposed insecticides is contingent upon annual approval by the NPS IPM program.

OTHER ALTERNATIVES CONSIDERED

The NPS studied several alternatives including treating areas with *Btk* only, treating areas with Gypchek only, treating areas with pheromone flakes only, a combination of Alternatives 2, 3, and 4 (the preferred/selected alternative), and no action.

Alternative 1 — No Action. Alternative 1, the No Action Alternative, represents conditions and management practices as they currently exist on Blue Ridge Parkway lands. It provides the basis of comparison for the action alternative. Under the No Action Alternative, gypsy moth populations would follow their natural course in all of the identified areas and defoliation of vegetation would continue to occur.

Alternative 2 - Treat Areas with Btk Only. Under Alternative 2, all identified areas with egg mass densities approaching or exceeding 250 per acre would be treated with one or two aerial applications of *Bacillus thuringiensis* var. *kurstaki* (*Btk*) at 24 billion international units/acre (BIUs). Twenty-four BIUs equals one-half gallon of undiluted product per acre. The applications would begin when the leaves of oak (*Quercus*) trees have expanded to approximately 20-35% of their normal size and the first and second instar caterpillars are present and feeding. The specific time would depend on weather conditions, but the operation would

probably begin in early May. The second application, if needed, would occur 5-7 days later when oak leaves have expanded to approximately 40-50% of their normal size.

Alternative 3 - Treat Areas With Gypcheck® Only. Alternative 3 would treat all identified areas with egg mass densities approaching or exceeding 250 per acre with two applications of nucleopolyhedrosis virus (NPV) (manufactured as Gypchek®). NPV is a natural disease of gypsy moth larvae.

Alternative 4 — Treat Areas With Pheromone Flake Only. Under Alternative 4, a pheromone mating disrupter called Disparlure™ would be used to treat areas where gypsy moth populations are relatively small and located on the leading front of the overall population. The pheromone is injected between thin sheets of plastic, then chopped into small pieces (1/32 x 3/32 inches) and scattered over the forest canopy using an airplane. The plastic flakes slowly release the pheromone into the environment over a 2-3 month period when gypsy moths would be mating. The males would become disoriented because the air is filled with pheromone and they cannot find the females. This process is called mating disruption and is effective at controlling low-level infestations. The pheromone used is specific to the gypsy moth and is applied at a rate of 6 grams active ingredient per acre. The time of application is early to mid-June when gypsy moth mating begins.

MITIGATION

Mitigation measures were analyzed as part of the action alternatives. These actions were developed to lessen the effects of the selected alternative. The following are mitigation measures agreed to by the NPS during the National Environmental Policy Act (NEPA) process:

1. Application of insecticides will comply with all applicable Environmental Protection Agency label restrictions and State and Federal laws. All label warnings and restrictions will be strictly adhered to by the applicator. Application of insecticide will be made when wind speeds are less than ten (10) mph and when temperatures are less than 75°F yet warm enough for the insecticide to flow. Foliage must be dry and no threat of rain should exist within one hour of application. Relative humidity will be at least 45%. Application will be suspended if thermal inversion conditions, which cause the spray to rise, exist or develop during spraying. These conditions will be monitored by aerial observers in an observation aircraft and/or ground observers within the treatment block. Application heights will range between 50 and 150 feet over tree tops, depending on aircraft and terrain.
2. The spray blocks will be marked by natural geographic features or helium balloons raised thirty feet above the tree canopy. The applicator will conduct a pre-treatment flight of the proposed area to become familiar with boundaries and balloon locations. Aerial photographs or topographic maps will be provided to the spray pilot to assist in identifying area boundaries. The spray pilot will have radio communication with an observer aircraft and the ground crew to assure the proper application of insecticides and to provide for safety. Aircraft guidance and tracking system using Digital Global Positioning System (DGPS)

satellites may be used in place of balloons. Aircraft DGPS guidance and navigation systems are extremely accurate and can record flight track and aid the pilot in making precise applications.

3. Insecticides known to have adverse impacts on aquatic ecosystems will not be applied within 200 feet of streams or open bodies of water.
4. The public will be notified of the proposed treatment dates and times through local print and electronic media. A notice of intent to apply insecticides or other intervention tactics is posted on signs prior to treatment. Signs are placed along roads and trails at major entry points to the treatment areas. Signs inform visitors of the type of intervention tactic and the time span in which application may occur.
5. Treatment of developed recreation areas such as picnic areas and campgrounds or dispersed areas of high concentrated use are scheduled during low-use periods and the areas may be temporarily closed in order to minimize human exposure to the treatment. Area closure signs are posted in these areas at least 24 hours before treatment begins. Signs provide information on scheduled treatment dates and type of treatment.

ENVIRONMENTALLY PREFERRED ALTERNATIVE

Alternative 5, the selected alternative, is also the environmentally preferred alternative. The environmentally preferred alternative is determined by applying the criteria suggested in N EPA, which is guided by Council on Environmental Quality (CEQ) regulations. CEQ regulations provide direction that “[t]he environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA’s Section 101. Generally this means the alternative which causes the least damage to the biological and physical environment. It also means the alternative that best protects, preserves, and enhances historic, cultural, and natural resources.” [Question 6a, “Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations” (40 CFR 1500-1508). *Federal Register* Vol. 46, No. 55, 18026-18038, March 23, 1981]. The proposed action allows the flexibility to use the appropriate treatment for the given population level, which maximizes the effectiveness of the treatment. Therefore, this alternative will help lessen the effects of the gypsy moth, which will ultimately protect park resources.

WHY THE SELECTED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined in 40 CFR § 1508.27, significance is determined by examining the following criteria:

- Impacts that may be both beneficial and adverse.*
- Degree of effect on public health or safety.*
- Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*
- Degree to which effects on the quality of the human environment are likely to be highly controversial.*
- Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks.*
- Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*
- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*
- Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.*
- Degree to which the action may adversely affect an endangered or threatened species or its critical habitat.*
- Whether the action threatens a violation of Federal, state or local environmental protection law.*

Under the selected alternative gypsy moth populations will be contained and treated which will result in a positive effect on vegetation resources. The rate of spread of gypsy moth will be drastically reduced, therefore providing a positive impact on vegetation that will otherwise be negatively affected by the presence of gypsy moth.

Invertebrate species will be positively affected by the treatment of gypsy moth due to reduced competition under the selected alternative.

Animal species will benefit from a reduction in the rate of spread of gypsy moth under the selected alternative, since changes to habitat or food base will not be altered.

Under this alternative, gypsy moth populations' will be contained and treated which will result in a positive effect on threatened and endangered species.

The selected alternative will have only short-term impacts to recreational and visual resources on the Blue Ridge Parkway, but will preserve vista and recreational resources against unalterable long-term impacts. Visitation rates will likely have no noticeable long-term impacts.

The accumulation of forest litter will decrease, and thus, the safety risk of potential forest fire will be equitably reduced under the selected alternative.

SUMMARY OF ENVIRONMENTAL COMPLIANCE

The NPS, as a Federal land management agency, is required to locate, inventory, and nominate properties to the National Register of Historical Places, and to exercise caution to protect such properties under Section 106 of the *National Historic Preservation Act* (16 U.S.C. 470). The park has determined that there will be no ground disturbing activities involved with the proposed project, no alteration of any historic structures, nor any change in the use of historic resources. It was also determined that all three of the spray compounds that could be used in the proposed project have been proven conclusively to have no effect on any historic buildings, any subsurface archeological resources or any Parkway structures, such as stone-faced bridges, that are potentially contributing resources to any historic district designated in the future. Therefore, it has been determined that there will be no effect and that the proposed project is in compliance with Section 106 of the National Historic Preservation Act (see EA Appendix 2), and that the project as proposed is in compliance with this law and regulation.

Executive Order 13007 (*Native Americans' Concerns*) requires Federal agencies to avoid adversely affecting the physical integrity of Indian sacred sites. It was determined that the proposal will not affect any sacred sites; therefore, the NPS is in compliance with this regulation.

In accordance with Section 7 of the *Endangered Species Act of 1973*, as amended, (16 U.S.C. 1531 *et seq.*), the U.S. Fish and Wildlife Service (USFWS) and the Virginia Department of Conservation and Recreation (VADCR), Division of Natural Heritage, were consulted for potential impacts to state and/or federally listed threatened and endangered species and their critical habitat. In a letter dated November 19, 2002, the USFWS provided a list of species for the counties within which the project areas occur. The USFWS has stated that the project, as proposed, is not likely to adversely affect federally listed, proposed or candidate species and further states that no designated or proposed critical habitat occurs within the project areas (see EA Appendix 2). Since the proposal will not jeopardize the continued existence of any federally listed species, no Biological Assessment or further Section 7 consultation with the USFWS is required.

In accordance with the *U.S. Fish and Wildlife Coordination Act* (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*), the USFWS, and the VADCR, and the Virginia Department of Game and Inland Fisheries have been consulted regarding wildlife resources. According to those agencies, the Peaks of Otter Salamander (*Plethodon hubrichtii*) occurs within spray block D and outside, but proximal to, spray blocks E and F. Based on habitat requirements for this species, mature forest with canopy that provides moist leaf littered habitat primarily along the Blue Ridge Parkway, it is believed that the proposed project may be beneficial in the long term for the salamander. Thus, the NPS is in compliance with this regulation.

No wetlands, riparian areas, or floodplains are located within the proposed project areas, therefore, in accordance with the **Clean Water Act** of 1977 (33 U.S.C. 1251 *et seq.*), the NPS

will be in compliance with both Federal and state requirements.

There will be no impacts and no alterations to soils and geology on NPS land as a result of the proposed project. Therefore, it has been determined that this proposal will not result in any irreversible or irretrievable damage to prime farmlands. This is in keeping with the intent of the ***Farmland Protection Policy Act of 1984***.

Executive Order 11988 (*Floodplain Management*) requires Federal agencies, to the extent possible, to avoid adverse impacts associated with development in floodplains, and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. The proposal will not affect 100-year floodplains within the Blue Ridge Parkway, and is thus, in compliance with this regulation.

It was also determined that the NPS will be in compliance with **Executive Order 11990 (*Protection of Wetlands*)**, which requires Federal agencies, to the extent possible, to avoid long- and short-term adverse impacts associated with construction in wetlands, and to avoid direct and indirect support of development in wetlands wherever there is a practicable alternative. The proposed project will not affect any wetlands on NPS lands, and thus, the NPS is in compliance with this regulation.

The proposed project will not have any impacts on any streams on the ***NPS Nationwide Inventory, Final List of Rivers, potential State Scenic Rivers*** or existing or potential State Scenic Byways, and it is not anticipated to have any adverse impacts on planned or existing recreational facilities.

Because the project provides no additional facilities, programs, or activities for Parkway users, no consideration for access to persons with disabilities is needed. The proposal is, thus, in compliance with the intent of the ***Architectural Barriers Act of 1968***, as amended, the ***Rehabilitation Act of 1973***, as amended (Section 504), and the ***Uniform Federal Accessibility Standards (UFAS)***, and the ***Americans with Disabilities Act (ADA of 1990)***.

Executive Order 12989 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*) requires Federal agencies to integrate environmental justice considerations into the NEPA process. There will be no disproportionately high and adverse impacts upon minority and low-income populations resulting from the proposal.

Executive Order 13186 (*Responsibilities of Federal Agencies to Protect Migratory Birds*) requires Federal agencies to avoid or minimize the negative impact of their actions on migratory birds, and to take active steps to protect birds and their habitat. The Executive Order directs each Federal agency taking actions having or likely to have a measurable negative impact on migratory bird populations to work with the USFWS to develop an agreement to conserve those birds. No adverse impacts are expected to occur to any neotropical migrants and other birds by the proposed project; thus, the NPS is in compliance with this regulation.

The 1916 NPS Organic Act (16 USC 1), established the NPS in order to “promote and regulate the use of parks...” The Organic Act defined the purpose of the national parks as “to conserve the scenery and natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” The Organic Act still provides overall guidance for the management of the Blue Ridge Parkway.

Consequently, the selected alternative conserves values embodied in the Organic Act to:

- Accomplish the mission of the NPS.
- Achieve goals of the *Parkway Master Plan* and *Strategic Plan*.
- Prevent impairment of park resources in a manner that meets legal and policy requirements.
- Achieve the purposes and criteria of the following NPS Mission Goals, the Parkway’s Mission Goals, and the Parkway’s long-range GPRA goals:
 - natural resources are protected to maintain ecological and biological diversity with the abundance of plant and animal species found in the central and southern Appalachian ecosystem.
 - provide opportunities for visitors to experience the scenic qualities, recreational uses and natural and cultural resources of the Blue Ridge Parkway and its corridor.

IMPAIRMENT

In addition to reviewing the list of significance criteria, the NPS has determined that implementation of the proposal will not constitute an impairment to the Blue Ridge Parkway’s resources and values. This conclusion is based on a thorough analysis of the environmental impacts described in the EA, the agency comments received, relevant scientific studies, and the professional judgment of the decision-maker guided by the direction in NPS *Management Policies* (December 27, 2000).

PUBLIC INVOLVEMENT

In November 2002, the Blue Ridge Parkway Superintendent mailed a scoping notice announcing the project proposal and inviting review comments. This letter was sent to over 26 individuals and organizations on the park’s planning mailing list, and was posted on the park’s website. A news statement was released at that time for the media, as well as staff within the Park, that announced the project proposal, notified interested parties where more information could be obtained, and invited their review comments. The comment period closed on December 15, 2002.

Through scoping and the public comment review process on the *Gypsy Moth Treatment Environmental Assessment*, the planning process was conducted in consultation with affected

federal agencies, state and local governments, tribal groups, and interested organizations and individuals.

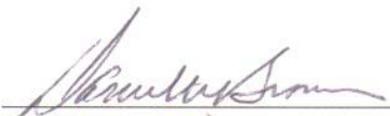
As a result of the scoping effort, three responses were elicited, all of which supported the proposed project (EA Appendix 2). All comments received in response to the scoping notice were duly considered and will remain in the project record throughout the planning process.

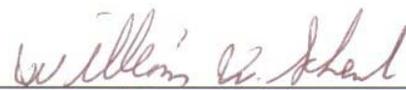
CONCLUSION

In consideration of the comments received throughout the scoping and planning process, careful review of potential resource and visitor impacts, and developing appropriate mitigation to protect resources, the preferred alternative best strikes a balance between the widest range of use and enjoyment of the Blue Ridge Parkway without degradation of the environment or risk of health or safety.

The preferred alternative does not constitute an action that normally requires preparation of an environmental impact statement (EIS). The preferred alternative will not have a significant effect on the human environment. Negative environmental impacts that could occur are minor and temporary in effect. There are no unmitigated adverse impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS is not required for this proposed project on NPS lands, and thus will not be prepared. Implementation may take place immediately after the date of this decision.

Recommended:  3/31/03
Superintendent, Blue Ridge Parkway Date

Approved:  4/29/03
Regional Director, Date