United States Department of Agriculture

Marketing and Regulatory Programs

Animal and Plant Health Inspection Service

Asian Gypsy Moth Cooperative Eradication Program
Travis County, Texas

Environmental Assessment, February 2006

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I. Introduction and Need for the Proposal

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), in cooperation with the Texas Department of Agriculture propose to eradicate the gypsy moth infestation in a small area located in Travis County, Texas. The alternatives being considered here have been analyzed in detail in the 1995 Final Environmental Impact Statement (EIS) for Gypsy Moth Management in the United States. The findings of that EIS regarding these alternatives will be summarized and incorporated by reference into this environmental assessment (EA). The need for this proposed action is based on the potential adverse ecological and economic impacts of gypsy moth infestations on the infested and surrounding areas.

This EA is tiered to USDA's 1995 Final EIS for Gypsy Moth Management in the United States. We propose eradication because of the isolated nature of the infestation in Travis County, Texas. This site-specific EA is designed to examine the environmental consequences of a range of treatment options under the 1995 Final EIS for Gypsy Moth Management in the United States that may accomplish the program's goals.

This EA is prepared consistent with National Environmental Policy Act (NEPA) and APHIS' NEPA implementing procedures (7 CFR, part 372), for the purpose of evaluating how the proposed action and alternatives described in the proceedings sections, if implemented, may affect the quality of the human environment.

A. Biology of Gypsy Moth

The gypsy moth, *Lymantria dispar* L, is one of the worst pests of trees and shrubs in the United States. It was originally imported into Massachusetts from Europe in 1869 for silk production experiments. Some moths were accidentally released and became established. This gypsy moth infestation has spread relentlessly and now covers the entire northeastern part of the United States from Maine south to North Carolina and west to Michigan and Wisconsin. Gypsy moth caterpillars alter ecosystems and disrupt people's lives when in high numbers. Heavy infestations cause defoliation and tree mortality. Defoliated trees are also vulnerable to other insects and diseases that may kill them. Heavy defoliation alters wildlife habitat, changes water quality, reduces property and esthetic values, and reduces the recreational value of forested areas. When present in large numbers, gypsy moth caterpillars can be a nuisance, as well as a hazard, to health and safety (USDA, 1995).

Egg masses and pupae can attach to nursery stock, vehicles, camping equipment, and outdoor household articles that people bring with them when they come to Texas. The presence of host plants allows the gypsy moth to begin to establish new populations in areas where they were previously unknown.

Gypsy moths originating in eastern North America that are progeny of the original European introduction are sometimes referred to as North American gypsy moths. Asian gypsy moths are a strain of the same species that comes from eastern Russia and Asia. Asian gypsy months have also been established in Germany and other European countries where they are interbreeding with European gypsy moths.

Asian gypsy moths differ from North American gypsy moths in that the female Asian gypsy moths can fly long distances. Female North American gypsy moths, despite having fully developed wings, cannot fly.

There is precedent for eradication of isolated populations of Asian and North American gypsy moths if eradication efforts are swiftly employed. This was demonstrated in North Carolina in 1993. A ship carrying military cargo from Germany was found to be infested with large numbers of gypsy moths, including flying female moths typical of the Asian strain. The ship was sent back out to sea and the cargo was fumigated, but not before large numbers of moths flew ashore. Hundreds of male moths were trapped near the port facilities, along the shore and up to 25 miles inland. Genetic testing indicated that both North American and Asian strain moths were present as well as some which were apparently mixed strains (N.C. Dept. of Agric. 1994). An eradication program was quickly devised and put into place, and the infestation was successfully eradicated before it could become established.

B. Affected Environment

The affected environment is a small area located in Travis County, Texas. The proposed 640-acre spray block is bisected by Interstate Highway 290. The treatment area is composed of approximately 24 commercial properties, 160 partially to heavily wooded residential properties, 2 private schools and 130 undeveloped wooded acres.

The woodlands within and surrounding the proposed treatment area contain many host species which are susceptible to gypsy moth infestation. These include live oak (*Quercus fusiformes*), shumard oak (*Quercus shumardii*), sweet gum (*Liquidambar stryraciflua*) and other hardwoods.

Two endangered bird species nest within the immediate area (black capped vireo, *Vireo atricapilla* and the golden cheeked warbler, *Dendroica chrysoparia*). The black-capped vireo arrives in Texas starting in mid-March to mid-April. Nesting usually occurs in mid-April through August. The golden-cheeked warbler arrives in Texas early- to mid-March and begins nesting in early April.

The proposed spray block starts at the northeast corner with the intersection of 30˚14'23.51"N latitude and 97˚54'52.16"W longitude. It continues west along 30˚14'23.51"N to the northwest corner where it intersects at 97˚55'53.16"W longitude. It goes south along 97˚55'53.16"W to the southeast corner and intersects at 30˚13'31.03"N latitude. Then it goes east along 30˚13'31.03"N to the southeast corner and intersects at 97˚54'52.16"W longitude. It continues north along 97˚54'52.16"W to the point of origin at the northeast corner.

C. Need for Action

A gypsy moth which had characteristics of both the Asian and North American gypsy moth was found along Interstate Highway 290 in Travis County, Texas. This find suggests that there may be an outbreak of gypsy moths in this area of Texas. This gypsy moth outbreak in Texas needs to be eradicated to minimize any potential ecological or human impacts. The Texas hill country contains an abundance of preferred host plants that are susceptible to defoliation by the gypsy moth. A majority of the tree species found in the delimited area are known hosts of the gypsy moth. Therefore, if the gypsy moth is not eradicated from this location, it is likely that the gypsy moth could become established and spread throughout the hill country and to other parts of Texas. The associated damage, defoliation, and mortality from such an occurrence, in the absence of timely eradication action, would be devastating to the native oak forest lands.

II. Proposed Action

Under the record of decision of the EIS, the selected alternative was to use a variety of treatment options to further three strategies (slow the spread, suppression, and eradication). Each strategy would be applied depending on the geography of the area to be treated relative to the generally infested gypsy moth area. In isolated infestations, as is seen in Travis County, the preferred strategy is eradication.

The following is a description of geography in United States with regard to the gypsy moth. The area of the United States where the North

American strain of the gypsy moth is established is called the generally infested area. Next to this area is a band 50 to 100 miles wide, called the transition area, where the gypsy moth is spreading from the generally infested area. The area where the gypsy moth is not established is called the uninfested area. Isolated infestations resulting from accidental spread of the gypsy moth by people may occur in the uninfested area. Different management strategies apply in these areas: the suppression strategy is employed in the generally infested area, the slow the spread strategy in the transition area, and eradication of isolated infestations in the uninfested area. In addition, for all infestations involving the Asian strain, eradication is the preferred strategy in all locations including the generally infested area.

Recently, a gypsy moth was detected in Travis County, Texas. Genetic testing indicated that the moth was the Asian biotype which is not known to exist in North America. The Asian Gypsy Moth (AGM) differs from the North American Gypsy Moth (NAGM) in two important ways. The female of the AGM flies long distances to deposit eggs and thus spreads the population rapidly, while the female NAGM is flightless. The AGM feeds on approximately 500 species of plants, while the NAGM feeds on approximately 300 species of plants. Therefore, the proposed strategy for this isolated infestation of gypsy moth is eradication.

III. Alternatives

In isolated infestations and any infestations that involve Asian gypsy moth characteristics, as the one found in Travis County, Texas, eradication is the strategy of choice. There are a number of treatment options available to implement the strategy:

1) B.t.k. This is a biological insecticide containing the bacterium, *Bacillus thuringiensis* var *kurstaki*. The insecticide is specifically effective against caterpillars of many species of moths and butterflies.

2) Diflubenzuron (Dimilin®). This is an insect growth regulator that interferes with the growth of some immature insects.

3) Gypsy moth virus. This is a nucleopolyhedrosis virus which occurs naturally and is specific to the gypsy moth. Gypcheck® is an insecticide product made from the gypsy moth nucleopolyhedrosis virus.

4) Mass trapping. The treatment consists of large numbers of pheromone traps used to attract male gypsy moths and prevent them from mating with

females, thereby causing a population reduction. Density of traps is nine or more traps per acre.

5) Mating disruption. This treatment consists of aerially-applied tiny plastic flakes or beads containing disparlure, a synthetic gypsy moth sex pheromone. The pheromone confuses male moths and prevents them from locating and mating with females.

6) Sterile insect releases. Large numbers of radiation-sterilized gypsy moth eggs or pupae are released in a treatment area and develop into adults. The sterile adults mate with fertile adults but viable offspring are not produced. If successful, the effect is population reduction and eventual elimination of the infestation.

This EA analyzes the no action alternative and various combinations of use of B.t.k., use of mass trapping, and use of mating disruption techniques. The other treatments were not considered in detail because the probability that they would achieve the program goal of eradication was judged to be too low or could not be determined. Diflubenzuron (Dimilin®) was not selected because the growth regulator has a broader non-target host range than B.t.k. and can kill many other insects in addition to larvae of moths and butterflies and is, therefore, not preferable unless B.t.k. is not available. This is of particular concern in regard to the potential effects on food sources for endangered species that occur in the area. Gypcheck® and sterile insect release are still in a somewhat experimental stage of development for eradication programs and the results have been variable. Although mass trapping has been shown to be useful in eliminating small populations, it is most effective in determining if a treatment option has been effective and is generally used coupled with one of the other treatments. The program will use limited trapping to determine effectiveness and to verify success of eradication.

A. No Action

Under this alternative, we would not treat the selected area with any insecticide or mating disruption. This would allow any population of gypsy moth within the area to become established and spread into the surrounding areas. Although this does not meet the need to manage the population of gypsy moth, it does provide a baseline for comparison to the alternatives.

B. Use of B.t.k.

Under this alternative, pesticide application of B.t.k. (trade name Foray 48B®) will be applied to the treatment site. The first application will be applied on or about March 12, 2006. There will be a total of three applications with a 7-10 day lapse in between the applications. Each application will use 24 BIU and will be applied using a Category C aircraft. The B.t.k. applications will be toxic to the caterpillars of moths and butterflies within the treatment zone potentially eliminating any immature gypsy moths that could be in the area. These applications are timed to occur during the early larval stages when gypsy moth caterpillars hatch from their eggs and are most susceptible to intoxication.

C. Use of Mating Disruption

Under this alternative, disparlure (Disrupt II®) mixed with Gelva® Multipolymer Emulsion 2333 will be applied once at a rate of 6 oz per acre using specially modified aircraft. The Disrupt II® will confuse the male gypsy months making it less likely that the females will find a suitable mate. This treatment would occur later in the year when the adult moths emerge from their cocoons.

D. Use of Mass Trapping

Mass trapping involves setting gypsy moth pheromone traps at very high densities (up to nine traps per acre). These traps attract male gypsy moths. Mass trapping has been attempted as an eradication tool but results have varied. This technique is very useful when used in combination with other techniques. Any captured male moths are removed from the breeding population.

E. Integrated Eradication Program

Under this alternative, the program would use a combination of B.t.k. applications, mating disruption treatments, and mass trapping to achieve the goal of eradication. The population effects from a combined use of B.t.k.application, mass trapping, and mating disruption are additive. First, B.t.k. will be applied to control caterpillars in the treatment area. The first application will be applied on or about March 12, 2006. There will be a total of three applications with a 7- to 10-day lapse in between the applications.

Each application will use 24 BIU and will be applied using a Category C aircraft. A treatment of Disrupt II® mixed with Gelva® Multipolymer Emulsion 2333 will be applied once at a rate of 6 oz per acre using a specially modified aircraft to limit potential mating of any adult moths not eliminated from B.t.k. application directed at the larval stages. Mass trapping would occur at sensitive sites where other treatments could not be readily employed.

IV. Environmental Impacts of the Proposed Action and Alternatives

A. No Action

The no action alternative is required by Council of Environmental Quality regulations (40 CFR §1502.14(d)). The no action alternative forms the basis for a comparison among the effects of the different alternatives. This alternative provides baseline information for understanding environmental impacts associated with the no action alternative and potential environmental effects associated with the outbreak from a non-native species.

Selecting this alternative would result in the establishment of a gypsy moth population with commensurate damage to trees relative to the level of infestation. Thus, this would allow the gypsy moth to establish in the area and expand into the surrounding area. A majority of the trees in the eradication area and surrounding areas are susceptible to damage from feeding of the gypsy moth. The alternative would allow the gypsy moth to flourish in the existing area and continue to spread into surrounding areas. With the establishment of the gypsy moth, the environmental concerns discussed below would be likely to occur.

1. Human Environment

Some people are allergic to the tiny hairs on gypsy moth caterpillars. These people would suffer minor allergic reactions, primarily rashes, if gypsy moths were allowed to become established. In addition, irritation to eyes and throat are common reactions in heavily infested outbreaks. During outbreaks, gypsy moth caterpillars crawl over sidewalks, patios, lawn furniture, and the like, and they may even enter houses. In heavily infested areas, large numbers of caterpillars limit some people's enjoyment of the outdoors. The droppings and defoliation are not aesthetically pleasing to those involved in recreational activities.

2. Ecological Environment

The ecological effects are expected to be similar to those of Asian gypsy moth, which were examined by the Forest Service. A large proportion of

the trees located in the area and surrounding areas are host trees and are threatened by gypsy moth defoliation. Gypsy moth feeding can lead to changes in forest stand composition. Nesting sites and cover would be reduced. Although major water sources are not located within the treatment site, if gypsy moths were to spread to other areas changes in water quality and effects to aquatic organisms would be seen. The loss of vegetation in the area could lead to increased erosion of soil and loss of moisture retention.

B. Use of B.t.k.

B.t.k. is a naturally occurring soil bacterium. When applied on foliage and ingested, it is toxic to most caterpillars (larvae of butterflies and moths). Other insects and vertebrates are not affected by this bacterium. Human health risks from use of B.t.k. in gypsy moth eradication programs have been shown to be extremely low. There are no known effects to mammals, amphibians, birds, or reptiles.

Modern aqueous formulations of B.t.k. contain no organic solvents. None of the inert ingredients in these formulations are on list 1 (Inerts of Toxicological Concern) of the Environmental Protection (EPA) or list 2 (Potentially Toxic Inerts). In addition, all of the inert ingredients are approved by the Food and Drug Administration for use in foods or in food processing. B.t.k. products are organic and are designated by EPA as exempt from residue tolerances. This means that there are no limitations on the amount of residue that exists on food items. B.t.k can be used on food crops up to and including the day these products are harvested, as well as on stored food products. All sensitive terrestrial insects are Lepidoptera and include some species of butterfly. The risk characterization for other wildlife species is unambiguous under foreseeable conditions of exposure; however, adverse effects are unlikely to occur.

Application of B.t.k. poses negligible risk to human health or the environment. B.t.k.'s host range is limited to caterpillars of Lepidoptera (moth and butterflies). The biological pesticide, B.t.k., is now commonly the material of choice for gypsy moth eradication programs in the United States. In the past decade, improved formulations and more concentrated applications of B.t.k. have increased gypsy moth larval mortality and have provided more consistent foliage protection where it has been used. Aqueous B.t.k. formulations do not affect aquatic organisms and can be applied over open water. B.t.k. is relatively expensive because three applications are usually required to ensure eradication.

1. Human Environment

If directly exposed to B.t.k. application, some individuals (particularly workers who handle or mix the pesticides) may develop minor irritation of the skin, eyes, or respiratory tract. These effects are relatively mild and transient. Pathogenic effects are not likely, even in individuals with impaired immune systems. Allergic responses to B.t.k. are conceivable, but have not been documented. Table 9–4 and figure 9–1, found in appendix F of the 1995 Final EIS for Gypsy Moth Management in the United States (USDA, 1995) clearly and concisely shows human risks due to gypsy moth and all treatment alternatives including B.t.k.

In 1998, EPA published Reregistration Eligibility Decision *Bacillus thuringiensis* (EPA 1998) in which the agency concluded:

"Based on the reviews of the generic data for the active ingredient, *Bacillus thuringiensis*, the Agency has sufficient information on the health effects of *Bacillus thuringiensis* and on its potential for causing adverse effects in fish and wildlife and the environment. The Agency has determined that *Bacillus thuringiensis* products, manufactured and used as specified in this Reregistration Eligibility Decision will not pose unreasonable risks or adverse effects to humans or the environment. Therefore, the Agency concludes that products containing *Bacillus thuringiensis* for all uses are eligible for reregistration."

2. Ecological Environment

Some non-target Lepidoptera larvae (caterpillars) present in the proposed application area would likely be killed by the application of B.t.k. In turn, theoretically, those animals dependent on caterpillars for food may be affected. However, depressions in caterpillar populations are expected to be temporary due to recolonization from adjacent areas and the high reproductive capacity of most insects. B.t.k. is only effective against early instars of caterpillars. Therefore, Lepidoptera larvae exposed in late instars and those present at times other than during treatment applications are not affected.

There are no known effects from B.t.k. to mammals, amphibians, birds or reptiles. In particular, the two species of particular concern (black capped vireo, *Vireo atricapilla* and the golden cheeked warbler, *Dendroica chrysoparia)* generally should not be affected by B.t.k. Studies have indicated that there have been no significant differences between treated and untreated areas in the numbers of bird eggs hatched and in nestling growth and development. When caterpillars aren't available, the birds switch to other available prey. In addition, the treatment area is small so the birds that are in the area will be able to travel a little further out to forage for food.

Water quality and soil conditions should not be directly affected by B.t.k. B.t.k. is not likely to affect most aquatic organisms and naturally occurs in soils worldwide. B.t.k. reduces the amount of defoliation by leaf-eating caterpillars; therefore, changes in microclimate due to defoliation are not expected after B.t.k. application.

C. Use of Mating Disruption

Mating disruption entails the aerial application of tiny plastic flakes or beads that contain disparlure. In this case, Disrupt II® mixed with Gelva® Multipolymer Emulsion 2333 will be used. The effect is to confuse male moths and prevent them from locating and mating with females.

1. Human Environment

The risk of toxic effects from exposure to disparlure is believed to be slight (USDA, 1995). Male gypsy moths will be attracted to workers who have direct contact with the chemical in sufficient quantity. Such exposure is unlikely except in some cases for project workers, but exposure may attract male gypsy moths. The effect could be annoying and sometimes stressful for these individuals who have an aversion to insects, but is not known to pose a health risk. The absence of gypsy moth in other parts of Texas makes it unlikely that the attraction would be experienced unless eradication was unsuccessful. The general public is not likely to be exposed to sufficient amounts of disparlure to experience the rare effect.

2. Ecological Environment

Disparlure has low toxicity to vertebrates and is specific to the gypsy moth. Disparlure is not likely to cause changes in the number of diversity of non-target organisms, forest conditions, water quality, microclimate, or soil productivity and fertility.

D. Use of Mass Trapping Using Disparlure

Disparlure is a chemical sex attractant that attracts male gypsy moths. Intensive mass trapping involves the use of large numbers of disparlure-baited pheromone traps—up to nine traps per acre. Section 5 from appendix G of the 1995 Final EIS for Gypsy Moth Management in the United States thoroughly discussed the ecological effects of disparlure, B.t.k., and other treatment options on the environment.

1. Human Environment

Data are not sufficient for a quantitative risk assessment. By analogy to other insect pheromones, risks of toxic effects, if any, are likely to be slight for the general public and workers. Disparlure is very persistent on and in the body. Individuals exposed to disparlure may attract adult male moths for prolonged periods of time (up to 2 to 3 years). This may be a

considerable nuisance in gypsy moth infested areas such as the eastern United States. The level of exposure required to cause the attractant effect cannot be characterized, although the likelihood of this effect is much greater for workers than for the general public. However, exposure to disparlure from mass trapping is unlikely and would only occur if someone were to tamper with the trap themselves.

2. Ecological Environment

In acute toxicity tests, disparlure was not toxic to mammals, birds, or fish. Pheromone traps do catch small numbers of non-target organisms. However, since the pheromone in the trap is specific to gypsy moth, the number of non-target organisms affected will be very small and will have a minimal impact to the environment.

E. Integrated Eradication Programs

Under this alternative, B.t.k. will be used in conjunction with mass trapping and mating disruption. B.t.k. will be applied during the caterpillar stage of life for the gypsy moth. Following the three applications of B.t.k. at the time of adult flight, there will be an application of disparlure in the form of Disrupt II® that will be applied to disrupt mating of the gypsy moth. The presence of this pheromone confuses the male moths making it difficult for any male moths that still exist to locate and mate with a female gypsy moth. In addition, selective use of mass trapping would be made to capture male moths and remove them from the mating population.

The environmental effects and human effects are a combination of the same effects seen in alternatives B, C, and D. However, the integrated use of treatments will have a higher probability of eradicating the gypsy moth from the treatment area, thus eliminating the negative impacts that would occur under the no action alternative.

The goal of the program is to eradicate the gypsy moth from Travis County, Texas. The use of B.t.k. can achieve the goal. B.t.k. combined with mass trapping and mating disruption will increase the likelihood of achieving the eradication goal. It is less likely that mass trapping or mating disruption alone could result in eradication of a gypsy moth population. The density of vegetation and the terrain in the treatment area would make it difficult for traps to be placed and therefore shouldn't be relied on as the sole eradication method in this area. However, if the program is unsuccessful in eradicating the gypsy moth, we will need to revisit the issues, potentially increasing the applicaiton area and treatments for subsequent years.

V. Other Issues

A. Cumulative Impacts

Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agencies or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR § 1508.7). Cumulative impacts resulting from an eradication program can be caused by 1) multiple treatments of the same area in the same season (that is, three applications of B.t.k. in this program), 2) combining treatment types (e.g., B.t.k. and mating disruption in this program) within the same project area and 3) retreatment of the same project area in following years. Cumulative impacts may be additive resulting in greater effect than the sum of the individual effects.

The cumulative impacts in the proposed alternative could occur from the three B.t.k. applications that extend the time of potential exposure and risk to a greater number of non-target lepidopterans. However, because the proposed eradication area is relatively small, the opportunity for recolonization of non-target lepidopterans from the surrounding areas is high. The likelihood of previous applications of B.t.k. to this area are low in that other pest Lepidoptera requiring control treatments are not known to regularly occur in this part of Texas.

Because B.t.k. application, mass trapping, and mating disruption have very little potential for human and environmental effects, when the techniques are used together they also have very little cumulative impact. B.t.k. application used in conjunction with mass trapping and mating disruption pose little or no risk to non-target organisms. The risk of cumulative impacts to humans, water quality, microclimate, and soil productivity is minimal.

In the event that the gypsy moth outbreak establishes itself in this small area, future treatments may be required to eliminate them. Application of B.t.k. over several years may lead to decreased likelihood that non-target lepidopterans reestablish populations in this area. However, if future treatments are needed, a subsequent EA will be conducted and these risks will be evaluated further.

B. Threatened and Endangered Species

Section 7 of the Endangered Species Act (ESA) and its implementing regulations require Federal agencies to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of critical habitat. APHIS has considered the potential effects of the proposed program on endangered or threatened species and their habitats.

APHIS has prepared a biological assessment (BA) and, based upon the findings of that analysis, has determined that the proposed program for eradication of the gypsy moth using B.t.k., mass trapping, mating disruption, or a combination of these treatments in Travis County, Texas, may affect, but is not likely to adversely affect the endangered black-capped vireo (*Vireo atricapillus*) or the endangered golden-cheeked warbler (*Dendroica chrysoparia*). In addition, APHIS has determined that the proposed program will have no effect on the endangered Barton Springs salamander (*Eurycea sosorum*) that also occurs in Travis County. APHIS submitted the BA to the U.S. Fish and Wildlife Service (FWS), and received concurrence with this determination on February 17, 2006.

C. Site Specific Concerns

There are two known sensitive sites within the spray area where mass trapping will be favored over the use of aerial application of B.t.k. and Disrupt II®. These sites include a 1/4 acre of school grounds and a child care center located on the opposite side of the spray area from the school. In addition, there have been concerns for individuals who have multiple chemical sensitivities. For these areas, and any other areas that come to the attention of the program as being sensitive areas, mass trapping will be used and a buffer zone will be established surrounding these areas to ensure that B.t.k. and Mating Disruption are not applied in these areas. In addition to sensitive areas, there has been concern from some individuals in the area about the collection of rain water from their rooftops. Based on the Risk Assessment it is unlikely that there will be any effects from human consumption of these compounds except for those individuals that are sensitive (Durkin, 2004; Klotzbach et. al., 2004). Citizens will be on notice regarding the timing of the application of chemicals. For those citizens who have concerns about the consumption of these products, they can take appropriate measures to ensure that water is not collected during and immediately after the application of these chemicals.

It is advised that individuals stay indoors during the application of these chemicals to ensure that any negative effects are limited. Sensitive individuals should be more aware of when the application occurs and to limit their exposure to these chemicals.

Consistent with Executive Order (E.O.) 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," APHIS considered the potential for disproportionately high and adverse human health or environmental effects on any minority or low income populations. The population in the affected area is composed mostly of Caucasians with some individuals of Hispanic and Middle Eastern descent. The environmental and health effects from the proposed applications are minimal and are not expected to have disproportionate adverse effects to any minority or low-income population.

Consistent with E.O. 13045, "Protection of Children From Environmental Health Risks and Safety Risks," APHIS considered the potential for disproportionately high and adverse environmental health and safety risks to children. The children in the area are not adversely affected disproportionately over adults from the program actions proposed.

VI. Listing of Agencies and Persons Consulted

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Riverdale, MD 20737–1236

USDA, APHIS
State Plant Health Director
903 San Jacinto Boulevard, Suite 270
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VII. References

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USDA—See U.S. Department of Agriculture

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Finding of No Significant Impact for
Gypsy Moth Cooperative Eradication Program
Travis County, Texas
Environmental Assessment
February 2006

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS) has prepared an environmental assessment (EA) for its participation in the eradication of the gypsy moth population in Travis County, Texas. The EA, incorporated by reference into this document, is tiered to the "Final Environmental Impact Statement for the Gypsy Moth Management in the United States: A Cooperative Approach." This EA is available from:

U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine
Program Support
4700 River Road, Unit 134
Riverdale, MD 20737

or

U.S. Department of Agriculture
Animal and Plant Health Inspection Service
903 San Jacinto Boulevard, Suite 270
Austin, TX 78701–2450

The EA analyzed the following alternatives: no action, use of *Bacillus thuringiensis* var. *kurstaki*, mating disruption, mass trapping, and an integrated eradication program. The integrated eradication program was preferred because of its capability to achieve the eradication objective in a way that reduces the magnitude of potential environmental consequences and provides the most opportunity for successful eradication.

APHIS has determined that there would be no significant impact to the human environment from the implementation of the proposed program by implementing any of the action alternatives in the EA. APHIS' Finding of No Significant Impact for this program was based upon its analysis of the program's characteristics and its anticipated environmental consequences, as analyzed in the EA. APHIS has considered the potential effects on endangered and threatened species and their critical habitats, and has received concurrence with the U.S. Fish and Wildlife Service.

I find that the proposed program will pose no disproportionate adverse effects to minority and low-income populations and the actions undertaken for this program are entirely consistent with the principles of "environmental justice," as expressed in Executive Order 12898, and the protection of children, as expressed in Executive Order 13045. Lastly, because I have not found evidence of a significant environmental impact associated with the proposed program, I further find that an environmental impact statement does not need to be prepared and that the proposed program may be implemented.

/S/ 2/27/06

Stuart Kuehn
State Plant Health Director
Animal and Plant Health Inspection Service

Date