



Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

Asian Gypsy Moth Cooperative Response Program in Stevens and Ferry Counties, Washington

Final Environmental Assessment, April 2022

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Table of Contents

- I. Introduction 1
 - A. Purpose and Need..... 2
 - B. Authorizing Laws and Regulations 3
 - 1. Federal Laws and Regulations..... 3
 - 2. State Laws and Regulations..... 3
- II. Alternatives..... 4
 - A. No Action Alternative 5
 - B. Preferred Alternative 5
- III. Potential Environmental Consequences 8
 - A. No Action Alternative 8
 - 1. Ecological Impacts 8
 - 2. Human Health..... 10
 - B. Preferred Alternative 10
 - 1. Ecological Impacts 10
 - 2. Human Health..... 12
 - C. Other Considerations..... 12
 - 1. Environmental Justice..... 12
 - 2. Executive Order 13045 “Protection of Children from Environmental Health Risks and Safety Risks” 13
 - 3. Historic and Cultural Resources 13
- IV. Listing of Agencies Consulted 15
- V. References 16

List of Figures

- Figure 1. The proposed area for mass trapping in Stevens County, Washington. 6
- Figure 2. The proposed area for mass trapping, delimitation and general survey in Stevens and Ferris Counties, Washington..... 7

List of Abbreviations and Acronyms

AGM	Asian gypsy moth
Btk	<i>Bacillus thuringiensis var kurstaki</i>
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
EA	Environmental Assessment
EIS	environmental impact statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FIFRA	The Federal Insecticide, Fungicide and Rodenticide Act
FS	Forest Service
GM	European (also known as North American) gypsy moth
NEPA	National Environmental Policy Act of 1969
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
T&E	Threatened and Endangered
USDA-APHIS	U.S. Department of Agriculture, Animal and Plant Health Inspection Service
USFWS	U.S. Fish and Wildlife Service
WA	Washington
WSDA	Washington Department of Agriculture

I. Introduction

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), in cooperation with the Washington Department of Agriculture (WSDA), is proposing an Asian gypsy moth (AGM) response program in Stevens and Ferris Counties, Washington (WA).

The gypsy moth is one of the most destructive pests of trees and shrubs in the United States. There are two types of gypsy moths—the European gypsy moth (also known as North American) (GM) and the Asian gypsy moth (AGM). The European gypsy moth (*Lymantria dispar*) is established in the eastern half of the United States, and defoliates an average of 700,000 acres each year, causing millions of dollars in damage. The target of the 2022 gypsy moth program in Washington is the AGM. The AGM (including *Lymantria dispar asiatica*, *Lymantria dispar japonica*, *Lymantria albescens*, *Lymantria umbrosa*, and *Lymantria postalba*) is an exotic pest not known to occur in the United States. Like the European gypsy moth, AGM prefers forest habitats and can cause serious defoliation and deterioration of trees and shrubs. The GM has more than 250 known host plants but prefers oak, while the AGM has a much broader host range, including larch, oak, poplar, alder, willow, and some evergreens. Another difference between Asian and European gypsy moths is that AGM females can fly while GM females cannot fly.

This broad range of possible host plants, combined with the female's ability to fly long distances, could allow AGM to spread rapidly. In contrast, the European gypsy moth has taken more than 140 years (since 1869) to spread throughout the United States from the Northeast to the Southeast and the Midwest (APHIS, 2015). Large infestations of gypsy moths can completely defoliate trees, leaving them weak and more susceptible to disease or attack by other insects. If defoliation is repeated for two or more years, it can lead to the death of large sections of forests, orchards, and landscaping. Any introduction and establishment of AGM in the United States would pose a major threat to the environment and urban, suburban, and rural landscapes (APHIS, 2015).

Asian gypsy moth egg masses may be found on tree trunks, limbs, or leaves, as well as on stones, walls, logs, lawn furniture, and other outdoor objects. Each egg mass can contain hundreds to more than 1,000 eggs. The mass is covered with buff or yellowish fuzz made from the female's body hair. While the velvety egg masses average 1½ inches long and three-fourths of an inch wide; they are often as small as a dime. Eggs begin hatching in the spring. All the damage caused by the gypsy moth happens during the caterpillar stage, as the insects feed on leaves during this active period of growth. Once caterpillars stop feeding, they enter the pupal stage. This stage typically begins in June or July. Because egg hatch and pupation depend on weather and temperature, they may occur earlier or later in different areas. Adult moths emerge from their dark-brown pupal cases in 10 to 14 days. Adult males have grayish-brown wings and a wingspan of 1 ½ inches. Adult female moths are white and larger, with wingspans of 3 ½ inches or more.

Gypsy moths do not feed in the moth (adult) stage (which lasts 1 to 3 weeks); they only mate and lay eggs. Eggs are laid between June and September, depending on weather and location. The eggs remain dormant during the winter and develop and hatch the following spring.

AGM infestations spread in several ways. Adult female moths may fly to other areas to lay eggs or newly hatched AGM caterpillars may climb to tree crowns, where the wind picks up their silken threads and carries them to other areas. In addition, people can inadvertently transport egg masses or pupae. AGM egg masses tolerate extremes in temperature and moisture and travel well on logs, lawn furniture, nursery stock, pallets, shipping containers, and the hulls and rigging of ships.

WSDA conducts general statewide surveys each year for GM and AGM. As part of the statewide survey a GM trap was deployed at the entrance of the Kamloops Island Campground in Stevens County, Washington on June 28, 2021. One specimen was collected in the trap on August 25, 2021. No other AGM have been detected; however, the level of infestation at the Kamloops Island Campground and the surrounding area is currently unknown.

A. Purpose and Need

The purpose of the proposed action is for USDA-APHIS and WSDA, to determine the extent of the AGM population in Stevens and Ferry Counties, Washington, and to reduce the number of AGM individuals where additional moths are detected. There is a need for this proposed action because if AGM were to become established in the United States the damage would likely be more extensive than damage from the GM that is established in the eastern United States. Female AGM can fly long distances making it probable that AGM could spread more quickly in the United States compared to the GM. AGM can completely defoliate trees, leaving them weak and more susceptible to disease or attack by other insects. If defoliation is repeated for two or more years it can lead to the death of large sections of forests, orchards, and landscaping. (APHIS, 2015).

USDA-APHIS and USDA-Forest Service (FS), two agencies within the USDA, support GM and AGM response work. Each agency has different roles and responsibilities in GM and AGM management. Per the revised memorandum of understanding between USDA-APHIS and the USDA- FS, signed in 2009, USDA-APHIS is responsible for treatments of 640 acres or less, while the USDA-FS' State and Private Forestry is the lead agency for treatment areas larger than 640 acres. Proposed actions would occur wherever there is a GM or AGM outbreak in the program area covered under this environmental assessment (EA). The preferred alternative (proposed action) proposes a cooperative approach between USDA-APHIS and WSDA to respond to the current AGM detection in Stevens County, Washington.

The USDA-APHIS prepared this EA to comply with the provisions of the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. §§ 4321 et seq.) as prescribed in implementing regulations adopted by the Council on Environmental Quality (CEQ) (40 Code of

Federal Regulations (CFR) parts 1500-1508), USDA's NEPA regulations at 7 CFR part 1b, and USDA-APHIS NEPA implementing procedures (7 CFR part 372) for the purpose of evaluating the potential effects of the proposed action on the human environment (40 CFR § 1508.1(m)).

The alternatives being considered were analyzed in detail in the 1995 final environmental impact statement (EIS) for GM management in the United States and the 2012 supplemental EIS (USDA 1995, 2012). The findings of that EIS regarding the alternatives being considered are summarized and incorporated by reference into this EA.

B. Authorizing Laws and Regulations

1. Federal Laws and Regulations

Authorization to conduct treatments for AGM infestations is given in the Plant Protection Act of 2000 (7 U.S.C. section 7701), and the cooperation with State agencies in Administration and Enforcement of Certain Federal Laws (7 U.S.C. section 450). The Cooperative Forestry Assistance Act of 1978 (Public Law (P.L.) 95-313) provides the authority for Federal and State cooperation in managing forest insects and diseases. The 1990 Farm Bill (P.L. 101-624) reauthorizes the basic charter of the Cooperative Forestry Assistance Act. The NEPA of 1969 requires detailed environmental analysis of any proposed Federal action that may affect the human environment. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) of 1947, as amended, requires pesticides used within the United States to be registered by the U.S. Environmental Protection Agency (EPA). Section 7 of the Endangered Species Act prohibits Federal actions from jeopardizing the continued existence of federally listed threatened, endangered, or candidate species or adversely affecting critical habitat of such species. Section 106 of the National Historical Preservation Act and 36 CFR part 800: Protection of Historic Properties requires consultation with the State Historic Preservation Officer regarding the proposed activities.

2. State Laws and Regulations

WSDA has authority under Chapter 17.24 of the Revised Code of Washington, Insect Pests and Plant Diseases, to eradicate or control insect pests that may endanger agricultural and horticultural industries in the State of Washington.

II. Alternatives

This EA is tiered to the USDA's 1995 Final EIS and 2012 supplemental EIS for GM Management in the United States. The preferred alternative in the 1995 EIS is alternative 6: Suppression, Eradication, and Slow the Spread. Under alternative 6 of the EIS, six treatment options were analyzed with an additional treatment option analyzed in the 2012 supplemental EIS:

- Btk—a biological insecticide containing the bacterium *Bacillus thuringiensis* var *kurstaki* (Btk). The insecticide is specifically effective against caterpillars of many species of moths and butterflies, including GM.
- Diflubenzuron (Dimilin[®])—an insect growth regulator that interferes with the growth of some immature insects.
- GM Virus (Gypcheck[®])—a nucleopolyhedrosis virus which occurs naturally and is specific to GM. Gypcheck is an insecticide product made from the GM nucleopolyhedrosis virus.
- Mass Trapping—a treatment that consists of large numbers of pheromone traps used to attract the male GM thus preventing them from mating with females and, thereby, causing a population reduction.
- Mating Disruption—a treatment that consists of a carrier (i.e., tiny plastic flakes, beads, etc.) that release disparlure, a synthetic GM sex pheromone. The pheromone confuses male moths and prevents them from locating and mating with females.
- Sterile Insect Technology—a treatment that consists of an aerial release of many sterile male GM. This reduces the chance that female moths will mate with fertile males, which results in progressively fewer and fewer fertile egg masses being produced, and eventual elimination of the population.
- Tebufenozide—an insecticide that controls molting in various insects and other invertebrates.

Of the treatment options listed above, USDA-APHIS and WSDA propose the use of mass trapping to determine the extent of AGM populations and to reduce their numbers if additional moths are present. Mass trapping along with delimitation and general survey will allow USDA-APHIS and WSDA to determine the extent of the AGM population in Steven and Ferry Counties, WA while reducing AGM numbers, and determine whether there is a need for a future program to eradicate the AGM population using insecticide treatments. Once the area of the AGM infestation is determined USDA-APHIS and WSDA will determine which of the six options described in the USDA 1995 Final EIS and 2012 EIS will be implemented. The selected option and potential impacts to human health and the environment will be analyzed in a future EA if additional AGM are detected.

This EA analyzes the potential environmental consequences associated with two alternatives: A) no action and B) the preferred alternative (proposed action) to implement a response program using mass trapping, delimitation survey, and general survey in Stevens and Ferry Counties, Washington.

A. No Action Alternative

NEPA regulations (40 CFR parts 1500-1508) require the scope of analysis to include a no action alternative in comparison to other reasonable courses of action. Under the no action alternative, USDA-APHIS would not participate in the AGM response program. Other Federal and non-federal entities, including the State of Washington, could take measures to conduct trapping; however, USDA-APHIS would not assist in either the control or funding of these measures.

B. Preferred Alternative

Under the preferred alternative, USDA-APHIS would provide funding for the AGM response program in Stevens and Ferry Counties, Washington.

The cooperative APHIS/WSDA Program proposes the use of mass trapping to determine AGM density and distribution. Mass trapping also serves to reduce the number of AGM by removing male individuals from the population and reducing reproduction of AGM. Traps will be deployed at 10 traps per acre resulting in approximately 280 delta traps baited with the gypsy moth pheromone, disparlure (see Figure 1). Disparlure is a synthetic pheromone that mimics the pheromone that female gypsy moth produce to attract male AGM. Male gypsy moths fly to the delta traps that contain disparlure and become trapped in the sticky material that coats the inside of the trap. The delta traps that will be used for mass trapping will be monitored weekly.

In addition to mass trapping, there will be precision delimiting and general detection survey using the same type of traps used in the mass trapping effort (see Figure 2). USDA-APHIS response guidelines recommend 49 traps per square mile centered on the catch site for the first two-mile radius and 25 traps per square mile for an additional three-mile radius (USDA, 2014). These traps will be monitored on a regular 2-week cycle. General detection survey traps will also be deployed in Stevens and Ferry counties at a density of one trap per square mile (USDA, 2019). General detection survey trapping is typically conducted on alternating years in eastern Washington. General detection survey detected AGM in 2021. General detection survey is proposed for 2022 due to the presence of AGM in 2021 and the need to determine if other AGM may be detected outside of the areas designated for mass trapping and delimitation survey. Additional traps will be deployed at a density of one trap per square mile, or one per high-risk location such as rail lines, off-loading facilities, business districts, and recreation areas for a total of approximately 200 traps.

Some of the grid points identified in Figures 1 and 2 are inaccessible due to primitive roads not suitable for vehicle travel or hiking, mining areas closed for safety, open grazing lands, active logging areas, large area burned during the 2021 wildfire season, and fenced/gated private

property with no known landowner present. Some areas are on private lands that will require permission by the landowner and may not be accessible if accessed is not granted. A total of approximately 1088 traps will be deployed for mass trapping, delimitation, and general detection.

Figure 1. The proposed area for mass trapping in Stevens County, Washington.

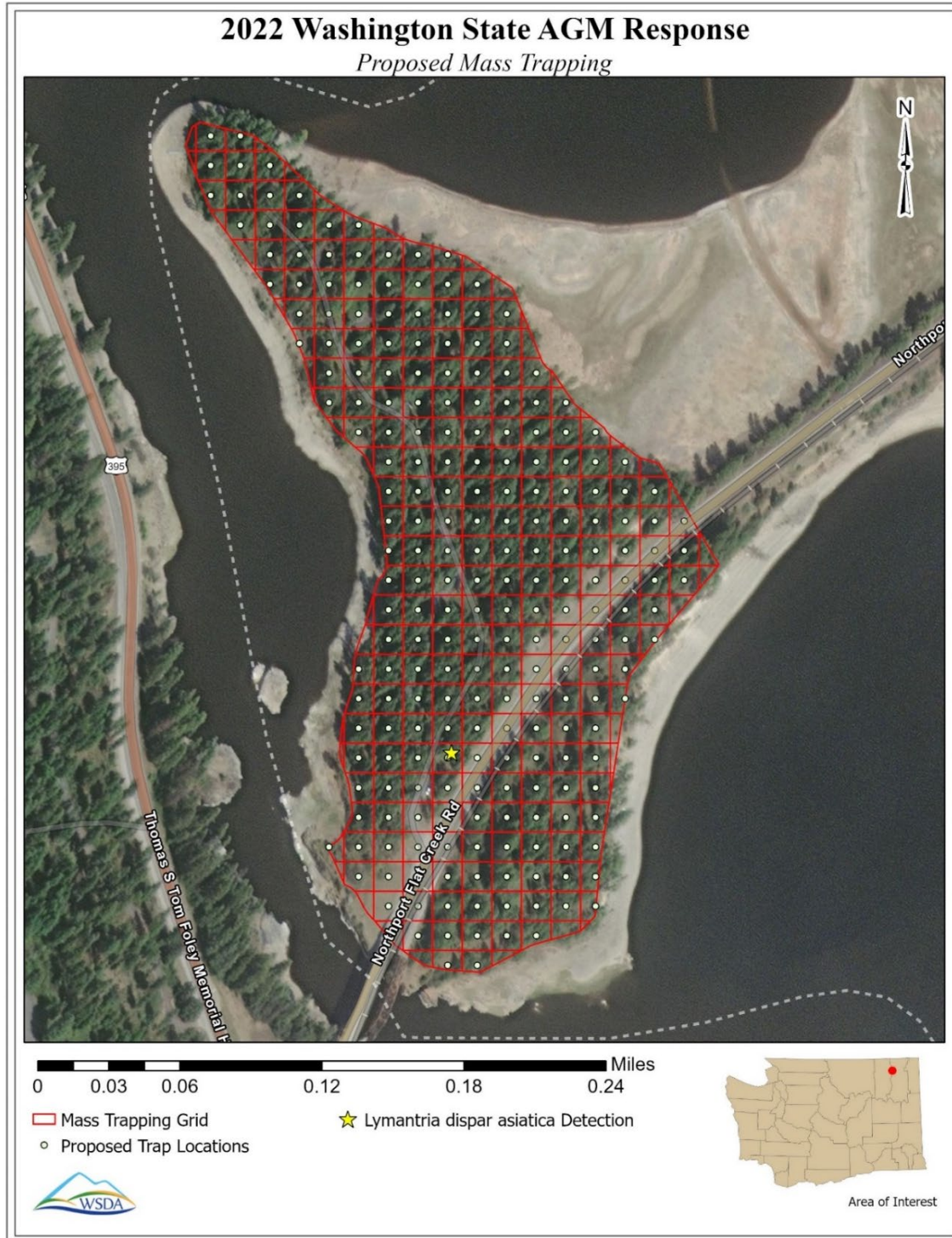
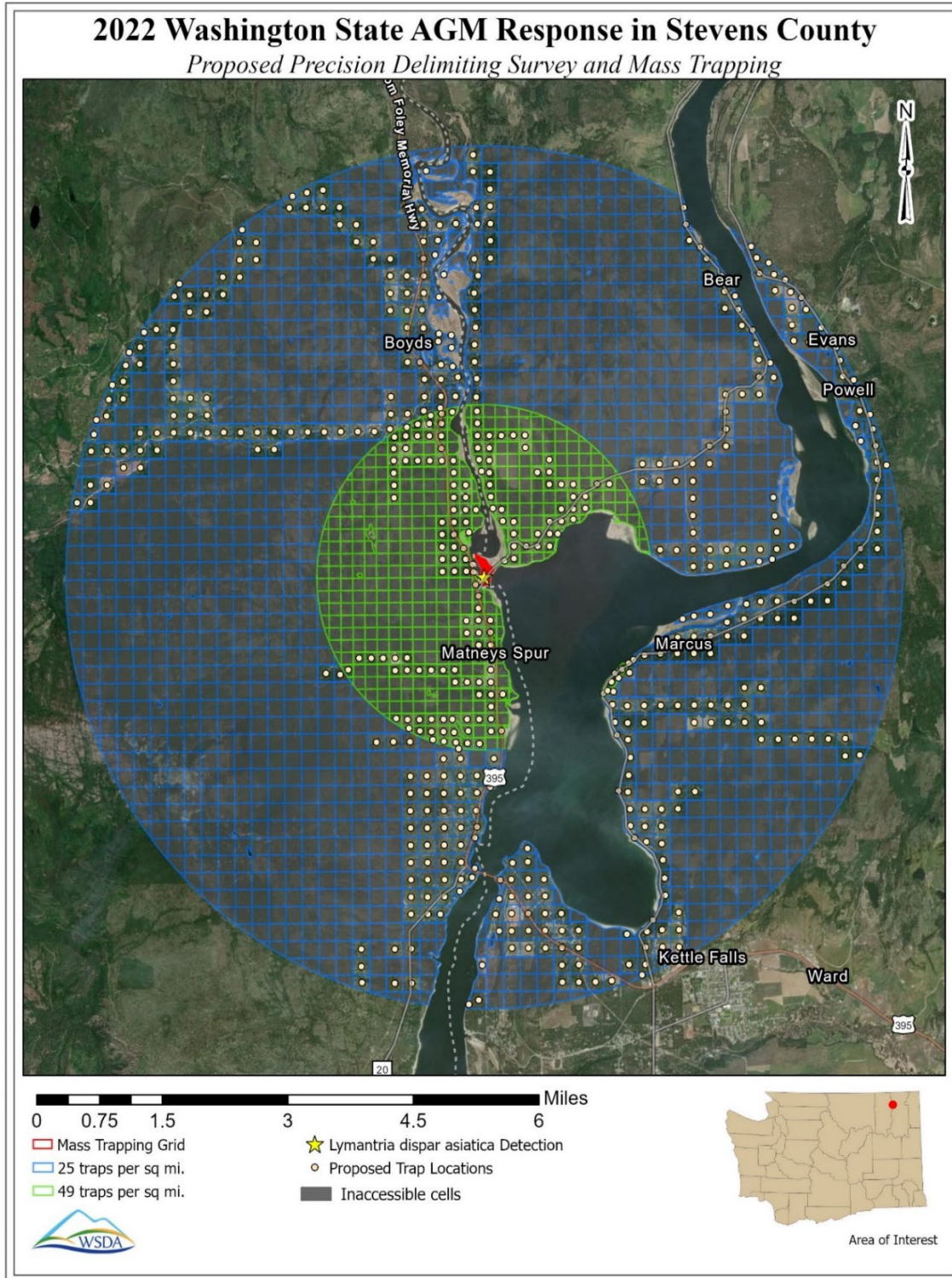


Figure 2. The proposed area for mass trapping, delimitation and general survey in Stevens and Ferris Counties, Washington.



III. Potential Environmental Consequences

This section evaluates the potential environmental impacts associated with each of the alternatives. The no action alternative is compared to the potential of the preferred alternative to affect human health and ecological resources. This section presents a short description of the environmental baseline for each environmental resource analyzed, followed by an analysis of the potential environmental impact to that resource. The potential impacts may be direct or indirect, of short or long duration, and either beneficial or adverse.

The area where mass trapping will occur is at the Kamloops Island campground which is part of the National Park Service (NPS) Lake Roosevelt National Recreation area. Lake Roosevelt is a 154-mile-long reservoir created on the Columbia River by Grand Coulee Dam. A 5-party Agreement is in place that divides the management of the reservoir between the NPS, Bureau of Reclamation, Colville Confederated Tribes, Spokane Tribe, and Bureau of Indian Affairs. Kamloops Island is mostly forested. Canopy cover is comprised of ponderosa pine (83%), Douglas fir (15%), and larch (2%). Understory is comprised of serviceberry, Oregon grape, chokecherry, and kinnikinnick.

Other areas outside Kamloops Island where delimitation and general survey will be conducted include a mix of forested areas plus open areas such as shrub, sedge, and grasslands, some of which may be used for grazing. The southern edge of the general survey boundary includes the edge of the town Kettle Falls, WA. The eastern boundary of the general survey area includes the towns of Marcus, Evans, and Powell, WA. North of Kamloops Island is the small unincorporated community of Boyds (USEPA, 2022). The Columbia River bisects the area that will be under general survey (Figure 2).

A. No Action Alternative

Selection of the no action alternative would likely result in the establishment of AGM in Stevens County, which could lead to commensurate damage to trees relative to the level of infestation. The no action alternative would allow AGM to flourish in the existing area and continue to spread into surrounding areas. The ecological and human health effects associated with no action were examined in the 1995 final EIS and the 2012 supplemental EIS for GM management in the United States (USDA 1995, 2012). This EA incorporates by reference the no action evaluation in both EIS documents. A summary of ecological and human health impacts is provided below.

1. Ecological Impacts

Most of the environmental impacts associated with AGM are caused by the larval stage. In areas where AGM populations are high, trees can be defoliated, leading to stress (USDA 1995). Trees that are stressed are more susceptible to diseases and other plant pests (USDA 1995). In

circumstances where high populations are sustained over several years, AGM feeding damage can cause tree mortality (USDA 1995).

If left untreated, AGM populations would increase and expand into surrounding areas. AGM larval feeding can lead to changes in forest stand composition (USDA 1995). Nesting sites and cover for birds and other animals would also be reduced (USDA 1995). The loss of vegetation in the affected areas could lead to increased erosion of soil and loss of soil moisture retention (USDA 1995). GM infestations can lead to changes in water quality and effects to aquatic organisms (USDA 1995). In the Pacific Northwest defoliation in riparian habitats could lead to increased water temperatures, affecting aquatic life. AGM populations would increase without any treatments and compete with native Lepidoptera for resources (Manderino et al. 2014), alter native flora, and increase the resident predator and parasitoid populations that could impact native Lepidoptera populations (Scriber 2004).

(1) Migratory Bird Treaty Act

Federal law prohibits an individual to pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird or any part, nest, or egg of any such bird (16 U.S.C. §§ 703-712; 50 CFR § 21).

Under the no action alternative, USDA-APHIS will not improve habitat conditions for migratory birds, nor will it inadvertently disturb migratory birds.

(2) Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. § 668) prohibits the take of bald or golden eagles unless permitted by the US Fish and Wildlife Service (USFWS). The term “take” is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, or disturb” (50 CFR § 22.3). Disturb means to agitate or bother to a degree that causes . . . injury . . . a decrease in its productivity . . . or nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior (§ 22.3).

Stevens and Ferris Counties are not within the golden eagle’s nesting and habitat range (WDFW, 2022a). Bald eagle’s may be present in both counties, as they are found along marine shorelines and major rivers of western and northeastern Washington (WDFW, 2022b). USDA-APHIS conducted a literature review and did not find evidence of the AGM directly impacting bald eagles. The potential loss of trees may reduce the availability of nesting sites if AGM were to become established. However, the Program expects bald eagles to utilize nearby trees that are not hosts to the AGM. Also, over time, trees that succumb to AGM and secondary pests and diseases may be replaced with trees that are not hosts to the AGM. Therefore, the no action alternative is unlikely to have any negative impacts on nesting bald eagles.

(3) *Endangered Species Act*

Section 7 of the ESA and ESA's implementing regulations require Federal agencies to ensure that their actions are not likely to jeopardize the continued existence of federally listed threatened and endangered (T&E) species or result in the destruction or adverse modification of critical habitat. USDA-APHIS does not expect the no action alternative to affect T&E species in the short term because of the current AGM detection. The no action alternative would also not impact critical habitat for species where critical habitat has been designated. However, under the no action alternative AGM would be expected to become established and expand over time resulting in potential future environmental impacts, including T&E species.

2. Human Health

Some people are allergic to the tiny hairs on AGM caterpillars. These people could suffer minor allergic reactions (primarily rashes) if AGM became established. Also, irritation to eyes and throat are common reactions with increased AGM infestations (USDA 1995). In heavily infested areas, large numbers of caterpillars limit enjoyment of the outdoors for some people due to AGM larval droppings and defoliation (USDA 1995).

B. Preferred Alternative

The preferred alternative is the use of disparlure for mass trapping and delimitation of AGM populations in Stevens and Ferry Counties, Washington. The ecological and human health effects associated with mass trapping were examined in the 1995 final EIS and the 2012 supplemental EIS for GM management in the United States (USDA 1995, 2012) as well as previous EAs for GM and AGM that are located at the APHIS website. This EA incorporates by reference the preferred alternative evaluation in both EIS documents. A summary of ecological and human health impacts is provided below.

Since part of the trapping program will occur on National Park Service land, USDA-APHIS and WSDA will obtain the appropriate permits and approval for placing traps prior to initiating mass trapping at the Kamloops Island campground. Permits to use trapping on NPS lands will further ensure the protection of park service trust resources and protect the public who may use the recreational area.

1. Ecological Impacts

Disparlure, or *cis*-7,8-epoxy-2-methyloctadecane, is a synthetically produced sex pheromone of the natural pheromone that is used by the female AGM to attract the male AGM. It is the lure used in the traps used in mass trapping and delimitation and general survey activities. In acute toxicity tests, disparlure was not toxic to mammals, birds, or fish (USDA 2006). Disparlure does exhibit some toxicity to aquatic invertebrates; however, the effects are related to study design and the limited solubility of the pheromone (USDA 2006). Studies using the freshwater flea, *Daphnia magna*, revealed toxicity was related to the organisms becoming physically trapped at the water surface where undissolved pheromone was present (USDA 2006). Risks to aquatic organisms are not expected in this program because all pheromone will be placed in sticky traps,

thus eliminating any potential offsite run-off or drift. Pheromone traps do catch small numbers of nontarget organisms that accidentally fly or crawl into the traps. However, because the pheromone in the trap is specific to AGM, nontarget insects will not be attracted to traps. The number of nontarget organisms affected will be very low and the pheromone will have minimal impacts to the environment. The traps used to trap and monitor AGM will pose minimal risk to most nontarget terrestrial and aquatic organisms due to limited exposure and low toxicity.

(1) *Migratory Bird Treaty Act*

AGM Program activities may temporarily disturb migratory birds. Some examples of anticipated disturbance associated with program activities includes the use of off-road vehicles and noise.

To minimize impacts to migratory birds, the Program will conduct as many activities as possible outside of the nesting season. However, USDA-APHIS and WSDA expects that some activities will take place during migratory bird breeding. There will be the presence of personnel in areas when traps are placed for mass trapping and delimitation and follow up collection. This disturbance will be of short duration and not anticipated to result in impacts to migratory birds. The traps will collect AGM and some non-target invertebrates; however, the lure is specific to AGM and no indirect impacts to birds that are insectivores are anticipated. Other invertebrates are available as prey items and the area for trapping is small relative to the foraging range of migratory birds.

(2) *Bald and Golden Eagle Protection Act*

As discussed under the no action alternative, bald eagles may occur within Stevens and Ferry Counties. If bald eagles are discovered in or near an area where a nest is located USDA-APHIS and WSDA will implement recommendations for avoiding disturbance at nest sites, where applicable. For bald eagles, USDA-APHIS would follow guidance as provided in the National Bald Eagle Management Guidelines (USFWS 2007). These guidelines include a 330–660-foot buffer from an active nest, depending on the visibility and level of activity near the nest. The placement of AGM traps for mass trapping and delimitation survey are not anticipated to result in disturbance to active bald eagle nests. The use of disparlure in the AGM traps will not result in any adverse impacts to bald eagles due to a lack of exposure to the lure, and no impacts to bald eagle prey items.

(3) *Endangered Species Act*

Section 7 of the ESA and ESA's implementing regulations require Federal agencies to ensure that their actions are not likely to jeopardize the continued existence of Federally listed threatened and endangered species or result in the destruction or adverse modification of critical habitat. Federally listed species under U.S. Fish and Wildlife Service (USFWS) jurisdiction in Stevens and Ferry Counties in Washington include Canada lynx (*Lynx canadensis*), grizzly bear (*Ursus arctos horribilis*), yellow-billed cuckoo (*Coccyzus americanus*), bull trout (*Salvelinus confluentus*), Spalding's catchfly (*Silene spaldingii*), and whitebark pine (*Pinus albicaulis*) (USFWS, 2022). Critical habitat for the bull trout also occurs within the program area (USFWS,

2022). Federally listed species under National Oceanic and Atmospheric Administration (NOAA) Fisheries jurisdiction include the Upper Columbus River steelhead (*Oncorhynchus mykiss*) and Upper Columbia River spring-run chinook salmon (*Oncorhynchus tshawytscha*) (NOAA Fisheries, 2022). No critical habitat for these species occurs in the program area (NOAA Fisheries, 2022).

Trapping will have no effect on any federally listed species, species proposed for listing, or critical habitat in the program area. The traps would not be attractive to listed species nor would they expose listed species to insecticides because none are used in the traps. Non-target insects are not attracted to the gypsy moth-specific pheromone, and the pheromone is not toxic to animals or plants. Traps are placed in locations that are accessible by pre-existing roads; thus, trampling of plants or habitat is not expected.

2. Human Health

Disparlure belongs to a group of compounds known as straight-chain lepidopteran pheromones. Acute toxicity studies with this group of compounds have shown very low mammalian toxicity through multiple exposure routes. The lack of toxicity with these types of compounds has resulted in reduced data requirements for their registration by the EPA (USEPA 2008). Sub chronic and chronic studies are limited for these types of chemicals; however, given the low acute toxicity and the fact that pheromones occur naturally in the environment, human health risks are expected to be minimal. The reduced data requirements introduce uncertainty into potential long-term risks; however, the lack of significant exposure to the public (given its use in sticky traps and the limited amount used in the proposed program) substantially reduces the potential for exposure and risk. Human health risks are expected to be minimal from using pheromone-baited traps in this program based on disparlure's long-term safety and the fact that it would be unlikely that humans would be exposed to the pheromone in the traps. The potential for exposure is greatest to workers who handle the concentrated product; however, following label requirements will minimize exposure.

Most disparlure use will be in forested areas except for some general survey work where low-density trapping will be used in high-risk areas such as rail lines, off-loading facilities, business districts, and recreation areas. Trapping will only be done on private lands with landowner consent.

C. Other Considerations

1. Environmental Justice

Federal agencies identify and address disproportionately high and adverse human health or environmental impacts of proposed actions on minority and low-income populations, as described in Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The no action alternative does not pose any highly disproportionate adverse effects to minority or low-income populations. The use of traps

for mass trapping and survey described under the preferred (proposed) alternative are based on AGM finds in the area. The area for mass trapping is a NPS site while delimitation and general survey are anticipated to include government and private lands in areas where human activity will be mostly hikers. General survey does include small communities; however, traps will be focused in high-risk areas for detecting AGM such as rail lines, off-loading facilities business districts, and recreation areas. Any traps placed on private property will only occur with landowner permission. The proposed use of pheromone traps will have minimal effects to those that use or may live on private lands that allow survey activities and will not have disproportionate effects to any minority or low-income population.

2. Executive Order 13045 “Protection of Children from Environmental Health Risks and Safety Risks”

Consistent with EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, USDA-APHIS considered the potential for disproportionately high or adverse environmental health and safety risks to children. The no action alternative does not pose any highly disproportionate health or safety risks to children. Under the preferred alternative, children are not expected to be adversely affected disproportionately more than adults from the proposed program actions. Pheromone traps used for mass trapping and delimitation are placed in areas typically out of the reach of children. No schools are located within the mass trapping, delimitation, and general survey areas. There is a school district in Kettle Falls, WA; however, the school is located outside of the boundary where general survey traps will be placed and is not considered a high-risk area for AGM. Children that may climb to areas where traps are located are at low risk from disparlure exposure. Disparlure has low toxicity to human health and any exposure would occur only by taking the traps apart and touching the wick that contains the pheromone. The most common side effect of human exposure through contacting the lure is that they may attract adult male moths. Disparlure is contained within the trap with no dietary exposure to children from crops or from drinking water resources.

3. Historic and Cultural Resources

The National Historic Preservation Act of 1966, as amended (16 United States Code (U.S.C.) §§ 470 et seq.), requires Federal agencies to consider the potential for impact to properties included in, or eligible for inclusion in the National Register of Historic Places (36 C.F.R. §§ 63 and 800) through consultation with interested parties where a proposed action may occur. This includes districts, buildings, structures, sites, and landscapes.

USDA-APHIS has examined the proposed action considering its impacts to national historical properties. USDA-APHIS queried the National Register of Historic Places (USDOJ 2022) for properties that are in the proposed Program area. There are two historic properties near the delimitation survey boundary for AGM. St. Paul’s Mission and Columbia River Bridge are on the southern boundary of the general survey boundary. These two structures and their

surrounding areas will not be adversely impacted by any of the trapping and survey activities described in the preferred alternative.

Executive Order 13175 *Consultation and Coordination with Indian Tribal Governments* calls for agency communication and collaboration with Tribal officials for proposed Federal actions with potential Tribal implications. The Archaeological Resources Protection Act of 1979 (16 U.S.C. §§ 470aa-mm), secures the protection of archaeological resources and sites on public and Tribal lands.

USDA-APHIS has determined that the proposed area for trapping contains ceded lands from the Methow, Okanagan, and Colville Tribes, with lands that are currently part of the Confederated Tribes of the Colville Reservation (USDA, 2022). USDA-APHIS sent a letter on February 9, 2022 about the proposed AGM response program to the following tribal nations: Kalispel Tribe of Indians; Spokane Tribe of Indians; and the Confederated Tribes of the Colville Reservation. USDA-APHIS and WSDA will address any Tribal questions or concerns about the proposed AGM response program.

V. Listing of Agencies Consulted

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

U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine
33400 9th Ave. S., Suite 200
Federal Way, WA 98003

U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Policy and Program Development
Environmental and Risk Analysis Services
4700 River Road, Unit 149
Riverdale, MD 20737

Washington State Department of Agriculture
Natural Resources Building
P.O. Box 42560
1111 Washington St. SE
Olympia, WA 98504-2560

VI. References

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WDFW. 2022b. Bald eagle (*Haliaeetus leucocephalus*) Washington Department of Fish and Wildlife. Accessed February 7, 2022 at <https://wdfw.wa.gov/species-habitats/species/haliaeetus-leucocephalus#desc-range>