



COUNTY OF MENDOCINO

DEPARTMENT OF PLANNING AND BUILDING SERVICES

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DATE: August 31, 2018

TO: California State Clearinghouse
Responsible and Trustee Agencies
Interested Parties and Organizations

SUBJECT: **Notice of Preparation of an Environmental Impact Report for the Proposed Integrated Wildlife Damage Management Program Project**

REVIEW PERIOD: **August 31, 2018 to October 1, 2018**

Mendocino County is the lead agency for the preparation of an Environmental Impact Report (EIR) for the proposed Integrated Wildlife Damage Management (IWDM) Program Project (proposed project) in accordance with the California Environmental Quality Act (CEQA), Section 15082. The purpose of the Notice of Preparation (NOP) is to provide responsible agencies and interested persons with sufficient information in order to enable them to make meaningful comments regarding the scope and content of the EIR. Your timely comments will ensure an appropriate level of environmental review for the proposed project.

Project Location: The project location consists of Mendocino County as shown in Figure 1.

Contact: For more information regarding the project, please contact Ignacio Gonzalez, Interim Director, Department of Planning and Building Services, (707) 234-6650. A copy of the NOP is available for review at the Mendocino County Department of Planning and Building Services (Ukiah Office), and on the Mendocino County website at the following link:

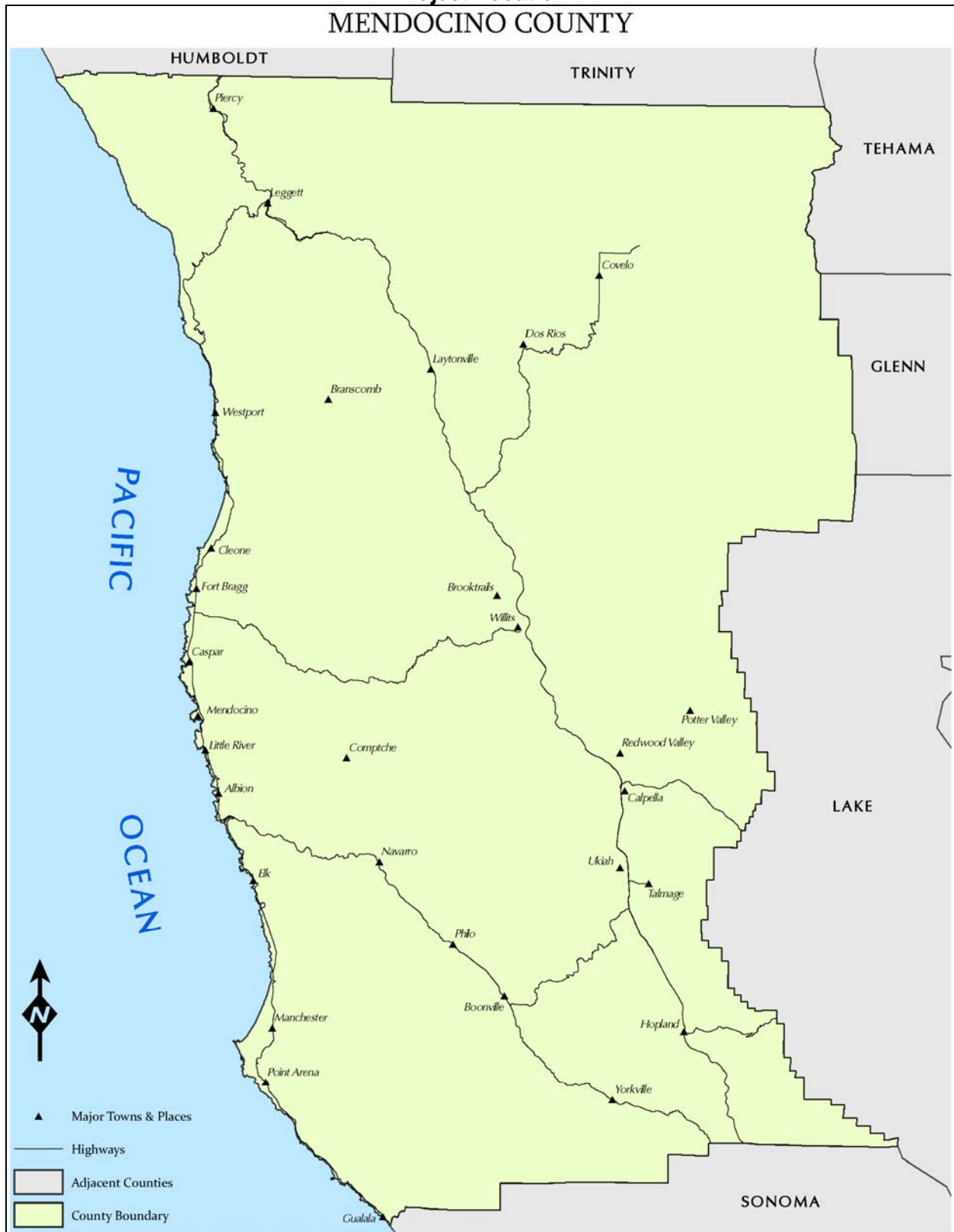
<https://www.mendocinocounty.org/government/planning-building-services/public-notice>

NOP Scoping Meeting: In addition to the opportunity to submit written comments, a public scoping meeting will be held to inform interested parties about the proposed project and to provide agencies and the public an opportunity to provide comments on the scope and content of the EIR. The meeting will be held on **September 18, 2018**, from 5:30 to 7:30 PM, at the Mendocino County Board of Supervisors Chambers at 501 Low Gap Road, Ukiah, California.

NOP Comment Period: Written comments should be submitted at the earliest possible date, but not later than 5:00 pm on **October 1, 2018** to Ignacio Gonzalez, 860 North Bush Street, Ukiah, CA 95482, (707) 234-6650, fax (707) 463-5709, or gonzalezn@mendocinocounty.org.

Initial Study: An Initial Study has been prepared for the proposed project and is attached to this document for public review. The EIR will address the CEQA-required environmental topics identified in the Initial Study as having the potential to result in a significant impact. Please note that the Initial Study includes a more detailed description of the proposed project and the non-lethal program alternative, summarized below.

Figure 1
Project Location



Summary of Proposed Project

The proposed project is approval of the IWDM Program to protect livestock, crops, human health and safety and property in the County from wildlife damage. The Program:

- (1) establishes the general purpose for and standards pursuant to which the Program will be implemented. For purposes of this EIR, the County is adopting and incorporating *WS Directive 2.105, The WS Integrated Wildlife Damage Management Program*. March 1, 2004 as the IWDM Program standards.
- (2) authorizes the Department of Agriculture to:
 - a. develop and/or adopt standards, either in the form of a guidance document or as part of a third-party service agreement, to implement the Program;
 - b. negotiate third-party service agreements to implement the Program for approval by the Board of Supervisors;
 - c. make recommendations to the Board of Supervisors concerning the Program, including but not limited to recommending approval of third-party service agreements;
 - d. provide oversight for and monitor implementation of the Program;
 - e. provide the public information concerning the Program;
 - f. take any other such actions as are necessary to effectively implement the Program in a manner consistent with its general purpose and standards.

As currently proposed, the Program would be implemented initially pursuant to a five-year Cooperative Service Agreement (CSA), including annual work plans (work and financial plans) required by the five-year CSA, with the United States Department of Agriculture Animal and Plant Health Inspection Service – Wildlife Services (APHIS-WS). The CSA and annual work plans would require the approval of the Mendocino County Board of Supervisors. Yearly adjustments to the work plan would primarily be a function of personnel and equipment costs. Technical assistance data maintained by APHIS-WS through the MIS for one year would also be used to help develop the work plan and budget for the subsequent year throughout the remaining term of the CSA. Activities performed under the IWDM Program would be implemented by APHIS-WS field specialists in accordance with the regulations, standards, and guidelines of the IWDM Program, including the WS Policy Manual, Directives, and standard operating procedures. The County would not be involved in any of the wildlife damage management activities, though would provide oversight of APHIS-WS's implementation of the IWDM Program.

For a detailed description of the proposed project, please refer to Attachment 1, Initial Study.

Summary of Non-Lethal Program Alternative

This EIR will also evaluate a Non-Lethal Program Alternative at an equal-level to the proposed project. The Non-Lethal Program Alternative would not use or recommend lethal methods to attempt to resolve wildlife damage. It is assumed for the Non-Lethal Alternative that Mendocino County would contract with an outside governmental or non-governmental agency to provide personnel who would give technical information and operational assistance on non-lethal management methods to livestock managers.

This alternative could also involve cost sharing with property owners for reimbursement of management methods, such as building of new fences or repair of fences; purchasing new

livestock protection animals; maintenance of livestock animals; and scare devices.

A variation of the Non-Lethal Program Alternative is also being considered, which continues to prioritize the use of non-lethal methods for wildlife damage management, but allows very limited exceptions for the use of lethal methods. The exception for use of lethal methods would be limited to instances when public health and safety is in danger.

For a more detailed description of the Non-Lethal Program Alternative, please refer to Attachment 1, Initial Study.

Probable Environmental Effects and Scope of the EIR

Based upon the Initial Study analysis conducted for the proposed project (see Attachment 1), the County anticipates that the EIR will contain the following technical chapters:

- Agricultural Resources;
- Biological Resources;
- Hazards and Hazardous Materials;
- Noise; and
- Public Services.

Each chapter of the EIR will include identification of the thresholds of significance, identification of impacts, and the development of mitigation measures and monitoring strategies. Each chapter will contain a cumulative impact analysis conforming to CEQA Guidelines Section 15130. The proposed EIR will incorporate by reference the Mendocino County General Plan and the Mendocino County General Plan EIR. In addition to these County documents, project-specific technical studies are being prepared by various technical sub-consultants.

In addition to the above technical chapters, in accordance with Section 15126.6(a) of the CEQA Guidelines, the EIR will include an analysis of a range of alternatives. As discussed above, one alternative, the Non-Lethal Program Alternative, will be evaluated at an equal-level to the proposed project. The remaining alternatives, which will be evaluated at a lesser level of detail, will be selected as the environmental analysis progresses such that the selection of alternatives can be informed by the findings of the analysis.

Attachment 1: Initial Study Checklist

ATTACHMENT 1

INITIAL STUDY CHECKLIST

INITIAL STUDY & CHECKLIST

This Initial Study has been prepared to satisfy the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (14 CCR 15000 et seq.) CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects.

The Initial Study is a public document used by the decision-making lead agency to determine whether a project may have a significant effect on the environment. If the lead agency finds substantial evidence that any aspect of the project, either individually or cumulatively, may have a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, the lead agency is required to prepare an EIR. If the agency finds no substantial evidence that the project or any of its aspects may cause a significant effect on the environment, a Negative Declaration shall be prepared. If in the course of analysis, the agency recognizes that the project may have a significant impact on the environment, but that by incorporating specific mitigation measures the impact will be reduced to a less-than-significant effect, a Mitigated Negative Declaration shall be prepared.

A. BACKGROUND:

Project Title: Integrated Wildlife Damage Management Program	
Entitlement(s): Mendocino County Board of Supervisors approval of five-year Program and Agreement Renewal between USDA APHIS-WS and Mendocino County and annual work and financial plans required by the five-year Cooperative Services Agreement for each of the five years.	
Site Area: Countywide	APN: Various
Location: Mendocino County	

The United States Department of Agriculture (USDA) has been operating various federal regulatory programs to promote livestock disease research, enforce animal import regulations, and regulate the interstate movement of animals for over 130 years (since about 1883, when the USDA Veterinary Division was founded). The first California organized predator control program was in 1915, when appropriations were made to the Department of the Interior, Bureau of Biological Survey, to employ government trappers in Modoc County. This program was soon extended to other counties in 1916. The program was designed to suppress a coyote rabies outbreak, responsible for the deaths of cattle and horses between 1915 and 1917.¹ Between 1916 and 1919, the U.S. Forest Service requested predator control on National Forest land in the state for the protection of range sheep.

In 1919, the U.S. Biological Survey and the County of Mendocino started the first cooperatively financed predator control program; the Bureau of Biological Survey and the County supplied funds to employ hunters and trappers. In 1921, the State Legislature started biennial appropriations for cooperative predator animal control to suppress losses to livestock, poultry and agricultural crops. A paid hunter system was established and the joint Federal-State-County program was supervised by the Federal Government. Reports from the 1920s confirm the on-going cooperative contractual relationship between the County and USDA-Bureau of Biological Survey for predatory animal control. The Animal Damage Control Act, enacted by Congress in 1931, recognized the cooperative relationship between the USDA and the states and designated Wildlife Services' predecessor (the Bureau of Sport Fisheries and Wildlife, within the U.S. Fish and Wildlife Service and the Department of the Interior) as the organization charged with addressing human/wildlife conflicts.

The California Department of Fish and Game (predecessor to the California Department of Fish and Wildlife (CDFW)) began a predatory animal control program for the purposes of game management in 1932. This

¹ W. Karabian. *Animal Damage Activities in California*. Submitted to the Cal. Legislature and the Cal. Dept. of Agriculture. October 20, 1970.

program was carried on through 1956 when the State Legislature directed the CDFW to terminate its predator control program. Approval was given for the CDFW to enter into a cooperative contract with the Bureau of Sport Fisheries and Wildlife when CDFW determined that unprotected mammals were unduly preying on any bird, mammal, or fish.

Mendocino County began its own Predatory Animal Damage Control program in 1943. In the 1970s, the Predatory Animal Damage Control Program was housed in the Department of Animal Control for the County; the Department of Agriculture managed and supervised wildlife damage management activities conducted by the Department of Animal Control. A review of County records demonstrates that collaborative wildlife damage management occurred throughout the 1970s and 1980s. In 1986, Animal Damage Control was transferred into USDA-Animal and Plant Health Inspection Service (APHIS), which oversees predator management programs in 36 of the state's 58 counties. A formal Cooperative Agreement was adopted by Mendocino County and APHIS-Wildlife Services in 1989, providing the framework for the current predator management program. The purpose of the Cooperative Agreement was to "undertake a program for the control of damaging birds and mammals within the County of Mendocino." Under the program, Wildlife Services specialists would be directed to "reduce, terminate, and/or prevent predation and damage to livestock, crops, and other property within the county." Pursuant to the terms of the Cooperative Agreement, it was to continue indefinitely, permitting either party to terminate the Agreement upon 30 days' notice. The Cooperative Agreement was in place from 1989 until 2004, with the exception of fiscal years 1995 and 1996 when the County faced budgetary constraints that would not guarantee its share of program funding would be satisfied. In December 2004, the County entered into a new Cooperative Agreement with a five-year term, and in March 2010, the second five-year agreement was approved. The Cooperative Agreement and Work Plan were both renewed by the Board on June 3, 2014. The Work Plan expired on June 30, 2015. Since that time, Wildlife Services has continued to implement the Integrated Wildlife Damage Management (IWDM) Program in Mendocino County without funding from the County. Since April 2016, Wildlife Services has implemented the IWDM Program wholly independently from and without any oversight, direction, or funding from the County.

The IWDM was supervised and administered by the Wildlife Services-California State office through the Northern District office. At the County level, the Mendocino County Agricultural Commissioner's office facilitates the contractual agreements for these services and assists landowners in contacting the Specialists for the control of problem animals. Mendocino County has played an active role in predatory animal damage control for over half a century, with the most recent predatory animal damage control program in place for over thirty-five years. In addition, similar control measures have been undertaken by landowners at their own discretion (unassociated with the IWDM Program) simultaneously over the same time frame.

B. ENVIRONMENTAL SETTING:

Mendocino County is generally located along California's west coast and contains 2,246,000 acres, or 3,510 square miles, and is the 15th largest county in California in terms of land area (see Figure 1). About one-fifth of the land in Mendocino County is in public ownership, controlled by a variety of federal, state, and local government agencies, including ten Indian reservations or rancherias. The rest of the land in the county (almost 80 percent) is in private ownership; about three-fourths of all privately held land is committed to long-term agricultural or timber uses. Mendocino County land ownership and jurisdictions are summarized in Table 1 and shown in Figure 2.

Figure 1
Project Location

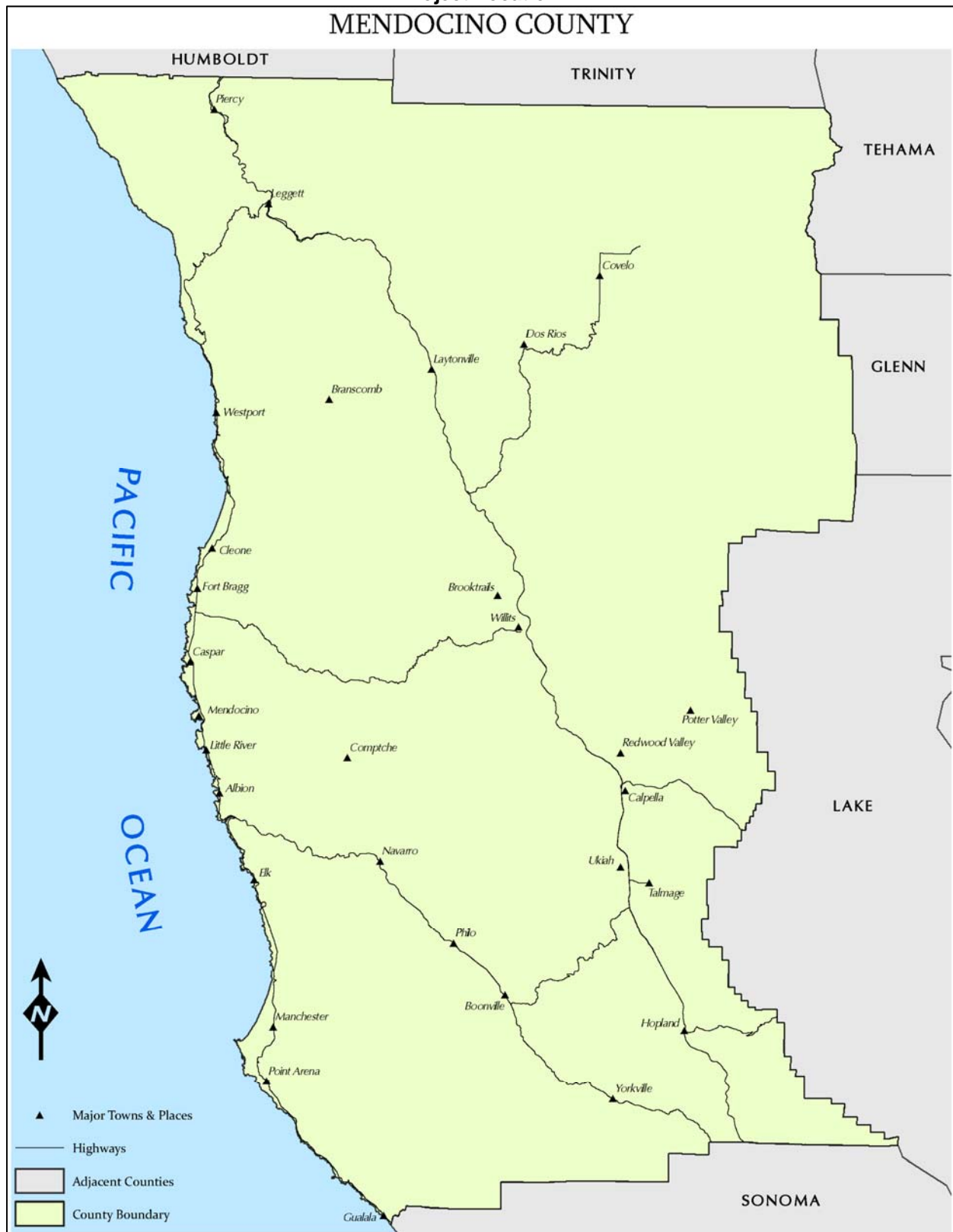


Figure 2
Land Ownership and Jurisdiction

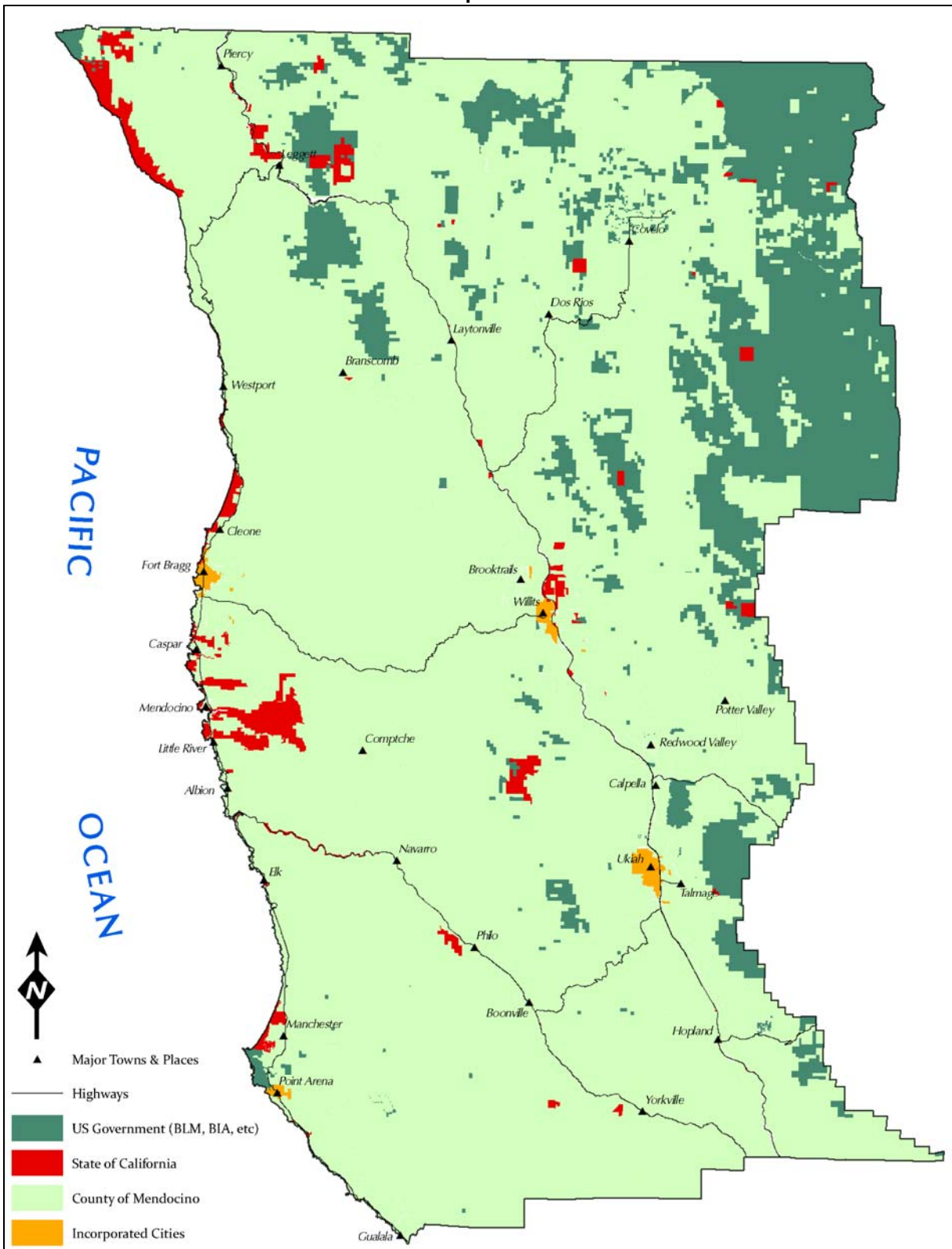


Table 1		
Land Ownership in Mendocino County		
Ownership Agency	Acres	Percentage of Total
Federal ¹	341,616	12.7
State	102,000	3.8
County ²	2,236,506	83.2
Incorporated Cities	7,623	0.3
Total All Land	2,687,745	100.0
Notes: ¹ Includes lands administered by the U.S. Forest Service, the Bureau of Land Management, Native American Tribes, and other federal entities. ² Includes County parks, and land in County administered areas that are owned privately. <i>Source: Mendocino County 2018</i>		

Mendocino County's diverse geographic regions have affected land use and settlement patterns. The coastal terrace and inland river valleys contain the major population centers, rural residential settlements, and agricultural uses. Timber, grazing, and rural residential development characterize the Coast Range. Other inland areas are largely mountainous and forested with limited population centers.

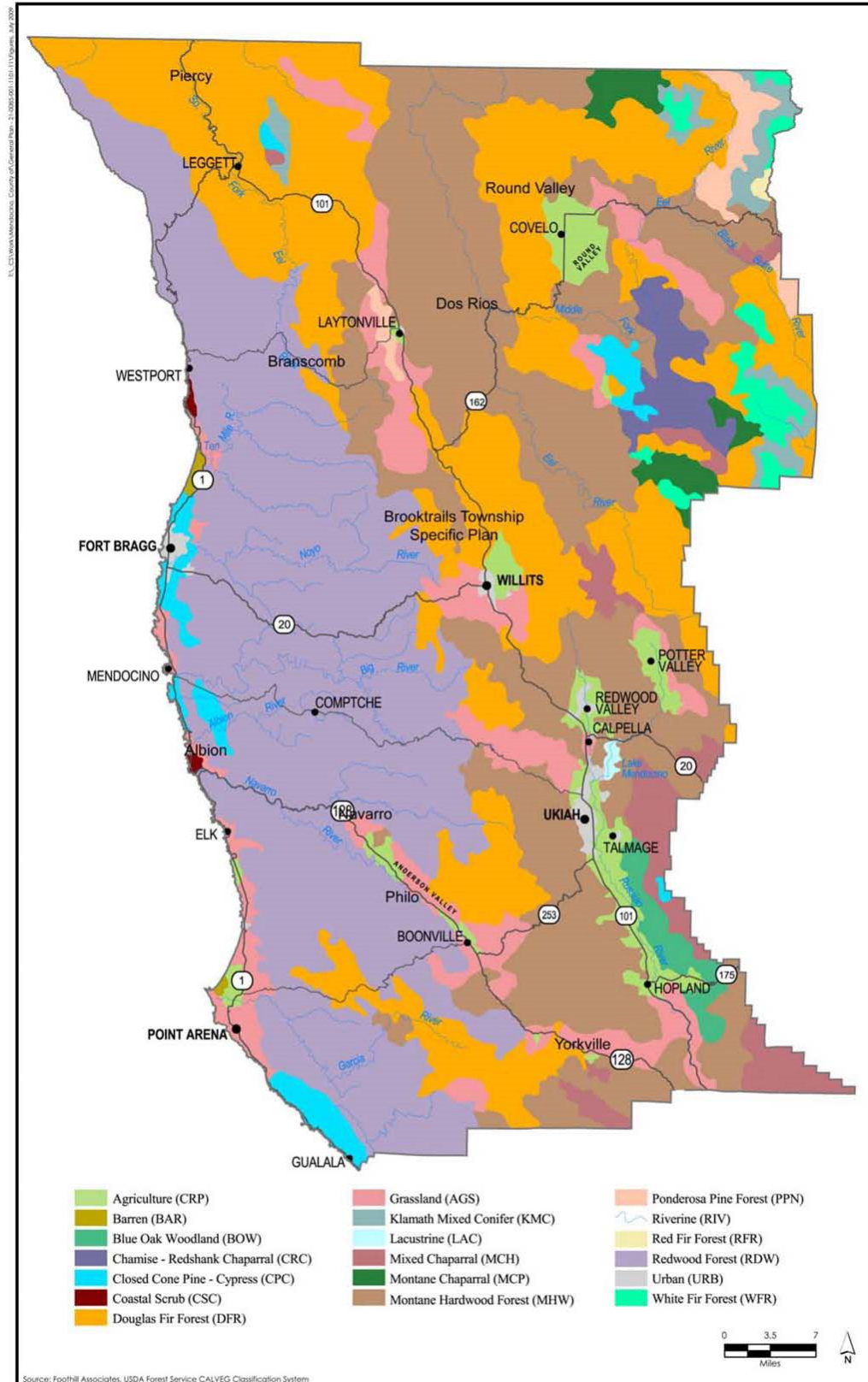
Today, Mendocino County remains mostly rural, with about 69 percent of the population living outside of incorporated cities.² The remaining population lives in the four incorporated cities in the County; of these, Ukiah is the largest, with a population larger than the other three cities combined. The other three cities are Fort Bragg, Willits, and Point Arena. The populations for the foregoing incorporated cities are presented in Table 2 below.

Table 2	
Population of Incorporated Cities in Mendocino County	
City	Population
Ukiah	16,036
Fort Bragg	7,312
Willits	4,875
Point Arena	453
<i>Source: United States Census Bureau. American FactFinder Available at https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk. Accessed July 2018.</i>	

Mendocino County has a very wide range of biological communities, some of which are highly productive or contain rare plant communities. These include redwood, Douglas-fir, montane hardwood, chaparral, grasslands, closed cone pine-cypress, oak woodland, agricultural, white fir, ponderosa pine, Klamath mixed fir, coastal scrub, urban, red fir, barren, and aquatic habitats. Figure 3 contains a map of the biological communities in Mendocino County. These habitats are home to numerous common wildlife species as well as species that are protected under federal and state laws and regulations.

² County of Mendocino. *The County of Mendocino General Plan*. August 2009, p. 3-2.

Figure 3
Geographical Distribution of Major Habitat Types within Mendocino County



Source: Mendocino County General Plan, 2009

C. PROPOSED PROJECT:

The purpose of the proposed project as well as the components of the IWDM Program are discussed in the following sections.

Purpose

As is true throughout the United States, wildlife habitat in the County has been altered as human populations expand and land is used for human needs. These human needs often compete with wildlife, which increases the potential for conflicting human-wildlife interactions. The Wildlife Services program summarizes the relationship of wildlife values and wildlife damage as follows:³

Wildlife has either positive or negative values, depending on varying human perspectives and circumstances ... Wildlife generally is regarded as providing economic, recreational and aesthetic benefits ... and the mere knowledge that wildlife exists is a positive benefit to many people. However, the activities of some wildlife may result in economic losses to agriculture and damage to property ... Sensitivity to varying perspectives and values is required to manage the balance between human and wildlife needs. In addressing conflicts, wildlife managers must consider not only the needs of those directly affected by wildlife damage but a range of environmental, socio-cultural and economic considerations as well.

Conflicts between humans and wildlife are common in the County. The purpose of the IWDM Program is to resolve conflicts with selected species that have caused damage to resource owners in the County. Damaging mammals in California include a range of species that prey on livestock and wildlife, cause property and other resources damage and threaten human health and safety. In the North District, CDFW has management authority and responsibility for resident wildlife including furbearers, game species and nongame mammals that cause damage, including: badger, bobcat, coyote, gray fox, red fox, black-tailed jackrabbit, muskrat, Virginia opossum, desert cotton-tail rabbit, raccoon, striped skunk, western spotted skunk, and California ground squirrel. Bobcats may only be taken under permit issued by CDFW either for human health and safety or agricultural and property protection. CDFW can request assistance from Wildlife Services for any species under CDFW's primary responsibility.

Feral swine, deer, beaver, elk, bobcat, turkeys, mountain lion, black bear and gray squirrel are managed by CDFW pursuant to Fish and Game Code sections requiring CDFW to issue a permit to authorize the removal of individual animals that damage specified resources. Current state policies enable lethal removal of wild pigs by sport hunters and property owners threatened with property damage.

Coyotes, badgers, skunks, weasels and raccoons may be taken year-round with no restriction and furbearers can be taken at any time if they are found destroying livestock or poultry. This is allowed because current population levels of these species can generally sustain a high level of removal without irreparable consequences.

The IWDM Program provides assistance to protect livestock, crops, human health and safety and property from wildlife damage.

The target species for the IWDM Program include coyote, raccoon, striped skunk, spotted skunk, badger, Virginia opossum, bobcat, feral dog, gray fox, red fox, black bear, mountain lion, feral swine, black-tailed deer, California ground squirrel/other squirrels, and avian species, including rock dove (pigeon) and European starling. The IWDM Program may be utilized for other species in Mendocino County, as in the past; however, the numbers of take are historically very low.⁴ The following sections discuss the various

³ U.S. Department of Agriculture Animal and Plant Health Inspection Service. *Pre-Decision Environmental Assessment: Mammal Damage Management in the North California District APHIS-WS Program*. May 29, 2015.

⁴ For example, from the 20-year period 1997-2017: three turkey vultures; six porcupines; two elk; two snakes; four common ravens, etc.

aspects of the IWDM Program, including wildlife damage management to protect agriculture, human health and safety, property, and natural resources.

Wildlife Damage Management to Protect Agriculture

Cattle and calves are most vulnerable to predation (killing, harassment or injury resulting in monetary losses to the owner) during calving, and less vulnerable at other times of the year. However, sheep and especially lambs can sustain high predation rates throughout the year.

Damage inflicted by wildlife upon agricultural operations is not limited to damage to traditional livestock production. The following are examples of other types of damage to agricultural resources: badger and ground squirrel damage to hay fields, crops and pastures; coyote, raccoon and ground squirrel damage to vegetable and fruit crops and to irrigation systems; ground squirrel damage to pastures, rangeland and fruit, nut and row crops; and fox, coyote or bobcat predation on small enterprise operations with rabbits, chickens, sheep goats or other animals.

Wildlife Damage Management to Protect Human Health and Safety

Human health and safety concerns include, but are not limited to: animal attacks on humans that result in injuries or death; disease threats from rabies and plague outbreaks where predators act as reservoirs; odor and noise nuisances from skunks and raccoons under houses; and airstrike hazards from coyotes or other predators crossing runways at airports or airbases. Coyotes, raccoons, skunks, opossums, gray fox, bobcats, and free ranging dogs also kill and harass pets, eat pet food and/or pose disease threats to pets and humans.

Wildlife Services also plays an active role in surveillance and monitoring of wildlife diseases such as rabies, plague, Lyme disease, and West Nile Virus. Zoonotic diseases (diseases transmissible from wildlife to humans) are one of the leading infectious causes of illness and death to humans. Rabies is frequently carried in skunks, bats, fox and other animals. Plague can be carried in coyotes and other predators, as well as ground squirrels and other rodents. Wildlife Services' assistance in reducing wildlife disease risks through surveillance, monitoring and response helps safeguard humans from the threat of zoonotic diseases and bioterrorist threats by responding to requests for assistance through the IWDM Program.⁵

Wildlife Damage Management for the Protection of Property

The IWDM Program would provide for responses to these complaints, as well as to requests from land and homeowners to alleviate property damage from coyotes, raccoons, skunks and badgers including, but not limited to: damage to golf courses, parks, schools and residential and commercial properties, as well as odor problems and disease threats from burrowing raccoons, skunks, opossums, ground squirrels and badgers; and damage to irrigation systems from coyotes biting holes in pipes.

Feral swine behavior during feeding and the search for feed is termed rooting. This activity turns sod and topsoil over which often leaves the area bare of vegetation and susceptible to erosion and colonization of invasive weeds. Feral swine dig or root in the ground with their nose in search of desired roots, grubs, earthworms, and other food sources. When this natural activity takes place in developed areas, it results in damage to landscaping, golf courses, roads, drainage ditches and can lead to erosion issues.

Wildlife Damage Management for the Protection of Natural Resources

Natural resource protection in Mendocino County can include protecting sensitive species or other natural resources from mammal damage. This has been associated with managing damage from muskrats when they burrow into stream banks and undermine the integrity of the banks, causing erosion, sedimentation,

⁵ U.S. Department of Agriculture Animal and Plant Health Inspection Service. *Pre-Decision Environmental Assessment: Mammal Damage Management in the North California District APHIS-WS Program*. May 29, 2015.

collapse of the bank and damage to riparian areas. APHIS-WS may also assist cooperators with requests to protect other natural resources from mammal damage.

Project Implementation and Operation

The proposed project is approval of the IWDM Program to protect livestock, crops, human health and safety and property in the County from wildlife damage. The Program:

- (1) establishes the general purpose for and standards pursuant to which the Program will be implemented. For purposes of this EIR, the County is adopting and incorporating *WS Directive 2.105, The WS Integrated Wildlife Damage Management Program*. March 1, 2004 as the IWDM Program standards, as further described below.
- (2) authorizes the Department of Agriculture to:
 - a. develop and/or adopt standards, either in the form of a guidance document or as part of a third-party service agreement, to implement the Program;
 - b. negotiate third-party service agreements to implement the Program for approval by the Board of Supervisors
 - c. make recommendations to the Board of Supervisors concerning the Program, including but not limited to recommending approval of third-party service agreements;
 - d. provide oversight for and monitor implementation of the Program;
 - e. provide the public information concerning the Program;
 - f. take any other such actions as are necessary to effectively implement the Program in a manner consistent with its general purpose and standards.

As currently proposed, the Program would be implemented initially pursuant to a five-year Cooperative Service Agreement (CSA), including annual work plans (work and financial plans) required by the five-year CSA, with APHIS-WS. The CSA and annual work plans would require the approval of the Mendocino County Board of Supervisors. Yearly adjustments to the work plan would primarily be a function of personnel and equipment costs. Technical assistance data maintained by APHIS-WS through the MIS for one year would also be used to help develop the work plan and budget for the subsequent year throughout the remaining term of the CSA. Activities performed under the IWDM Program would be implemented by APHIS-WS field specialists in accordance with the regulations, standards, and guidelines of the IWDM Program, including the WS Policy Manual, Directives, and standard operating procedures. The County would not be involved in any of the wildlife damage management activities, though would provide oversight of APHIS-WS's implementation of the IWDM Program.

While the CSA would fund an initial five-year term during which APHIS-WS would implement the IWDM program in the County, the IWDM Program being analyzed in the EIR is not limited to five-years. Rather, the proposed project would adopt and establish the IWDM Program for ongoing implementation in the County. Any future discretionary actions by the County necessary to implement the Program would need to be evaluated for consistency with the IWDM Program and compliance with CEQA.

Program and Agreement

The IWDM Program would include the following wildlife damage management elements, as implemented pursuant to the third-party agreement(s) with APHIS-WS.

Overview of Wildlife Damage Management

Wildlife damage management is the science of reducing damage or other problems associated with wildlife and is recognized as an integral part of wildlife management.⁶ APHIS-WS is authorized by law⁷ to manage a program to reduce human/wildlife conflicts, and this environmental analysis will evaluate the ways by which the IWDM Program will authorize APHIS-WS to carry out its authority in Mendocino County. Wildlife damage management is often misunderstood and many individuals consider management options as only lethal. However, wildlife damage management is a specialized field within the wildlife management profession and decisions are not predicated solely on biological rationale.

Integrated Approach

The IWDM Program employs an integrated approach to wildlife damage management; hence the program title of "Integrated Wildlife Damage Management Program." According to Wildlife Services Directive 2.105:⁸

The WS program applies the IWDM (commonly known as Integrated Pest Management) approach to reduce wildlife damage. As used and recommended by the WS program, IWDM encompasses the integration and application of all approved methods of prevention and management to reduce wildlife damage. The IWDM approach may incorporate cultural practices, habitat modification, animal behavior management, local population reduction, or a combination of these approaches. The selection of wildlife damage management methods and their application must consider the species causing the damage and the magnitude, geographic extent, duration, frequency, and likelihood of recurring damage. In addition, consideration is given to non-target species, environmental conditions and impacts, social and legal factors, and relative costs of management options.

Before wildlife damage management programs are undertaken, careful assessment should be made of the problem, including the impact to individuals, the community, and other wildlife species. Selected techniques should be incorporated that will be efficacious, biologically selective, and socially appropriate. The policy of The Wildlife Society in regard to wildlife damage management and the alleviation of wildlife problems is to:

1. Recognize that wildlife damage management is an important part of modern wildlife management.
2. Recognize that nuisance wild animals are common in many human-occupied situations and may need special management attention as well as an astute understanding of cultural carrying capacity, to alleviate problems they create.
3. Support those wildlife damage prevention and/or management programs and techniques that are biologically, socially, environmentally, and economically valid, effective, and practical.
4. Encourage research to improve methods of: (a) assessing damage caused by wildlife; (b) assessing effectiveness and environmental impacts of damage management programs; (c) preventing and managing wildlife damage, including health hazards and nuisance problems; (d) assessing alternatives available to landowners/managers for wildlife damage prevention and/or management; and (e) understanding people's level of tolerance for a variety of human/wildlife conflicts and the social/biological factors that influence their decision-making (Wildlife Stakeholder Acceptance Capacity).
5. Recommend wildlife damage management programs that are cost-effective and whose benefits outweigh risks.

⁶ The Wildlife Society. *Standing Position: Wildlife Damage Management*. 2010.

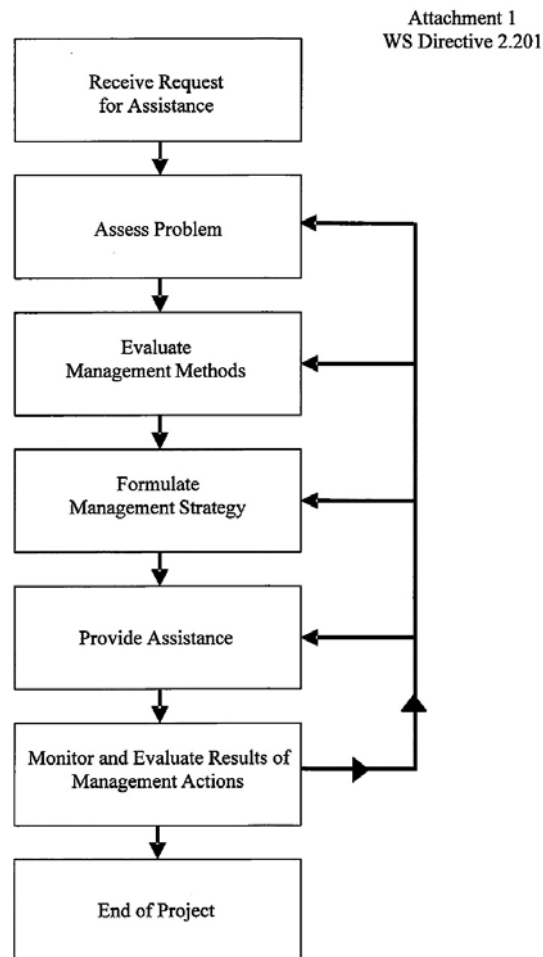
⁷ The Secretary of Agriculture is authorized to carry out wildlife damage management programs necessary to protect the Nation's agricultural and other resources. The Secretary has delegated this authority under the statutes listed below to APHIS. Within APHIS, the authority resides with the WS program. The primary statutory authorities for the APHIS-WS program are the Act of March 2, 1931 (7 U.S.C. 426-426c; 46 Stat. 1468) and Rural Development, Agriculture, and Related Agencies Appropriations Act (Public Law 100-202, Dec.22, 1987. Stat. 1329-1331 (7 USC 426c)), as amended in the Fiscal Year 2001 Agriculture Appropriations Bill.

⁸ U.S. Department of Agriculture Animal and Plant Health Inspection Service. *WS Directive 2.105, The WS Integrated Wildlife Damage Management Program*. March 1, 2004.

6. Support use of efficient, safe, and economical methods of preventing and/or controlling depredating animals that cause human/wildlife conflicts, and which pose jeopardy to other wildlife populations, including threatened or endangered species.
7. Encourage and support educational programs in wildlife damage prevention and management to ensure that those in need of wildlife damage management information have access to currently approved techniques and methodologies.

Decision Model

In recognition of the careful assessment that should be made of each wildlife damage problem, the APHIS-WS employs a Decision Model for its IWDM Program. The Decision Model provides a systematic approach to decision-making for wildlife management activities. The model is illustrated below.⁹



Selecting Wildlife Damage Management Methods

When responding to requests for assistance under the terms of the IWDM Program CSA, WS may provide technical assistance, direct control assistance, and/or research assistance. Technical and

⁹ U.S. Department of Agriculture Animal and Plant Health Inspection Service. *WS Directive 2.201, WS Decision Model*. July 15, 2014.

direct control assistance, as defined below, may involve the use of either lethal or nonlethal methods, or a combination of the two. Preference is given to non-lethal methods when practical and effective.¹⁰

Before wildlife damage management is conducted, an Agreement for Control must be signed by APHIS-WS and the land owner or manager, or an APHIS-WS work plan is presented to the land owner or its representative for review. The County would not be involved in this action because it would be an agreement between a private party and APHIS-WS.

When services are requested by a resource owner, APHIS-WS personnel would conduct an initial investigation that defines the nature, history, and extent of the problem, species responsible for the damage, and methods that would be available to resolve the problem. In selecting damage management techniques for specific wildlife damage situations, the APHIS-WS field specialist would consider the species responsible and the frequency, extent, and magnitude of the damage. In addition, consideration would be given to the status of target and potential non-target species, local environmental conditions, relative costs of applying management techniques, environmental impacts, and social and legal concerns.

Although the County would provide funding for the services, County staff would not be involved in the decision-making regarding which methods should or should not be used.

Technical Assistance

Technical assistance is defined as advice, recommendations, information, equipment, literature, instructions, and materials provided to others for use in managing wildlife damage problems and understanding wildlife damage management principles and techniques.¹¹

Technical assistance is the primary method used in responding to requests for assistance. Individuals calling for assistance are given advice and information on ways to reduce predation on livestock, damage to property or avoid attracting nuisance wildlife onto their property. The implementation of technical assistance recommendations is the responsibility of the requester based on information, demonstrations, and advice on available and appropriate wildlife damage management methods provided by APHIS-WS personnel. Technical assistance includes demonstrations on the proper use of management devices (i.e., propane exploders, exclusionary devices, cage traps, etc.) and information on animal husbandry, habitat management, and animal behavior modification that could reduce damage. These types of non-lethal management methods are described in the following section.

Technical assistance is provided following consultation or an on-site visit with the requester, and generally several management strategies are described to the requester for short and long-term solutions to damage problems; these strategies are based on the level of risk, need, and practical application.

Under the proposed contract, APHIS-WS would continue to provide the following services in Mendocino County:

- Offer technical advice/assistance to resource owners on prevention and/or control techniques.
- Inform and educate the public on how to prevent and reduce wildlife damage on their own, including APHIS-WS staff-prepared pamphlets and documentation.
- Provide expertise from wildlife specialists trained in wildlife control methods, state and federal regulations, and certified in the safe handling and use of firearms and other control equipment.

¹⁰ United States Department of Agriculture, Animal and Plant Health Inspection Service. *WS Directive 2.101, Selecting Wildlife Damage Management Methods*. 07/20/09, Section 4, Policy.

¹¹ USDA, APHIS. *WS Directive 2.101, Selecting Wildlife Damage Management Methods*. 07/20/09.

- Investigate wildlife damage situations to determine the responsible species and evaluate the site for applicability of prevention and control methods.
- Develop and implement wildlife damage management actions for the protection of agricultural resources, public health and safety, and property.
- Develop and implement wildlife damage management methods and actions targeting invasive species (e.g., wild pigs) that may damage or threaten property, livestock, crops, and/or public safety.
- Respond to incidents where wildlife species are threatening public health and safety (in coordination with CDFW and local law enforcement) including the use of out-of-county resources and expertise.
- Collect samples for wildlife diseases that may affect agriculture and public safety.
- Provide access to APHIS-WS support staff, including at the National Wildlife Research Center, which conducts research on and develops wildlife damage management methods.

Direct Control Assistance

Direct control assistance, also known as operational management, is defined as field activities conducted or supervised by WS personnel. APHIS-WS Directive 2.101 states the following regarding the use of direct control assistance:¹²

1. Direct control assistance may be implemented when it has been determined that a problem cannot reasonably be resolved by technical assistance or that the professional skills of WS employees are required for effective problem resolution. Direct control assistance is often initiated when the wildlife damage involves several ownerships, sensitive species, application of WS restricted-use pesticides, or complex management problems requiring the direct supervision of a professional wildlife manager or biologist.
2. Direct control operations will be conducted upon request only with the written authorization of the landowner, cooperator, other authorized officials, or in accordance with another appropriate instrument such as a memorandum of understanding.

Types of direct control assistance that have been and could continue to be utilized by APHIS-WS in Mendocino County are described in the following section. It is important to note that the following management methods will not be used in the proposed IWDM program: aerial gunning, gas cartridges, chemical immobilizing and chemical euthanizing, or pesticides.

Lethal Methods

The lethal control of animals by APHIS-WS is authorized under APHIS-WS Directive 2.505.¹³ A variety of methods for removing a target animal species are available in California.

With respect to the physical capture methods discussed below, it is noted that, except in limited cases where CDFW makes an individual exemption, CDFW does not allow the relocation of wildlife causing damage (see California Code of Regulations, Title 14, Section 465.5(g)(1)). Relocation of wildlife known to cause resource damage in one area does not correct the damaging behavior and can spread the problem to a new area. Relocation can also spread disease to other wildlife and domestic species.

¹² USDA, APHIS. *WS Directive 2.101, Selecting Wildlife Damage Management Methods*. 07/20/09.

¹³ U.S. Department of Agriculture Animal and Plant Health Inspection Service. *WS Directive 2.505, Lethal Control of Animals*. 05/18/11.

CDFW dictates that the type of disposition of all wildlife captured for resource protection be euthanasia, unless it grants an individual exemption. Captured wildlife may be euthanized using a handgun or rifle.

Cage and Corral Traps

These traps come in a variety of styles to target different species. The most common traps are cage traps. Cage traps are usually rectangular, made from wood or heavy gauge wire mesh. These traps are used to capture animals alive and can often be used where lethal tools would be too hazardous. Cage traps are well suited for use in residential areas. Other types of cage traps are corral traps and drive-traps. Often, target animals such as feral swine are allowed to feed in a cage until they get used to coming and going. A trip wire that closes the entrance, a one-way door, or other device is set to capture the animal when it comes to feed; these will often capture multiple animals at one location. Cage traps usually work best when baited with foods attractive to the target animal.¹⁴

Corral or cage style traps large enough to hold multiple animals would be utilized in areas frequented by feral swine. The size of traps may be up to 20 feet wide by 20 feet long. They would likely be set near water sources, riparian areas or groves of oak trees where feral swine are likely to congregate and forage. Traps would be set to avoid resource damage within areas of sensitive biological, cultural or watershed resources. Installation of traps may involve minor ground disturbance with the installation of fence posts and anchors, as well as the activity of the feral swine while they are inside the traps. Traps would be baited with grain or other food attractive to feral swine. After feral swine are trapped they would be euthanized quickly with lethal gun shots in a humane manner and the carcasses disposed of off-site in compliance with applicable regulations or left on-site if removal is not feasible. Trapping locations in remote areas may be logistically supported by helicopter as needed or trapping may also be supported by limited use of packstock; stock would be restricted to designated trails.

Snares

Snares made of wire or cables are among the oldest wildlife management tools and are generally not affected by inclement weather. They can be used effectively to catch most species. Snares may be employed as either lethal or live-capture devices depending on how or where they are set. Snares set to capture an animal by the neck are usually lethal but stops can be attached to the cable to make the snare a live capture device. Snares positioned to capture the animal around the body can be a useful live-capture device, but they are more often used in conjunction with euthanasia. Snares can also be used to capture animals by the legs, but leg snares are not often set for feral swine. Snares can be effectively used wherever a target animal moves through a restricted lane of travel (e.g., trails through vegetation). When a target animal moves forward into the loop formed by the cable, the noose tightens and the animal is held. The catch-pole snare is used to capture or safely handle problem animals. This device consists of a hollow pipe with an internal cable or rope that forms an adjustable noose at one end. The free end of the cable or rope extends through a locking mechanism on the end opposite of the noose. By pulling on the free end of the cable or rope, the size of the noose is reduced sufficiently to hold an animal. Catch poles are used primarily to remove live animals from traps without danger to or from the captured animal. Also, most snares incorporate a breakaway feature to release non-target wildlife and livestock.

The foot or leg snare is a spring-powered non-lethal device, activated when an animal places its foot on the trigger. In some situations using snares to capture wildlife is impractical due to the behavior or animal morphology of the animal, or the location of many wildlife conflicts.

¹⁴ U.S. Department of Agriculture Animal and Plant Health Inspection Service. *Pre-Decision Environmental Assessment: Mammal Damage Management in the North California District APHIS-WS Program*. May 29, 2015, see Appendix C.

Snares must be set in locations where the likelihood of capturing non-target animals is minimized. The Wildlife Services program uses a leg snare with a built-in pan tension device that can be set to exclude capturing animals lighter than the target animal.

The Collarum is a non-lethal, spring-powered, modified neck snare device that is primarily used to capture coyotes. It is activated when an animal bites and pulls a cap with a lure attractive to coyotes, whereby the snare is projected from the ground up and over the head of the coyote. As with other types of snares, the use of the Collarum device to capture coyotes is greatly dependent upon finding a location where coyotes frequently travel where the device can be set. Collarums must also be set in locations where the likelihood of capturing non-target animals is minimized.

A number of specialized "quick-kill" traps are used in wildlife damage management work. They include Conibear, snap, gopher, and mole traps. Conibear traps are used mostly in shallow water or underwater to capture beaver. The Conibear consists of a pair of rectangular wire frames that close like scissors when triggered, killing the captured animal with a quick body blow. Conibear traps have the added features of being lightweight and easily set. Snap traps are common household rat or mouse traps usually placed in buildings. These traps are often used to collect and identify rodent species that cause damage so that species-specific management tools can be applied. If an infestation is minor, these traps may be used as the primary means of management. Glue boards (composed of shallow, flat containers of an extremely sticky substance) are also used as an alternative to snap traps. Spring-powered harpoon traps are used to reduce damage caused by surface-tunneling moles. Soil is pressed down in an active tunnel and the trap is placed at that point. When the mole reopens the tunnel, it triggers the trap and is killed. Two variations of scissor-like traps are also used in burrows for both mole and pocket gopher damage reduction.

Shooting

Shooting is conducted with hand guns, rifles, and shotguns and is very selective for the target species. Shooting is frequently performed in conjunction with calling particular predators such as coyotes, bobcats, and fox. Trap-wise coyotes are often vulnerable to calling. Shooting is limited to locations where it is legal and safe to discharge firearms. Shooting may be ineffective for controlling damage by some species and may actually be detrimental to control efforts. Shooting is used selectively for target species but may be relatively expensive because of the staff hours sometimes required. Nevertheless, shooting is an essential control method. For example, many airports have perimeter fences for security purposes that also confine resident deer populations. These deer frequently stray onto active runways and pose a significant threat to aircraft. Removal of these deer may be effectively achieved by shooting.¹⁵

Shooting is sometimes used as the primary method in feral swine management operations. Often, though, shooting is only used opportunistically where an APHIS-WS Specialist sees the target swine in the damage area. Shooting can also be used in conjunction with spotlighting and for lethal reinforcement to ensure the continued success in swine scaring and harassment efforts. In situations where the feeding instinct is strong, feral swine can quickly adapt to scaring and harassment efforts unless the IWDM Program is periodically supplemented by shooting. Shooting is limited however to locations where it is legal and safe to discharge firearms.

¹⁵ U.S. Department of Agriculture Animal and Plant Health Inspection Service. *Pre-Decision Environmental Assessment: Mammal Damage Management in the North California District APHIS-WS Program*. May 29, 2015, see Appendix C.

Tracking Dogs or Trailing Dogs

Trained dogs are used primarily to locate, pursue, or decoy animals. Training and maintaining suitable dogs requires considerable skill, effort, and expense. There must be sufficient need for dogs to make the effort worthwhile.¹⁶ Dogs commonly used are different breeds of hounds such as blue tick, red-bone, and Walker. They become familiar with the scent of the animal they are to track and follow, and will howl when they smell them. Tracking dogs are trained not to follow the scent of non-target species. Wildlife Services Specialists find the track of the target species and put their dogs on it. Typically, if the track is not too old, the dogs can follow the trail and bay the animal. When trained dogs are used, handlers will be at the site of encounters between target animals and dogs as soon as possible to minimize stress to the target and reduce potential injury to the dog. Dogs will not be allowed to kill the target animal. When the objective is removal, the target will be euthanized as quickly as possible; for feral swine the most common method of euthanizing is via mortal gunshot. Animals intended to be captured alive (e.g., research, Judas operations) will be protected from trained dogs once handlers are on-site. When the dogs bay the animal, it usually seeks refuge in a thicket on the ground at bay. The dogs stay with the animal until the APHIS-WS Specialist arrives and dispatches, tranquilizes, or releases it, depending on the situation.

The most effective approach to resolving wildlife damage problems is to integrate the use of several of the above-referenced methods, either simultaneously or sequentially. The IWDM Program would integrate and apply practical methods of prevention and reduce damage by wildlife while minimizing harmful effects of damage reduction measures on humans, other species, and the environment. IWDM may incorporate resource management, physical exclusion and deterrents, and population management, or any combination of these depending on the characteristics of specific damage problems.

In selecting damage management techniques for specific damage situations and the methods under each alternative, consideration is given to the responsible species and the magnitude, geographic extent, duration and frequency, and likelihood of wildlife damage. Consideration is also given to the status of target and potential non-target species, local environmental conditions and affects, social and legal aspects, and relative costs of damage reduction options. The cost of damage reduction may sometimes be a secondary concern because of the overriding environmental, legal, and animal welfare considerations. These factors are evaluated in formulating damage management strategies that incorporate the application of one or more techniques.

Non-Lethal Methods

A brief summary of the range of possible non-lethal methods is included in the following section.

Livestock Guardian Animals

Livestock producers have used guarding animals to protect flocks and herds for thousands of years. At the present time, dogs, donkeys, and llamas are most commonly used.

Livestock Protection Dogs

Livestock protection dogs (LPD) can be an important component of an overall predation management program. LPDs are working dogs that stay with or near sheep most of the time, with the purpose of aggressively repelling predators. While most commonly used to protect sheep, LPDs are also helpful in protecting other livestock. APHIS-WS supports the use of LPDs for predation

¹⁶ U.S. Department of Agriculture Animal and Plant Health Inspection Service. *Pre-Decision Environmental Assessment: Mammal Damage Management in the North California District APHIS-WS Program*. May 29, 2015, see pg. 19.

management and develops and distributes informational resources for livestock producers and others.¹⁷

LPDs are generally large animals (80-120 pounds). Some of the more readily known and utilized breeds in the United States include Great Pyrenees, Anatolian Shepherds (Akbash), Komondors, and Maremmas. LPDs disrupt predatory behavior rather than displace predators, such that predators likely remain present and continue to prey on other wildlife species.¹⁸ While further study is necessary, this suggests that guardian dog use does not result in increased predator pressure on neighboring operations that do not use dogs.¹⁹

Livestock guardian dogs can create problems. They can be aggressive toward people, harass non-target wildlife or livestock, injure herding dogs, or destroy property.

Donkeys

Some ranchers prefer donkeys to livestock guardian dogs due to their relatively low acquisition and maintenance costs, their compatibility with other predator control methods (e.g., traps, snares), their greater longevity, and the fact that they are less likely to stray outside fencelines.²⁰ Donkeys can effectively deter dogs, coyotes, and foxes. When confronting a predator, an effective donkey will bray, bare its teeth, run towards or chase the predator, and possibly kick or bite.

With respect to potential problems, male donkeys can be overly aggressive towards livestock, and females in heat may be aggressive towards lambs or kids.

Llamas

Llamas are South American camelids. Typical guarding behaviors include alertness; alarm calling; walking or running toward a predator; chasing, kicking, or pawing at a predator; spitting; herding livestock away from a predator; or placing themselves between livestock and a predator. Llamas appear to effectively deter dogs, coyotes, and foxes, but not wolves, bears, or mountain lions.²¹

Fencing

Fencing is a predation mitigation method that involves constructing a physical barrier that will keep human resources and predators apart. Fences are most useful and cost-effective on small, open pastures, without dense brush cover or timber, so that predators already located in the area can be easily removed.

Conventional fences are relatively ineffective in preventing access by mountain lions and bears, but if well-constructed and maintained are reasonably effective in excluding dogs and coyotes.²² Conventional netwire fences modified by adding electrically charged wires and all-electric fences may be more effective in excluding predators but must be carefully maintained. Some are easily grounded and rendered ineffective by wet vegetation, extraneous wires, damage by animals and other causes.

¹⁷ United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services. *Factsheet, Livestock Protection Dogs*. October 2010.

¹⁸ University of California, Agriculture and Natural Resources. "Livestock Protection Tools for California Ranchers." *ANR Publication 8598*. (January 2018), p. 5.

¹⁹ University of California, Agriculture and Natural Resources, "Livestock Protection Tools for California Ranchers," p. 5.

²⁰ University of California, Agriculture and Natural Resources, "Livestock Protection Tools for California Ranchers," p. 6.

²¹ University of California, Agriculture and Natural Resources, "Livestock Protection Tools for California Ranchers," p. 7.

²² Dale A. Wade. "The use of fences for predator damage control." *Proceedings of the Vertebrate Pest Conference*. (1982). 10:24-53, p. 31.

Fencing is also understood to be an important component to the most effective use of livestock protection dogs. As part of a larger study of livestock protection dogs over a 5-year period, Gehring et al. found that effective fencing and training was a crucial link for successfully incorporating livestock protection dogs into working farms and preventing roaming of the dogs.²³

Animal husbandry

This method includes modifications in the level of care and attention given to livestock. The level of care or attention given to livestock may range from daily to seasonal. Generally, as the frequency and intensity of livestock handling increases so does the degree of protection. The following methods may be used:

Night and seasonal enclosures

The risk of depredation can be reduced when livestock are nightly gathered to make them unavailable during the hours when depredating animals are most active. Some producers herd animals back to corrals in the evening when they are most vulnerable to most predators. Nightly gathering may not be possible where livestock are in many fenced pastures and where grazing conditions require livestock to scatter.

One form of enclosure is known as “shed lambing”; i.e., keeping ewes inside a shed when they are giving birth to lambs. In addition, the risk of depredation is usually greatest with immature livestock. This risk can be minimized by holding expectant females in pens or sheds to protect females during birthing and by holding newborn livestock in pens for the first two weeks.

Timing of breeding

Predators are often more likely to kill livestock at specific times of year; e.g., coyote-killing of lambs often coincides with the need to provide food for their pups.²⁴ If livestock are bred earlier in the season, they are larger earlier and may be less vulnerable to predation.

Altering herd composition

The composition of herds may influence the degree of depredation. Sheep are generally much more vulnerable to predation than cattle.²⁵ Mixing cattle with sheep may lead to a better use of the landscape, with the added benefit that cattle may be more aggressive toward small predators, thus providing some degree of livestock protection.

Herding/Vigilance

North American predators tend to be wary of human presence; and a good herder who is able to stay with and monitor livestock can be an effective method of protection.²⁶

²³ Thomas M. Gehring et al. “Good fences make good neighbors: implementation of electric fencing for establishing effective livestock-protection dogs.” *Human-Wildlife Interactions*. (2011). 5(1): 106-111, p. 107.

²⁴ John A. Shivik. “Non-Lethal Alternatives for Predation Management”. (2004). *Sheep & Goat Research Journal*. 14, p. 66.

²⁵ C. Kerry Gee. “Cattle and Calf Losses to Predators – Feeder Cattle Enterprises in the United States.” (1979) *Journal of Range Management*. 32, p. 154.

²⁶ Shivik, “Non-Lethal Alternatives for Predation Management,” p. 65.

Animal Behavior Modification

Several different methods fall into the category of behavior modification. The following section provides a summary of a range of methods that have been used by APHIS-WS in Mendocino County.

Frightening devices

These devices may use sound, lights, pursuit or other methods to disperse animals from the area to be protected. These methods are best suited for short-term protection of relatively small areas. Propane exploders are one type of method designed to produce loud explosions at controllable intervals. They are strategically located in areas of high wildlife use to frighten wildlife from the problem site. Because animals are known to habituate to sounds, exploders must be moved frequently and used in conjunction with other scare devices.²⁷

Pyrotechnics is another form of frightening device that range from shell crackers or scare cartridges fired from shotguns to noise bombs fired from flare pistols. They can be used to frighten birds or mammals but are most often used to prevent crop depredation by birds or to discourage birds from undesirable roost locations. Noise bombs are firecrackers that travel about 75 feet before exploding. Whistle bombs are similar to noise bombs, but whistle in flight and do not explode.

With respect to light/siren combinations, early research into battery operated strobe/siren devices in fenced-pasture sheep operations across the western United States found these devices deterred coyotes for up to 91 days and reduced lamb losses an estimated 44-95 percent.²⁸ However, habituation can be a problem if these devices are randomly - rather than behaviorally – activated.

Electronic Distress Sounds

Distress and alarm calls of various animals have been used singly and in conjunction with other scaring devices to successfully scare or harass animals. Many of these sounds are available in digital format.

Chemical Repellents

These are compounds that prevent consumption of food items or use of an area. They operate by producing an undesirable taste, odor, feel, or behavior pattern. Effective and practical chemical repellents should be nonhazardous to wildlife; nontoxic to plants, seeds, and humans; resistant to weathering; easily applied; reasonably priced; and capable of providing good repelling qualities. Chemical repellents are strictly regulated, and suitable repellents are not available for many wildlife species or wildlife damage situations.

²⁷ USDA APHIS. *Pre-Decision Environmental Assessment: Mammal Damage Management in the North California District APHIS-WS Program*, p. 114.

²⁸ Samuel B. Linhart et al. "Electronic Frightening Devices for Reducing Coyote Predation on Domestic Sheep: Efficacy Under Range Conditions and Operational Use." (1992). *Proceedings of the Fifteenth Vertebrate Pest Conference 1992*. 47, p. 389. Linhart et al. note that strong evidence exists in the technical literature that coyotes have a long-lasting fidelity to established home ranges. Testimony from herders, as well as ongoing coyote predation on the test areas of Linhardt et al., strongly suggest that use of frightening devices will not result in higher levels of predation on adjacent bands of sheep. Linhardt et al. believe that coyotes merely avoided the immediate vicinity of devices but continued to frequent the general area. However, particularly if use of such devices becomes common, the question of how coyote activity and predation patterns are affected might be a subject for future research.

Modification of human behavior

The agency responsible for implementing the program in the field may recommend alteration of human behavior to resolve potential conflicts between humans and wildlife. For example, the elimination of feeding of wildlife that occurs in parks, forest, or residential areas may be recommended. Many wildlife species adapt well to human settlements and activities, but their proximity to humans may result in damage to structures or threats to public health and safety. Eliminating wildlife feeding and handling can reduce potential problems, but many people who are not directly affected by problems caused by wildlife enjoy wild animals and engage in activities that encourage their presence. It is difficult to consistently enforce no-feeding regulations and to effectively educate all people concerning the potential liabilities of feeding wildlife.

Habitat management

Just as habitat management is an integral part of other wildlife management programs, it also plays an important role in wildlife damage management. The type, quality, and quantity of habitat are directly related to the wildlife that are present. Therefore, habitat can be managed to not support or attract certain wildlife species. Limitations of habitat management as a method of reducing wildlife damage are determined by the characteristics of the species involved, the nature of the damage, economic feasibility, and other factors.²⁹ Also, legal constraints may exist which preclude altering particular habitats.

When depredation cannot be avoided by careful crop selection or modified planting schedules, lure crops can sometimes be used to mitigate the loss potential. Lure crops are planted or left for consumption by wildlife as an alternative food source. This approach provides relief for critical crops by sacrificing less important or specifically planted fields. For lure crops to be successful, frightening techniques may be necessary in fields where crops are to be protected; wildlife should not be disturbed in sacrificial fields.

Establishing lure crops is expensive, requires considerable time and planning to implement, and may attract other unwanted species to the area, causing additional wildlife damage problems.

Cage traps and immobilization

A variety of cage traps are used in different wildlife damage control efforts. The most commonly known cage traps used in the current program are box traps. Cage traps are usually rectangular, made from wood or heavy gauge mesh wire. These traps are used to capture animals alive and can often be used where many lethal or more dangerous tools would be too hazardous. Cage traps are well-suited for use in residential areas.

Cage traps usually work best when baited with foods attractive to the target animal. They are used to capture animals ranging in size from mice to deer, but are usually impractical in capturing most large animals. They are virtually ineffective for coyotes, but are highly effective and most often used in the urban environment for raccoon, skunk and opossum.³⁰

All applied techniques should be compatible with each other. For example, it is important to note that traps can kill livestock protection dogs if they are caught and not released in a reasonable period of time.

²⁹ USDA APHIS. *Pre-Decision Environmental Assessment: Mammal Damage Management in the North California District APHIS-WS Program*, p. 112.

³⁰ USDA APHIS. *Pre-Decision Environmental Assessment: Mammal Damage Management in the North California District APHIS-WS Program*, p. 116.

Adaptive Management

A premise of adaptive management is that because practitioners/managers do not have full knowledge of wildlife management issues, a management program and its practitioners must apply enough rigor to management activities to ensure that they learn and improve through experience. Stakeholders need to understand that a management program must be sufficiently flexible over time to adapt to what is learned as the program unfolds and managers gain experience.

Essential components of adaptive management include but are not necessarily limited to situational analysis, definition of goals and objectives, identification and selection of alternatives, management interventions, monitoring, and adjustment to approaches and management.³¹ Monitoring is a critical step to better understanding current management systems and to forecast effects of management. Monitoring is not an end in itself; rather, results of monitoring inform necessary adjustments to management approaches if desired goals are not met.

Adaptive management is inherent to APHIS-WS' IWDM approach, as evidenced in select policy directives. For example, WS Directive 2.110 states in reference to Wildlife Services research and methods development, "While conducting assigned field activities, WS operational employees may evaluate modifications to existing WDM techniques, tools, and systems for the purpose of improving these techniques and tools."³²

Actions and Approvals

The following actions and approvals by Mendocino County would be required to implement the proposed project:

- 1) Mendocino County Board of Supervisors certification of the EIR.
- 2) Mendocino County Board of Supervisors adoption of the IWDM Program.
- 3) Mendocino County Board of Supervisors approval of five-year Program and Agreement between USDA APHIS-WS and Mendocino County and annual work and financial plans required by the five-year CSA for each of the five years, which would provide for the following:
 - Assignment of up to four APHIS-WS wildlife specialists for a maximum of 4,176 work hours distributed as needed among direct control activities, technical assistance, APHIS-WS required training and administrative tasks, and leave.
 - APHIS-WS procurement and maintenance of vehicles, tools, supplies, and other specialized equipment as deemed necessary to accomplish direct control activities.
 - APHIS-WS supervision of safe and professional use of approved wildlife damage management tools/equipment, including the use of firearms, advanced optics, assorted snaring devices, trailing hounds, all-terrain vehicles, leg-hold traps for the protection of endangered species and public safety, cage-type and other specialized traps, deterrent methods/devices (including pyrotechnics), Environmental Protection Agency approved chemicals (including immobilizing and euthanasia drugs), night vision equipment, and electronic calling devices.
 - Data reporting for inclusion in the APHIS-WS Management Information System, which would

³¹ Shawn T. Riley et al. "The Essence of Wildlife Management." *Wildlife Society Bulletin*, Vol. 30, No. 2 (Summer, 2002), pp. 585-593.

³² United States Department of Agriculture, Animal and Plant Health Inspection Service. *WS Directive 2.110, Wildlife Services Research and Methods Development*. July 21, 2008.

consist of the number and types of request for assistance, control methods, types of species, whether species causing damage or loss were removed or released, estimated value of loss, and other information used to document and monitor program activities.

No state agency approvals are required.

D: NON-LETHAL PROGRAM ALTERNATIVE

The Non-Lethal Program Alternative would not use or recommend lethal methods to attempt to resolve wildlife damage. All of the non-lethal operational and technical assistance available under the proposed project would be allowed under this alternative. This Alternative assumes that Mendocino County would contract with an outside governmental or non-governmental agency to provide personnel who would give technical information and operational assistance on non-lethal management methods to livestock managers. For example, with respect to deterrent methods, field technicians would instruct livestock managers how to use deterrent tools in ways that maximize their effectiveness while minimizing the potential for predators to habituate to the deterrents. Information and training on lethal management methods would not be provided under this alternative.

This alternative could also involve cost sharing with property owners for reimbursement of management methods, such as building of new fences or repair of fences; purchasing new livestock protection animals; maintenance of livestock animals; and scare devices.

Similar to the proposed project, adaptive management would be a key component of the Non-Lethal Alternative. Adaptive management has been an important and effective component of other non-lethal programs, such as the Wood River Wolf Project in Idaho.³³

Actions and Approvals

Similar actions and approvals would be required for the Non-Lethal Alternative, as would be required for the proposed project. For example, Mendocino County would be required to certify the EIR and approve a Program and Agreement with whichever outside organization it selects to implement the Non-Lethal Program.

Variation of Non-Lethal Program Alternative

A variation of the above-describe Non-Lethal Program Alternative will be considered. This variation continues to prioritize the use of non-lethal methods for wildlife damage management, but allows very limited exceptions to the use of lethal methods. The exception for use of lethal methods would be limited to instances when public health and safety is in danger. This can be generally defined as animal attacks on humans that result in injuries or death; disease threats from rabies and plague outbreaks where predators act as reservoirs.

E. SCOPE OF ENVIRONMENTAL IMPACT ANALYSIS

The environmental checklist recognizes differences between both the proposed project and the non-lethal alternative and the resultant effects of those differences with respect to potential environmental impacts. A few important distinctions are provided in what follows.

³³ Suzanne A. Stone et al. "Adaptive use of nonlethal strategies for minimizing wolf-sheep conflict in Idaho." *Journal of Mammalogy* (98): 33-44. 2017.

Technical Assistance Not Involving Direct Control of Wildlife Damage Management

Proposed Project

The IWDM Program would initially be implemented pursuant to a cost-share agreement with APHIS-WS. The proposed cost-share agreement between the County and APHIS-WS is for a range of services, which would be provided to resource owners upon their request. Many of the activities that would be performed by APHIS-WS personnel under the renewed agreement would be administrative, for example, responding to telephone inquiries, preparing informational literature, giving presentations, and performing initial investigations at the request of resource owners. Personnel would also offer recommendations to resource owners on wildlife damage management that would not involve removal of animals causing damage (that is, non-lethal methods for damage management). In cases where technical assistance would provide sufficient wildlife damage management, further assistance would not be required. These administrative-type activities would not result in physical changes in the environment that require analysis in this Initial Study.

Non-Lethal Program Alternative

The non-lethal program alternative would operate in a similar manner, with representatives of an outside governmental or non-governmental agency providing technical assistance at the request of resource owners.

Use of Direct Control Methods

Proposed Project

The use of direct control methods by APHIS-WS could involve non-lethal and/or lethal methods. The potential environmental effects of each method would vary. For example, whereas the non-lethal use of pyrotechnics could result in impacts related to noise and target species populations, the lethal use of snares could have impacts on target species populations, but not otherwise result in additional physical impacts to the environment such as noise. Through the cost-share agreement between APHIS-WS and the County, the County would provide funding to APHIS-WS for the implementation of direct control methods. Thus, the analysis contained within this Initial Study will be focused on the potential physical effects to the environment that could result from APHIS-WS' use of direct control methods.

Non-Lethal Program Alternative

While the Non-Lethal Program Alternative would not use or recommend lethal methods to attempt to resolve wildlife damage, all of the non-lethal control methods available under the proposed project would be allowed under this alternative. The agency responsible for implementing the program in the field would still provide direct control assistance of non-lethal methods when it has been determined that a problem cannot reasonably be resolved by technical assistance or that the professional skills are required for effective problem resolution and/or safe implementation of methods, such as pyrotechnics. Direct control assistance is often initiated when the wildlife damage involves several ownerships, sensitive species, or complex management problems requiring the direct supervision of a professional wildlife manager or biologist.

Under the variation to the non-lethal program alternative, there may be very limited cases where lethal methods are carried out to protect public health and safety. Thus, their potential physical environmental consequences need to be considered.

Use of Non-lethal Methods by Private Parties

Proposed Project

As part of technical assistance to resource owners, APHIS-WS staff may recommend non-lethal methods for wildlife damage management. Some of these methods could be safely implemented by the resource owner and would be the responsibility of the resource owner. This could include altering animal husbandry practices, fencing, night pens, or use of guard animals, among others. Neither APHIS-WS nor County staff would be involved in implementing these actions, nor would the agreement as proposed allow for County funds to be provided directly to resource owners to acquire materials or resources to implement non-lethal methods on private property.³⁴ As such, under the proposed project, the use of non-lethal methods by private parties would be at the sole discretion of the resource owner. The use of non-lethal methods by private parties, and potential environmental effects, would occur with or without the proposed project, and there are no aspects of the proposed project that would change what non-lethal controls a resource owner might use, either by limiting them or adding new ones.

Non-Lethal Program Alternative

In contrast, under the non-lethal program alternative, the program may provide cost-sharing to private parties for their use of certain non-lethal management methods. For instance, private parties choosing to install fencing or purchase and sustain guard animals following the recommendations of the contracted non-governmental or outside governmental agency may be eligible for cost-sharing. Through cost-sharing with private parties, the County would indirectly provide funds for the implementation of some non-lethal control methods, which may result in impacts to the environment. Therefore, for the non-lethal program alternative, this Initial Study analyzes potential impacts that could occur due to implementation of those non-lethal control methods by private parties for which program reimbursement may be sought.

F. EVALUATION OF ENVIRONMENTAL IMPACTS:

The Initial Study checklist recommended by the State of California Environmental Quality Act (CEQA) Guidelines is used to determine potential impacts of the proposed project on the physical environment. The checklist provides a list of questions concerning a comprehensive array of environmental issue areas potentially affected by the project (see CEQA Guidelines, Appendix G). Explanations to answers are provided in a discussion for each section of questions as follows:

- a) A brief explanation is required for all answers including "No Impact" answers.
- b) "Less Than Significant Impact" applies where the project's impacts are insubstantial and do not require any mitigation to reduce impacts.
- c) "Less Than Significant with Mitigation Measures" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The County, as lead agency, must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level (mitigation measures from earlier analyses may be cross-referenced).
- d) "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- e) All answers must take account of the entire action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts [CEQA Guidelines, Section 15063(a)(1)].

³⁴ While APHIS-WS may temporarily loan and deploy equipment (non-lethal and lethal) as part of IWDM actions, the agency currently has no mechanism to purchase this equipment for private ownership nor grant or reimburse funds for the purchase of such equipment. (Personal email communication between Shannon Chandler, Environmental Coordinator, USDA APHIS Wildlife Services and Nick Pappani, Vice President, Raney Planning and Management, Inc., August 27, 2018).

- f) Earlier analyses may be used where, pursuant to the tiering, Program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or Negative Declaration [CEQA Guidelines, Section 15063(c)(3)(D)]. A brief discussion should be attached addressing the following:
- ➔ **Earlier analyses used** – Identify earlier analyses and state where they are available for review.
 - ➔ **Impacts adequately addressed** – Identify which effects from the above checklist were within the scope of, and adequately analyzed in, an earlier document pursuant to applicable legal standards. Also, state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - ➔ **Mitigation measures** – For effects that are checked as “Less Than Significant with Mitigation Measures,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

I. AESTHETICS – Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Have a substantial adverse effect on a scenic vista?			X	
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway?			X	
3. Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
4. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X	

Discussion Items I-1, 2, 3:

Proposed Project

Approval of the proposed IWDM Program would enable APHIS-WS to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. The proposed project would be anticipated to involve the use of non-permanent control methods such as frightening devices. In addition, while preference is given to non-lethal methods when practical and effective, non-permanent lethal control methods such as trapping and shooting may be implemented. Such non-permanent methods would not include elements that would substantially contrast with the surrounding visual character of any area and many of the elements, such as cages or traps, would be removed following use. Rather, such methods would represent a temporary and minor interruption of the existing visual condition of individual properties within the County.

Mendocino County does not currently include any officially designated State Scenic Highways; however, it should be noted that State Route (SR) 1 through the County, a portion of U.S. 101 and all of SR 20 are eligible routes that have not yet been officially designated. Considering that the proposed project would not result in substantial permanent changes to the visual character of any areas within the County and officially designated State Scenic Highways do not exist within the County, the proposed project would not have the potential to result in the substantial degradation of the visual character of any areas within the County, including areas and scenic resources in proximity to designated scenic highways, impacts related to implementation of the proposed project would be ***less than significant***. No mitigation measures are required.

Non-Lethal Program Alternative

The non-lethal program alternative would involve the provision of technical assistance and operational assistance by an outside governmental or non-governmental agency, as well as potential cost-sharing with private parties to implement particular non-lethal control methods. While the majority of non-lethal control methods would involve non-permanent activities or activities that do not involve physical changes to the environment, technical assistance to private parties may include recommendations regarding the provision of fencing, for which program reimbursement may be obtained. Fencing would be considered a permanent or semi-permanent method of control. When used for the purpose of predation control, fencing requires specific design aimed at deterring predator trespass. Exclusionary fencing may require high gauge metal wire and solid construction, but is not anticipated to include materials, such as wood slats or masonry, that would significantly block near or distant views of agricultural land, pastureland, and rangeland that may represent scenic resources. Therefore, implementation of the non-lethal program alternative and potential construction of exclusionary fencing throughout the County would not have the potential to substantially degrade the visual character or quality of the County.

Considering that fencing would not result in substantial degradation in visual character of areas within the County, including areas and scenic resources in proximity to designated scenic highways, impacts related to implementation of the proposed project would be ***less than significant***. No mitigation measures are required.

A variation of the non-lethal program alternative is being considered that would involve strictly limited use of lethal methods, only in exceptional cases where a risk to public health and safety is posed by wildlife. Considering the limited extent of lethal control to be used under the variation of the non-lethal program alternative, the vast majority of program activity would be similar to the activity discussed above for the non-lethal program alternative. In the infrequent circumstances that lethal methods would be used, such methods would be identical to those considered under the proposed project above, which were determined not to result in substantial degradation of the visual character or quality of the County. Therefore, the variation of the non-lethal program alternative would not result in any potential impacts not previously discussed above.

Discussion Item I-4:

Proposed Project

The checklist question focuses on whether the proposed project could result in a substantial source of light or glare that could adversely affect day or nighttime views in the area. This could be an issue where a project introduces substantial new sources of light near a community that currently enjoys dark skies and associated nighttime views of the stars. In the case of the proposed project, the use of light-emitting devices by APHIS-WS personnel would be carried out primarily in rural areas, where only a few receptors may be exposed to the new light source. In addition, as previously discussed, this analysis is limited to those direct control methods that require implementation by APHIS-WS personnel. This would not be expected to include direct light-emitting devices such as strobes. Rather, this could include pyrotechnics. The light emitted from this frightening device would be akin to fireworks, and thus, temporary, associated only with the period during which the device is being detonated. With respect to lethal methods, light associated with use of lethal methods could be expected to be limited to possible light from the muzzle of a firearm when being discharged. This light would be momentary and extremely localized. Thus, intermittent use of these devices would not be considered substantial sources of light that could adverse nighttime views of receptors, resulting in a ***less-than-significant*** impact. No mitigation measures are required.

Non-Lethal Program Alternative

The non-lethal program alternative would include implementation of similar frightening strategies as discussed above for the proposed project. However, the non-lethal program alternative may involve program reimbursement for private party expenses related to light-emitting devices, such as strobe devices. Consequently, in addition to the direct application of propane exploders and pyrotechnics, as discussed above, the non-lethal program alternative may result in the financing of other control methods, such as implementation of strobe light battery devices. Strobe light battery devices have been shown to deter coyotes and reduce lamb losses by 44-95 percent.³⁵ Use of strobe light battery devices would intentionally produce intermittently flashing light at night to deter detrimental wildlife. Strobe lights would not be operated continuously, as continuous operation could result in habituation and reduction in efficacy of the frightening device. The use of frightening devices, including strobe light battery devices and pyrotechnics, would likely occur in rural portions of the County. Implementation of such methods in rural portions of the County would reduce the potential for such methods to result in disturbance of nearby residences. Considering the wide dispersal of residences in rural areas of the County, the ability to direct frightening devices away from other residences, and the intermittent nature of lighting from such devices, frightening devices would not be considered substantial sources of daytime or nighttime lighting that could adversely affect views in the area.

Although not explicitly addressed in Appendix G of the CEQA Guidelines, the potential for intermittent sources of light to affect non-target wildlife species is being given consideration herein. In the process of frightening target wildlife species, intermittent lighting from frightening devices may disturb non-target species in the area. Strobe light battery devices would not be a source of continuous light but would provide intermittent light in the immediate area of the device. Consequently, such devices would only have the potential to affect wildlife behavior in the immediate vicinity of the device and would not be anticipated to have substantial spill-over effects on other non-target wildlife in the vicinity of the project site. However, the localized nature of such devices would allow for the dispersal of non-target wildlife away from the frightening devices to other suitable habitats, and would not be anticipated to result in any sustained changes to wildlife behavior that could affect the species' life history. Therefore, the non-lethal project alternative is not anticipated to result in substantial impacts to non-target species.

It should be noted that a variation of the non-lethal program alternative is being considered that would involve strictly limited use of lethal methods, only in exceptional cases where a risk to public health and safety is posed by wildlife. Considering the limited extent of lethal control to be used under the variation of the non-lethal program alternative,

³⁵ Samuel B. Linhart et al. "Electronic Frightening Devices for Reducing Coyote Predation on Domestic Sheep: Efficacy Under Range Conditions and Operational Use." (1992). *Proceedings of the Fifteenth Vertebrate Pest Conference 1992*. 47, p. 389.

the vast majority of program activity would be similar to the activity discussed above for the non-lethal program alternative. In the infrequent circumstances that lethal methods would be used, such methods would be identical to those considered under the proposed project above, which were determined not to have an adverse effect on day or nighttime views of an area.

For the above reasons, implementation of the non-lethal program alternative would result in a ***less-than-significant*** impact. No mitigation measures are required.

II. AGRICULTURAL & FOREST RESOURCES – Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	X			
2. Conflict with General Plan or other policies regarding land use buffers for agricultural operations?	X			
3. Conflict with existing zoning for agricultural use, a Williamson Act contract or a Right-to-Farm Policy?	X			
4. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	X			
5. Involve other changes in the existing environment which, due to their location or nature, could result in the loss or conversion of Farmland (including livestock grazing) or forest land to non-agricultural or non-forest use?	X			

Discussion – All Items:

Proposed Project

Approval of the IWDM Program would enable APHIS-WS to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. Due to the programmatic nature of the IWDM program, the proposed project would not result in the direct conversion of important agricultural or timberland for other purposes. However, the implementation of the proposed project could result in conflicts with existing agricultural operations and other uses. Such conflicts are anticipated to be particularly pronounced in areas where agricultural activity occurs in proximity to other nearby residences, and the application of particular direct control methods, for instance propane exploders, would have the potential to create conflicts between the existing agricultural uses and the nearby non-agricultural land uses. Conflicts between existing agricultural activities and nearby non-agricultural land uses resulting from implementation of the proposed project could reduce the viability of agricultural activities within the County, leading to eventual conversion of agricultural lands to other uses. The potential for wildlife damage management is anticipated to be significantly reduced in forest land areas, due to the relative lack of crops and livestock. Predator conflicts and wildlife damage would instead be concentrated in and around agricultural lands.

Considering the above concerns related to viability of agricultural operations, implementation of the proposed project could result in a **potentially significant** impact.

Further analysis of these potential impacts will be discussed in the Agricultural Resources chapter of the Integrated Wildlife Damage Management Program EIR.

Non-Lethal Program Alternative

The non-lethal program alternative would involve activities similar to the proposed project with the key difference that personnel would not perform site visits to implement lethal detrimental wildlife control strategies. Under the variation to the non-lethal program alternative, there may be very limited cases where lethal methods are carried out to protect public health and safety, but such cases would not include implementation of lethal methods where protection of agriculture is the only concern. As discussed above for the proposed project, various techniques that would be implemented under the non-lethal program alternative could result in conflicts related to agricultural uses. Should

such conflicts reduce the viability of farmland within the County, the non-lethal program alternative would result in a ***potentially significant*** impact.

Further analysis of these potential impacts will be discussed in the Agricultural Resources chapter of the Integrated Wildlife Damage Management Program EIR.

III. AIR QUALITY – Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Conflict with or obstruct implementation of the applicable air quality plan?			X	
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
3. Result in a cumulatively considerable net increase of any criteria for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
4. Expose sensitive receptors to substantial pollutant concentrations?			X	
5. Create objectionable odors affecting a substantial number of people?			X	

Discussion Items III-1, 2, 3, 4:

Mendocino County is located within the North Coast Air Basin, which includes Del Norte, Trinity, and Humboldt Counties, as well as a portion of Sonoma County. The Mendocino County Air Quality Management District (MCAQMD) has jurisdictional authority to enforce state and federal air quality laws and regulations within Mendocino County. Air quality within Mendocino County is generally good, and, as a result, Mendocino County is classified as attainment for all federal and state criteria pollutants except for particulate matter less than 10 microns in diameter (PM₁₀). The main sources of PM₁₀ within the County are woodburning devices, fossil fuel powered automobiles, dust from unpaved roads, and construction activity.

To address potential impacts related to air quality emissions, the MCAQMD has adopted thresholds of significance for use in project-level analyses. The significance thresholds, expressed in pounds per day (lbs/day) or tons per year (tpy), serve as air quality standards in the evaluation of air quality impacts associated with proposed projects within the County. Thus, if the proposed project's or the non-lethal project's emissions exceed the MCAQMD's thresholds, the project could have a significant effect on regional air quality and attainment of federal and State ambient air quality standards.

Proposed Project

Implementation of the proposed project would involve the provision of technical assistance and direct control assistance throughout Mendocino County. Technical assistance is the primary method used in responding to requests for assistance and principally consists of the dissemination of advice and information by APHIS-WS. Such information is provided through phone calls and other correspondences. In some cases, demonstrations on the proper use of management devices may be administered, and site visits may be conducted upon request. Direct control assistance generally involves implementation of physical control techniques, which are discussed in-depth in the project description section of this chapter. Implementation of such techniques requires APHIS-WS personnel to visit the affected site one or more times.

Technical Assistance consisting of advice given over the phone would not involve direct sources of air pollutant emissions. On-site visits and implementation of direct control assistance involve representatives of APHIS-WS visiting locations within the County to either demonstrate control techniques or implement direct control assistance. Traveling to and from sites is assumed to involve the use of fossil fueled vehicles. Fossil fueled vehicles are a source of pollutant emissions including criteria pollutants, such as PM₁₀, and toxic air contaminants (TACs). Although site visits using fossil fueled vehicles would constitute a source of emissions, emissions related to site visits would be similar under the proposed project as compared to emissions under previous iterations of the agreement. Therefore, the proposed

project would not be expected to constitute an increase in emissions beyond levels that have previously occurred within the County.

Notwithstanding the above, the potential emissions related to vehicle trips resulting from implementation of the proposed project have been analyzed. Based on data for the years 2013 through 2017, the IWDM program in Mendocino County has resulted in an annual average of 53,795 vehicle miles travelled (VMT).³⁶ Vehicles used under the IWDM project have been four-wheel drive pick-up trucks, which would continue to be used during implementation of the proposed project. Based on the foregoing information, the California Air Resource Board's (CARB's) Emission Factors (EMFAC) model was used to quantify potential emissions related to vehicle use under the proposed project. It should be noted that the type of fuel used for vehicles in the IWDM program was not known at the time of environmental analysis. Therefore, potential emissions from both diesel-fueled vehicles and gasoline-fueled vehicles used for the proposed project was quantified. Table 3 below presents the results of the EMFAC model and compares potential project-related emissions to the MCAQMD's emissions thresholds. Considering that the fuel used for vehicles in the proposed project is not known with certainty, the emissions presented in Table 3 represent the worst-case emission scenario for either a gasoline- or diesel-fueled vehicle, whichever fuel type would result in higher emissions.

Table 3 Operational Emissions			
Pollutant	Proposed Project	MCAQMD Threshold	Exceed Threshold?
ROG	5.71 (lbs/day)	180 (lbs/day)	No
NO _x	34.65 (lbs/day)	42 (lbs/day)	No
PM ₁₀	2.11 (lbs/day)	82 (lbs/day)	No
PM _{2.5}	2.02 (lbs/day)	54 (lbs/day)	No
Local CO	0.11 (tpy)	125 (tpy)	No
<i>Source:</i> Mendocino County Air Quality Management District. <i>Adopted Air Quality CEQA Thresholds of Significance – June 2, 2010.</i> California Air Resources Board. <i>Emissions Factors Model (EMFAC) 2014. Version 1.07. December 14, 2015. (see Appendix A)</i>			

As shown in Table 3, vehicle emissions related to implementation of the proposed project would not exceed the MCAQMD's thresholds of significance regardless of the fuel type used.

Given the limited total amount of emissions anticipated to occur with implementation of the proposed project, and the results of emissions quantification presented in Table 3 above, the proposed project would not have the potential to violate air quality standards. Therefore, the proposed project would not result in the emission of criteria air pollutants that would violate air quality standards, conflict with adopted implementation plans, or result in a cumulatively considerable increase in emissions, nor would the proposed project result in the exposure of sensitive receptors to substantial pollutant levels. As such, the proposed project would result in a **less-than-significant** impact. No mitigation measures are required.

Non-Lethal Program Alternative

The non-lethal program alternative would involve activities similar to the proposed project with the key difference that APHIS-WS staff would not perform site visits to implement lethal wildlife control strategies. While site visits would not be made to implement lethal wildlife control strategies, representatives from the outside governmental or non-governmental agency contracted with Mendocino County to implement the non-lethal program alternative would be anticipated to conduct some site visits to provide further operational assistance. In addition, under the variation to the non-lethal program alternative discussed in the project description above, there may be very limited cases where lethal methods are carried out to protect public health and safety. Implementation of limited lethal methods to protect public health and safety would require site visits, however limited in number. Similar to the proposed project, site visits are assumed to be made by fossil fueled vehicles, which would result in emissions of various air pollutants. The continued need for site visits to implement non-lethal techniques would be anticipated to result in similar emissions as would occur under the proposed project, and presented in Table 3 above. As a result, impacts related to implementation of the non-lethal program alternative would be similar to impacts that would occur under the proposed project and would be considered **less-than-significant**. No mitigation measures are required.

³⁶ Shannon Chandler, Environmental Coordinator, USDA APHIS Wildlife Services, August 16, 2018.

Discussion Item III-5:

Proposed Project

The proposed project could result in animal carcasses that, if not disposed of properly, could decompose and generate odors. WS Directive 2.515, however, sets forth requirements for the disposal of wildlife carcasses, requiring that APHIS-WS personnel make a reasonable effort to retrieve and dispose of wildlife carcasses that result from APHIS-WS wildlife damage management activities. The directive further requires that all carcasses be disposed of in a manner consistent with federal, state, county, and local regulations. Furthermore, the majority of project-related services are provided for the protection of livestock and field crops on agricultural lands where other animal- and farming-related odors are already present and where, given the dispersed nature of existing land uses, odors would not affect a substantial number of people.

Therefore, the potential for odor impacts would be ***less than significant***. No mitigation measures are required.

Non-Lethal Program Alternative

Unlike the proposed project, the non-lethal program alternative would not be anticipated to result in animal carcasses. In addition, while chemical repellents could be utilized, it is not anticipated that the program would provide reimbursement to property owners for purchase of such products. Thus, the potential use of chemical repellents does not need to be analyzed.

Under the variation to the non-lethal program alternative, there may be very limited cases where lethal methods are carried out to protect public health and safety. Although the outside governmental or non-governmental agency implementing the variation to the non-lethal program alternative would not be subject to WS Directive 2.515, the outside governmental or non-governmental agency would be subject to MCAQMD Rule 1-400, which prohibits the discharge of odiferous materials in a manner that creates a nuisance. Therefore, the outside governmental or non-governmental agency selected to apply the variation to the non-lethal program alternative would be required to properly dispose of carcasses to avoid creation of a nuisance related to the decomposition of animal carcasses.

Considering the above, the non-lethal program alternative would not be anticipated to result in the exposure of substantial numbers of receptors to odors, and a ***less-than-significant*** impact would result. No mitigation measures are required.

IV. BIOLOGICAL RESOURCES – Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish & Game, U.S. Fish & Wildlife Service or National Oceanic and Atmospheric Administration Fisheries?	X			
2. Substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number of restrict the range of an endangered, rare, or threatened species?	X			
3. Have a substantial adverse effect on the environment by converting oak woodlands?	X			
4. Have a substantial adverse effect on any riparian habitat or other sensitive natural community, including oak woodlands, identified in local or regional plans, policies or regulations, or by the California Department of Fish & Game, U.S. Fish & Wildlife Service, U.S. Army Corps of Engineers or National Oceanic and Atmospheric Administration Fisheries?	X			
5. Have a substantial adverse effect on federal or state protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) or as defined by state statute, through direct removal, filling, hydrological interruption, or other means?	X			
6. Interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nesting or breeding sites?	X			
7. Conflict with any local policies or ordinances that protect biological resources, including oak woodland resources?	X			
8. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			X	

Discussion Items IV-1, 2, 3, 4, 5, 6, and 7:

Proposed Project

Approval of the proposed IWDM Program would enable APHIS-WS to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. The IWDM Program would include wildlife control methods such as modifications of habitat, exclusionary fencing, frightening devices, and other such methods to prevent damage from wildlife. In cases where all practical non-lethal methods do not succeed in preventing wildlife damage or wildlife poses an imminent threat to public safety and/or health removal or killing of wildlife by trapping or shooting may be conducted. Such wildlife control methods could have an adverse effect on biological resources through adverse effects to special-status species, reduction in habitats, or changes in sensitive natural communities. Consequently, the proposed project would result in a **potentially significant** impact.

Further analysis of these potential impacts will be discussed in the Biological Resources chapter of the Integrated Wildlife Damage Management Program EIR.

Non-Lethal Program Alternative

The non-lethal program alternative would include all activities as would occur under the proposed project with the exception of lethal control methods. Thus, while the non-lethal program alternative would not involve the removal of wildlife through the use of lethal methods, the non-lethal program alternative would seek to alter wildlife behavior through the application of non-lethal methods. Non-lethal methods could include habitat modification, the use of exclusionary fencing, frightening devices, and other methods that could result in adverse effects to non-target species and habitats. In addition, a variation to the non-lethal program alternative under consideration would allow for very limited uses of lethal control methods only in cases where public health and safety is at risk. Should such a variation to the non-lethal program be implemented, lethal methods as discussed under the proposed project above could be implemented, resulting in similar impacts as discussed for the proposed project.

Consequently, the non-lethal program alternative and the variation to the non-lethal program alternative could have an adverse effect on biological resources through adverse effects to special status species, reduction in habitats, or changes in sensitive natural communities. Consequently, the non-lethal program alternative and variation to the non-lethal program would result in a **potentially significant** impact.

Further analysis of these potential impacts will be discussed in the Biological Resources chapter of the Integrated Wildlife Damage Management Program EIR.

Discussion Item IV-8

Proposed Project

The only adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP) within Mendocino County is the Mendocino Redwood Company (MRC) NCCP/HCP. The planning area for the MRC NCCP/HCP applies to approximately 232,000 acres of land owned by the MRC in Mendocino and Sonoma Counties. The MRC NCCP/HCP allows for the cohesive management of the MRC's forest resources to support natural resource conservation and regulatory efficiency.

The proposed project would enable APHIS-WS to provide wildlife management services throughout Mendocino County. Such services include the provision of technical assistance and direct control methods to protect livestock, crops, human health and safety and property from wildlife damage. Under the proposed project, APHIS-WS would not provide technical assistance or direct control within MRC managed lands as the MRC preforms such management activities in compliance with the MRC NCCP/HCP. In addition, MRC lands are used solely for timber harvesting, livestock or farming operations are not conducted within MRC lands; considering the absence of agricultural activities within MRC land, predator conflicts would be anticipated to be limited. In the event that wildlife damage management is needed, APHIS-WS would coordinate with MRC to ensure that selected methods would not conflict with the goals and requirements of the *MRC HCP/NCCP*. As such, a **less-than-significant** impact would result. No mitigation measures are required.

Non-Lethal Program Alternative

Similar to the proposed project, the non-lethal program alternative would not be expected to involve the provision of wildlife management services within any areas under the jurisdiction of an adopted HCP or NCCP, including the MRC NCCP/HCP. In the event that wildlife damage management is needed, APHIS-WS would coordinate with MRC to ensure that selected methods would not conflict with the goals and requirements of the *MRC HCP/NCCP*. Consequently, the non-lethal program alternative would not have the potential to result in conflicts with any adopted HCP or NCCP and a **less-than-significant** impact would result. No mitigation measures are required.

V. CULTURAL RESOURCES – Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines, Section 15064.5?			X	
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines, Section 15064.5?			X	
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
4. Disturb any human remains, including these interred outside of formal cemeteries?			X	

Discussion – All Items:

Proposed Project

The proposed project would involve the protection of human health and safety, property, natural resources, and agricultural activities from wildlife damage through technical assistance and direct control. Generally, methods for direct control of wildlife damage such as trapping and frightening devices do not require significant ground-disturbing activities that would have the potential to cause substantial adverse changes to historical, archaeological, unique geologic, or paleontological resources. Any ground disturbance necessary for the installation of traps or snares would be minimal and limited to surface soils. Thus, a **less-than-significant** impact would occur. No mitigation measures are required.

Non-Lethal Program Alternative

Unlike the proposed project, the non-lethal program alternative may include program reimbursement to private parties for materials related to non-lethal methods. For instance, should wildlife management require installation of fencing, private parties constructing fencing may be reimbursed for some costs. The placement of fencing would require minor ground disturbance for placement and securing of fence posts. Although minor ground disturbance would occur during the placement of fencing, such ground disturbance would be limited to small areas of excavation associated with the placement of fence posts. Such areas of disturbance would be limited spatially and in depth, and the likelihood of encountering any significant resource during post hole digging is low.

Therefore, the use of fencing under the non-lethal program would not be considered a significant source of new ground disturbing activity. The non-lethal program alternative would not have the potential to result in adverse effects to historical, archaeological, unique geologic, or paleontological resources, nor would the non-lethal alternative be anticipated to disturb human remains, and a **less-than-significant** impact would occur. No mitigation measures are required.

VI. GEOLOGY & SOILS – Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides? 			X	
2. Result in substantial soil erosion or the loss of topsoil?			X	
3. Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?			X	
4. Be located on expansive soils, as defined in Chapter 18 of the California Building Code, creating substantial risks to life or property?			X	
5. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			X	

Discussion Items 1, 3, 4, and 5:

Proposed Project

The proposed project would involve the protection of human health and safety, property, natural resources, and agricultural activities from wildlife damage through technical assistance and direct control, but would not include any development activity that would have the potential to expose people or structures to seismic or geologic hazards or require the use of septic systems. Consequently, the proposed project would result in a **less-than-significant** impact. No mitigation measures are required.

Non-Lethal Program Alternative

Similar to the proposed project, the non-lethal program alternative would not result in any development activity that would have the potential to expose people or structures to seismic or geologic hazards or require the use of septic systems. Consequently, the non-lethal program alternative would result in a **less-than-significant** impact. No mitigation measures are required.

Discussion Item 2:

Proposed Project

Implementation of the proposed project could involve the use of fencing, which, as discussed previously, would require minor ground disturbance for the placement and securing of fence posts. However, under the proposed project fencing would be installed and financed by private parties, and APHIS-WS would not directly construct fencing. Select control methods, such as traps or snares, would be directly implemented by APHIS-WS and could require minor ground disturbance for installation. Ground disturbance associated with traps and snares would not amount to

substantial areas of disturbance and would not result in noticeable top soil loss or erosion. Considering that the proposed project would not include any new development activity or other activities resulting in substantial disturbance of top soil, the proposed project would not have the potential to result in significant top soil loss or erosion and a ***less-than-significant*** impact would result.

Non-Lethal Program Alternative

Unlike the proposed project, the non-lethal program alternative may include program reimbursement to private parties for materials related to non-lethal methods. For instance, should wildlife management require installation of fencing, private parties constructing fencing may be reimbursed for some costs. The placement of fencing would require minor ground disturbance for placement and securing of fence posts. Although minor ground disturbance would occur during the placement of fencing, such ground disturbance would be limited to small areas of excavation associated with the placement of fence posts. Such areas of disturbance would be limited spatially and in depth and would not be considered to create the potential for substantial top soil loss or erosion.

Given the above, the non-lethal program alternative would not result in new development, and fencing that may be constructed under the non-lethal program alternative would not have the potential to result in substantial ground disturbance, top soil loss or erosion. Therefore, a ***less-than-significant*** impact would result.

VII. GREENHOUSE GAS EMISSIONS – Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant and/or cumulative impact on the environment?			X	
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Discussion – All Items:

Emissions of greenhouse gases (GHGs) contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on earth. Individual GHG emissions from a household, town, or, in some cases a County, are at a micro-scale level relative to global emissions and effects to global climate change; however, development or other activity within a County could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As such, impacts related to emissions of GHG are inherently considered cumulative impacts.

A number of regulations currently exist related to GHG emissions, predominantly Assembly Bill (AB 32), Executive Order S-3-05, and Senate Bill (32). AB 32 sets forth a statewide GHG emissions reduction target of 1990 levels by 2020. Executive Order S-3-05 sets forth a transitional reduction target of 2000 levels by 2010, the same target as AB 32 of 1990 levels by 2020, and further builds upon the AB 32 target by requiring a reduction to 80 percent below 1990 levels by 2050. SB 32 also builds upon AB 32 and sets forth a transitional reduction target of 40 percent below 1990 levels by 2030. In order to implement the statewide GHG emissions reduction targets, local jurisdictions are encouraged to prepare and adopt area-specific GHG reduction plans and/or thresholds of significance for GHG emissions.

The Mendocino County General Plan identifies the need for action to confront the challenge of climate change and includes Policy RM-50, as well as Action Items RM-50.1 through RM-50.3, which directs the County to take steps to address countywide GHG emissions. However, Mendocino County has not yet adopted a GHG reduction plan or climate action plan.

Although Mendocino County has not yet adopted a GHG reduction plan or climate action plan, the MCAQMD has adopted thresholds of significance in order to determine whether proposed projects would have the potential to result in impacts to the environment related to GHG emissions. The District's threshold includes a mass emissions level of 1,100 metric tons of CO₂ equivalents per year (MT CO₂e/yr) for a project or 4.6 Metric tons of CO₂e per service population per year (where service population represents the number of residents anticipated to reside at a new residential development or the number of employees that would be employed at a new commercial development). Considering that the proposed project does not include new development, the appropriate threshold for use in analysis of the proposed project is the mass emissions threshold of 1,100 MT CO₂e/yr.

Proposed Project

The proposed project would not involve the development of any structures or permanent sources of electricity consumption that would be considered sources of GHG emissions. Similar to what was discussed in Section III Air Quality, of this Initial Study, the technical assistance included in the proposed project would primarily involve correspondence between APHIS-WS and livestock managers or farmers, with occasional site visits as necessary. Correspondences occurring during technical assistance would not be considered a substantial source of GHG emissions.

As needed, technical assistance and direct control under the proposed project would involve representatives from APHIS-WS making site visits to implement wildlife control methods. Some wildlife control methods would result in

GHG emissions. For instance, propane is considered a GHG, and the use of propane exploders to frighten wildlife could result in the emission of GHGs, both in the form of fugitive propane, and through the combustion of propane, which releases carbon dioxide, a common GHG. It should be noted that agricultural land uses frequently involve the use and combustion of propane for heating and cooking, and use of propane exploders would likely result in similar emissions as other more common uses of propane for agricultural purposes. However, uses of propane for wildlife control represents relatively small individual sources of GHG emissions, and emissions of GHGs related to the use of propane exploders throughout the County would not be considered a substantial source of GHGs.

In addition to the limited emissions of GHG resulting from certain control techniques outlined above, traveling to and from sites would constitute a source of emissions from fossil fueled vehicles. Such emissions would be similar to the emissions that have occurred under previous iterations of IWDMD Program and would represent a small proportion of Countywide emissions. Thus, the emissions that would occur related to site visits would not be considered new emissions, as past iterations of the IWDMD Program resulted in similar emissions from site visits. Nonetheless, emissions were quantified using EMFAC as discussed under Section III Air Quality, above. Table 4 below presents the mobile GHG emissions that could occur with implementation of the proposed project and compares such emissions to the MCAQMD's thresholds of significance.

Table 4 Operational GHG Emissions			
Pollutant	Proposed Project	MCAQMD Threshold	Exceed Threshold?
GHG	0.00040 MT CO ₂ /yr	1,100 MT CO ₂ /yr	No
<i>Source:</i> Mendocino County Air Quality Management District. <i>Adopted Air Quality CEQA Thresholds of Significance – June 2, 2010.</i> California Air Resources Board. <i>Emissions Factors Model (EMFAC) 2014. Version 1.07. December 14, 2015. (see Appendix A)</i>			

As shown in Table 4, the proposed project would result in GHG emissions far below the MCAQMD's thresholds of significance. Furthermore, it should be noted that California has begun implementation of the Low Carbon Fuel Standard (LCFS) Program. The LCFS Program seeks to reduce the amount of carbon emissions per unit of fuel consumed in California. Implementation strategies for the LCFS Program include lowering the carbon intensity of common fuels such as gasoline and diesel, through the use of ethanol mixing and other strategies that reduce the amount of carbon emissions from each unit of fuel consumed. Unless specifically exempted, all fuel consumed within California is subject to the LCFS Program.³⁷ Thus, emissions from site visits using fossil fueled vehicles under the proposed project would be minimized through implementation of the statewide LCFS Program.

In the absence of adopted countywide plans to reduce GHG emissions, the proposed project's GHG emissions were compared to MCAQMD's thresholds and, as shown in Table 4, emissions related to the proposed project would be far below the thresholds being applied. Therefore, the proposed project would not result in significant emissions of GHGs and a **less-than-significant** impact related to the generation of GHGs and compliance with applicable state laws regarding the reduction of GHG emissions would result. No mitigation measures are required.

Non-Lethal Program Alternative

Similar to the proposed project above, the non-lethal program alternative would involve both technical assistance and operational assistance. Technical assistance would primarily involve correspondences between the outside governmental or non-governmental agency contracted by Mendocino County and livestock managers or farmers but may additionally include site visits as needed. Correspondences would not result in the emission of GHGs. However, similar to the proposed project, the non-lethal program alternative would involve site visits, which would generate GHG emissions related to the use of fossil fueled vehicles. Such visits would be similar to site visits undertaken during past iterations of the IWDMD program, and, for the reasons described for the proposed project above, would not be considered a significant source of GHG emissions.

Control methods such as electric fences, strobe light batteries, and electronic distress sounds would all consume electricity. Unless the electricity consumed is generated solely through renewable sources, the foregoing wildlife control methods represent indirect sources of GHG emissions through the consumption of fossil fuel generated electricity. Although the foregoing non-lethal control techniques would result in GHG emissions through the consumption of energy, the amount of electricity consumed would be limited and the GHG emissions resulting from

³⁷ California Air Resources Board. *Low Carbon Fuel Standard*. Available at: <https://www.arb.ca.gov/fuels/lcfs/lcfs.htm>. Accessed July 2018.

generation of such electricity would not be considered substantial. Similar to the proposed project, propane exploders may be implemented in certain cases; however, as discussed above, the use of propane for wildlife management would not be considered a substantial source of GHG emissions.

Considering the above, the non-lethal program alternative would result in a ***less-than-significant*** impact related to the generation of GHGs and compliance with applicable state laws regarding the reduction of GHG emissions. No mitigation measures are required.

VIII. HAZARDS & HAZARDOUS MATERIALS – Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Create a significant hazard to the public or the environment through the routine handling, transport, use, or disposal of hazardous or acutely hazardous materials?	X			
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	X			
3. Emit hazardous emissions, substances, or waste within one-quarter mile of an existing or proposed school?	X			
4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X	
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			X	
6. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing in the project area?			X	
7. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
8. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	X			

Discussion Items VIII-1, 2, 3:

Proposed Project

Approval of the proposed project would enable APHIS-WS to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. The IWDM program would include the use of chemical repellents as part of wildlife management within the County. Direct control would involve the use and transport of such repellents throughout the County. However, the repellents, such as Raccoon Eviction Fluid, are not considered hazardous to the environment or public health. The use, transport, and disposal of such repellents would not have the potential to create a hazard to the public or the environment (e.g., impacts to water quality) throughout the County, including in areas within one-quarter mile of a school, and could result in reasonably foreseeable releases due to accident or upset conditions. Potential hazards would be limited to non-chemical euthanasia methods such as firearms, which could create hazards if not used properly. Accordingly, the proposed project would result in a **potentially significant** impact.

Further analysis of these potential impacts will be discussed in the Hazards and Hazardous Materials chapter of the Integrated Wildlife Damage Management Program EIR.

Non-Lethal Program Alternative

The non-lethal program alternative would not involve the use of toxicants, nor would the non-lethal program be expected to include reimbursement to private parties for use of chemical repellents. Thus, the potential use of chemical repellents does not need to be analyzed. The potential variation to the non-lethal program alternative,

however, could involve lethal methods in certain scenarios where public health or safety is at risk. In such scenarios, non-chemical means of euthanasia may be used to control wildlife threatening public health or safety. Impacts from the use of non-chemical methods would be similar to the impacts discussed above for the proposed project. Accordingly, the variation to the non-lethal program alternative could result in a **potentially significant** impact.

Further analysis of these potential impacts will be discussed in the Hazards and Hazardous Materials chapter of the Integrated Wildlife Damage Management Program EIR.

Discussion Item VIII-4:

Proposed Project

Approval of the proposed project would enable APHIS-WS to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. The control methods included in the proposed project would not involve ground disturbance such as grading or other earth moving activity that would have the potential to disturb existing known contaminated soils or areas. Furthermore, existing contaminated areas are primarily located within developed portions of the County, while the majority of activities related to the proposed project are anticipated to occur in more rural portions of the County, where agricultural activity occurs. Considering that the majority of proposed project activity would be anticipated in rural areas, the proposed project would be unlikely to result in any activities within sites identified pursuant to Government Code Section 65962.5.

Given the above, the proposed project would not be located on a site identified on lists compiled pursuant to Government Code Section 65962.5 and a **less-than-significant** impact would occur.

Non-Lethal Program Alternative

Similar to the proposed project, the non-lethal program alternative would not result in any substantial ground disturbing activities and would not have the potential to disturb contaminated soils or sites. Although the non-lethal program alternative may include the placement of fencing, and potential cost-sharing for such fencing, the implementation of fencing would only occur where agricultural activity is being conducted. Agricultural activity is not compatible with hazardous material contamination, and, therefore, agricultural activity and any fencing related to the non-lethal program alternative would not occur on contaminated sites.

Considering the foregoing discussion, the non-lethal program alternative would not be anticipated to result in the placement of fencing on sites identified on lists compiled pursuant to Government Code Section 65962.5. Consequently, the non-lethal program alternative would result in a **less-than-significant** impact.

Discussion Items VIII-5, 6:

Proposed Project

Several public and private airports exist within Mendocino County including, but not limited to the Little River Airport, the Boonville Airport, the Ukiah Municipal Airport, and the Willits Municipal Airport. Approval of the proposed project would enable APHIS-WS to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. The proposed project would not involve the use of aerial hunting techniques, and would not involve the development of any structures or other infrastructure that could have the potential to create conflicts with existing airports. Therefore, the proposed project would result in a **less-than-significant** impact related to airport safety hazards.

Non-Lethal Program Alternative

Similar to the proposed project, the non-lethal program alternative would involve wildlife control activities throughout the County but would not involve lethal control methods. The non-lethal program alternative would not involve any development activity that could conflict with existing airport uses, and wildlife control activities would not have the potential to create safety hazards to airport uses. Consequently, the non-lethal program alternative would result in a **less-than-significant** impact related to airport safety hazards.

Discussion Item VIII-7:

Proposed Project

The Mendocino County Board of Supervisors adopted the *Mendocino County Operational Area Emergency Operations Plan* on September 13, 2016. The Emergency Operations Plan provides a framework for emergency response throughout the County. The proposed project does not involve any physical development or other land disturbing activity that could result in changes to the circulation system within Mendocino County or changes to the emergency response capability of any agencies within the County. Therefore, the proposed project would result in a ***less-than-significant*** impact. No mitigation measures are required.

Non-Lethal Program Alternative

Similar to the proposed project, the non-lethal program alternative would not involve changes to the circulation system within Mendocino County that could result in changes to the emergency response capability of any agencies within the County or conflict with the County's adopted Emergency Response Plan. Therefore, the non-lethal program alternative would result in a ***less-than-significant*** impact. No mitigation measures are required.

Discussion Item VIII-8:

Proposed Project

The majority of Mendocino County is subject to high fire hazard risk, with some areas of very high fire risk and other areas experiencing moderate fire risk.³⁸

Approval of the proposed project would enable APHIS-WS to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. The IWDM program could include the use of pyrotechnic scare methods, such as propane exploders that could pose a risk of causing wildfires within the County. Therefore, implementation of the proposed project could result in an increased risk of wildfires within the County, which would be considered a ***potentially significant*** impact.

Further analysis of these potential impacts will be discussed in the Hazards and Hazardous Materials chapter of the Integrated Wildlife Damage Management Program EIR.

Non-Lethal Program Alternative

The non-lethal program alternative would involve the use of all non-lethal wildlife control methods that would be implemented under the proposed project, and for the variation of this alternative, extremely limited use of lethal methods only when public health and safety is threatened. As such, wildlife control methods that would have the potential to increase fire risk within the County, such as propane exploders and electric fencing, would be used under the non-lethal program alternative. Therefore, implementation of the proposed project could result in an increased risk of wildfires within the County, which would be considered a ***potentially significant*** impact.

Further analysis of these potential impacts will be discussed in the Hazards and Hazardous Materials chapter of the Integrated Wildlife Damage Management Program EIR.

³⁸ California Department of Forestry and Fire Protection. *Fire Hazard Severity Zones in State Responsibility Areas*. November 7, 2007.

IX. HYDROLOGY & WATER QUALITY – Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Violate any federal, state or county potable water quality standards?			X	
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lessening of local groundwater supplies (i.e. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
4. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				X
5. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
6. Otherwise substantially degrade water quality?			X	
7. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
8. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
9. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
10. Inundation by seiche, tsunami, or mudflow?				X

Discussion Items IX-1, 6:

Proposed Project

The proposed project would involve the protection of human health and safety, property, natural resources, and agricultural activities from wildlife damage through technical assistance and direct control, but would not include any development activity and would not have the potential to create development-related sources of water quality pollutants or polluted runoff.

As discussed previously, the proposed project could result in animal carcasses that, if not disposed of properly, could decompose and lead to the degradation of water quality. WS Directive 2.515, however, sets forth requirements for the disposal of wildlife carcasses, requiring that WS personnel make a reasonable effort to retrieve and dispose of wildlife carcasses that result from APHIS-WS wildlife damage management activities. The directive further requires that all carcasses be disposed of in a manner consistent with federal, state, county, and local regulations. The proper disposal of carcasses would ensure that carcasses are not deposited in water ways, where the decomposition of such animals would result in the degradation of water quality.

It should be noted that the proposed project would not involve the use of lethal chemicals for wildlife control purposes. Thus, there would be no potential for lethal chemicals to enter downstream waterways and adversely affect water quality.

Considering that the proposed project would not result in substantial erosion or improper disposal of animal carcasses, implementation of the proposed project would not result in the violation of water quality standards or the substantial degradation of water quality and a ***less-than-significant*** impact would result. No mitigation measures are required.

Non-Lethal Program Alternative

Similar to the proposed project, the non-lethal program alternative would not result in any development activity and would not have the potential to create development-related sources of water quality pollutants or polluted runoff. Because the non-lethal program alternative would not involve lethal control methods, potential water quality issues related to animal carcasses would not occur. Furthermore, the non-lethal program alternative would not involve the use of pesticides or other toxicants that could degrade water quality.

Similar to the program in place in Marin County, the non-lethal program alternative may include cost sharing to partially compensate private parties implementing the recommended control methods. Control methods are anticipated to include the use of fencing. The placement of fencing would involve minor land disturbance associated with the digging of post holes; such limited ground disturbance activity would not be considered to have the potential to result in the creation of substantial amounts of polluted runoff due to erosion or top soil loss. Thus, while the non-lethal program alternative would include cost sharing that may compensate private parties for the installation of fencing, fencing would not result in impacts related to the degradation of water quality through erosion or siltation of waterways.

As noted in the project description section of this IS, a variation to the non-lethal program alternative may be implemented, which would allow for the use of lethal methods only where public health or safety is at risk. In such scenarios, non-chemical euthanasia methods may be used to control wildlife threatening public health or safety. Impacts from the use of non-chemical lethal methods would not have the potential to adversely water quality.

Considering that the non-lethal program alternative would not be anticipated to result in substantial erosion, and that animal carcasses would be properly disposed of under the variation of the non-lethal program alternative, the non-lethal program alternative and variation thereof would not result in the violation of water quality standards or the substantial degradation of water quality and a ***less-than-significant*** impact would result. No mitigation measures are required.

Discussion Items IX-2, 3, 4, 5, 7, 8, 9, 10:

Proposed Project

The proposed project does not include any development activity. Thus, the proposed project would not have the potential to result in changes to drainage patterns, increased stormwater runoff, the placement of structures within floodplains, or the depletion of groundwater. Consequently, the proposed project would result in ***no impact***. No mitigation measures are required.

Non-Lethal Program Alternative

Similar to the proposed project, the non-lethal program alternative would not result in any development activity that would have the potential to result in substantial changes to drainage patterns, increased stormwater runoff, the placement of structures within floodplains, or the depletion of groundwater. Installation of exclusion fencing would result in limited ground disturbance but would not substantially alter drainage patterns of an area. Consequently, the non-lethal program alternative would result in ***no impact***. No mitigation measures are required.

X. LAND USE & PLANNING – Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Physically divide an established community?			X	
2. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
3. Conflict with any applicable habitat conservation plan or natural community conservation plan?			X	

Discussion Item X-1:

Proposed Project

Approval of the proposed project would enable APHIS-WS to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. Permanent structures would not be developed which could physically divide an established community. This is considered a **less-than-significant** impact. No mitigation measures are required.

Non-Lethal Program Alternative

Similar to the proposed project, the non-lethal program alternative would not involve any development activity. Consequently, the non-lethal program alternative would not include the placement of permanent structures that could physically divide an established community. The non-lethal program alternative may include cost sharing to partially compensate private parties implementing the recommended control methods. Control methods are anticipated to include the use of fencing. Fencing placed for the management of wildlife under the non-lethal program alternative would likely be placed in targeted areas where livestock operations or other agricultural activities currently occur. Fencing would not be designed to inhibit the movement of people or goods and would likely be confined to individual parcels or sections of parcels needing protections from wildlife. Although fencing would be installed by private parties under the non-lethal program alternative, such installation would occur following consultation with the outside governmental or non-governmental agency implementing the non-lethal program. Consultation between the private party and the outside governmental or non-governmental agency implementing the non-lethal program would ensure that fencing installation was targeted at the control of wildlife, and would not result in the physical division of established communities.

Considering that the non-lethal program alternative would not include physical development, and fencing installed under cost-sharing agreements would be targeted through assistance from the outside governmental or non-governmental agency implementing the non-lethal program, the non-lethal alternative would not result in the division of an established communities and a **less-than-significant** impact would occur. No mitigation measures are required.

Discussion Item X-2:

Proposed Project

The proposed project would not involve development activity that would have the potential to conflict with applicable land use plans. Rather, the proposed project would involve the provision of assistance to existing or proposed land uses in order to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods. The proposed project would not introduce any new land uses or result in new development activity; consequently, the proposed project would not conflict with any applicable land use plans, policies, or regulations and a **less-than-significant** impact would occur. No mitigation measures are required.

Non-Lethal Program Alternative

Similar to the proposed project, the non-lethal program alternative would not result in any development activity. Rather the non-lethal program alternative would facilitate existing and planned uses within the County by providing assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of non-lethal methods. The non-lethal program alternative would not introduce any new land uses or result in new development activity; consequently, the non-lethal program alternative would not conflict with any applicable land use plans, policies, or regulations and a ***less-than-significant*** impact would occur. No mitigation measures are required.

Discussion Item X-3:

Proposed Project

The only natural community conservation plan within the County is the MRC HCP/NCCP, which applies to over 232,000 acres of timber harvest land within Mendocino and Sonoma Counties. The MRC HCP/NCCP only applies to lands owned by the Mendocino Redwood Company. The proposed project would enable APHIS-WS to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. The production of timber within the County is not subject to substantial loss or damage by wildlife, and, under the MRC HCP/NCCP the MRC provides resource management within MRC owned lands. Land managed by the MRC is not used for agricultural activities, and, therefore, APHIS-WS would not be anticipated to provide wildlife control services to lands managed by MRC under the proposed project. In the event that wildlife damage management is needed, APHIS-WS would coordinate with MRC to ensure that selected methods would not conflict with the goals and requirements of the *MRC HCP/NCCP*. Thus, the proposed project would not conflict with any adopted HCP or NCCP and a ***less-than-significant*** impact would occur. No mitigation measures are required.

Non-Lethal Program Alternative

Similar to the proposed project, the non-lethal program alternative would not be expected to involve the provision of wildlife management services within any areas under the jurisdiction of an adopted HCP or NCCP, including the MRC NCCP/HCP. In the event that wildlife damage management is needed, APHIS-WS would coordinate with MRC to ensure that selected methods would not conflict with the goals and requirements of the *MRC HCP/NCCP*. Consequently, the non-lethal program alternative would not have the potential to result in conflicts with any adopted HCP or NCCP and a ***less-than-significant*** impact would result. No mitigation measures are required.

XI. MINERAL RESOURCES – Would the project result in:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	
2. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			X	

Discussion- All Items:

Proposed Project

Proposed project activities do not include any changes in land use, construction, development, or other components that would result in the loss of availability of a known mineral resource or of a locally important mineral resource recovery site. This is considered a ***less-than-significant*** impact. No mitigation measures are required.

Non-Lethal Program Alternative

The non-lethal program alternative would not include any changes in land use, construction, development, or other components that would result in the loss of availability of a known mineral resource or of a locally important mineral resource recovery site. This is considered a ***less-than-significant*** impact. No mitigation measures are required.

XII. NOISE – Would the project result in:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies?	X			
2. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	X			
3. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	X			
3. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	X			
4. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	X			
5. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	X			

Discussion – All Items:

Proposed Project

The proposed project would include a variety of wildlife control methods, many of which would not result in the creation of noise. However, other methods of wildlife control could produce varying amounts of noise. Indeed, the efficacy of some control methods, including electronic sound frightening devices and propane exploders, are either partly or completely dependent on the creation of noise to frighten away target wildlife. Although simple devices such as sound frightening devices would not require direct implementation by APHIS-WS staff, propane exploders and other methods with the potential to create noise, such as shooting and pyrotechnics, would be directly implemented by APHIS-WS staff.

Agricultural operations and livestock management currently creates noise within the County; however, the intentional creation of noise for wildlife control purposes under the proposed project could affect nearby receptors and the proposed project would have a **potentially significant** impact.

Further analysis of these potential impacts will be discussed in the Noise chapter of the Integrated Wildlife Damage Management Program EIR.

Non-Lethal Program Alternative

The non-lethal program alternative would involve the use of all wildlife control methods that would be implemented under the proposed project, with the exception of the lethal control methods. As such, wildlife control methods that would cause noise, including electronic sound frightening devices and propane exploders, would be used under the non-lethal program alternative. It should be noted that a variation to the non-lethal program alternative is under consideration, which would include the limited use of lethal control methods in instances where wildlife poses a threat to public health or safety. Lethal control methods under the variation may include shooting, which would create noise. Considering the use of such control methods, similar to the proposed project, the non-lethal program alternative would result in a **potentially significant** impact.

Further analysis of these potential impacts will be discussed in the Noise chapter of the Integrated Wildlife Damage Management Program EIR.

XIII. POPULATION & HOUSING – Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Induce substantial population growth in an area, either directly (i.e. by proposing new homes and businesses) or indirectly (i.e. through extension of roads or other infrastructure)?			X	
2. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?			X	
3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?			X	

Discussion – All Items:

Proposed Project

Approval of the proposed IWDM Program would enable APHIS-WS to continue to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. Such management activities would not induce substantial population growth in the County, nor would they displace substantial number of existing housing or people, necessitating the construction of replacement housing elsewhere. This is considered a ***less-than-significant*** impact. No mitigation measures are required.

Non-Lethal Program Alternative

The non-lethal program alternative would serve to protect livestock, crops, human health and safety and property within the County from wildlife damage through the use of a variety of non-lethal methods. Such management activities would not induce substantial population growth in the County, nor would they displace substantial number of existing housing or people, necessitating the construction of replacement housing elsewhere. This is considered a ***less-than-significant*** impact. No mitigation measures are required.

XIV. PUBLIC SERVICES – Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental services and/or facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services?

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Fire protection?	X			
2. Sheriff protection?	X			
3. Schools?			X	
4. Parks?			X	
5. Other public facilities?			X	

Discussion Items XV-1, 2:

Fire protection services within Mendocino County are primarily provided by the California Department of Forestry and Fire Protection (CAL FIRE). In addition to CAL FIRE services, several local agencies provide fire protection and mutual aid with CAL FIRE. Generally, such departments are located within incorporated cities or unincorporated towns within the County. The majority of Mendocino County is subject to high fire hazard risk, with some areas of very high fire risk and other areas experiencing moderate fire risk.³⁹

Law enforcement services within Mendocino County are provided by local agencies located within incorporated cities or unincorporated towns within the County, as well as by Mendocino County Sheriff's Office for the unincorporated portions of the County.

Proposed Project

Approval of the proposed project would enable APHIS-WS to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. The IWDM program would include the use of frightening devices, such as pyrotechnics and propane exploders, which could pose a risk of causing wildfires within the County. Increased prevalence of wildfires within the County would result in increased demand on fire protection services.

In addition to the potential increase in demand on fire protection services discussed above, pyrotechnic devices and other scare devices, such as electronic distress sounds, may cause disturbances in the area where such techniques are employed. The use of such measures is anticipated to primarily occur in the less dense, rural portions of the County, where agricultural activity is currently located, though some such measures may be implemented in proximity to residences. Use of pyrotechnic or scare devices in proximity to existing residences may result in increased reports of disturbances to the Mendocino County Sheriff's Office. Similarly, lethal control methods, such as shooting, may result in increased reports of disturbances to the Mendocino County Sheriff's Office. Response to increased reports of disturbances would increase demand on sheriff protection services within the County.

Should demand on fire and sheriff protection services increase due to more frequent wildfires and disturbance calls, respectively, new or physically altered government facilities may be required, construction of which could result in adverse effects to the environment, and, consequently, the proposed project would result in a **potentially significant** impact.

³⁹ California Department of Forestry and Fire Protection. *Fire Hazard Severity Zones in State Responsibility Areas*. November 7, 2007.

Further analysis of these potential impacts will be discussed in the Public Services chapter of the Integrated Wildlife Damage Management Program EIR.

Non-Lethal Program Alternative

The non-lethal program alternative would involve the use of all wildlife control methods that would be implemented under the proposed project, with the exception of the lethal control methods. As such, wildlife control methods that would have the potential to increase fire risk within the County, such as propane exploders and electric fencing, would be used under the non-lethal program alternative. Therefore, similar to the proposed project, the non-lethal program alternative may increase the prevalence of wildfires within the County, which may result in the need for new or physically altered government facilities.

Similar to the proposed project, discussed above, the non-lethal program alternative may result in the use of pyrotechnic and other scare devices in proximity to existing residences. The use of such devices may result in increased disturbance calls to the Mendocino County Sheriff's Office. Increased disturbance calls would represent an increase in demand on sheriff protection services within the County, and may result in the need for new or physically altered government facilities in order to provide adequate sheriff protection and response services.

It should be noted that a variation to the non-lethal program alternative is being considered, under which lethal methods would be used in strictly limited instances where wildlife poses a risk to public health and safety. Lethal methods may include shooting, which, as discussed for the proposed project above, could cause increased reports of disturbances to the Mendocino County Sheriff's Office. Response to increased reports of disturbances would increase demand on sheriff protection services within the County.

Considering that construction of new or physically altered governmental facilities may be required due to increase wildfire prevalence and disturbance calls within the County, the non-lethal program alternative would result in a **potentially significant** impact.

Further analysis of these potential impacts will be discussed in the Public Services chapter of the Integrated Wildlife Damage Management Program EIR.

Discussion Items XIV-3, 4, 5:

Proposed Project

Approval of the proposed IWDM Program would enable APHIS-WS to continue to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. The IWDM Program would be administered by APHIS-WS staff with funding from the County and use of APHIS-WS equipment and facilities. Such management activities would not increase demand on schools, parks, or other public facilities. This is considered a **less-than-significant** impact. No mitigation measures are required.

Non-Lethal Program Alternative

The non-lethal program alternative would serve to protect livestock, crops, human health and safety and property within the County from wildlife damage through the use of a variety of non-lethal methods. The non-lethal program alternative would be administered by an outside governmental or non-governmental agency, which would be under contract with the County but would provide personnel and operate out of facilities separate from that of the County's. Such management activities would not induce not increase demand on schools, parks, or other public facilities. This is considered a **less-than-significant** impact. No mitigation measures are required.

XV. RECREATION – Would the project result in:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
2. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

Discussion – All Items:

Proposed Project

Approval of the proposed IWDM Program would enable APHIS-WS to continue to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. Such activities would not have the potential to increase demand on recreational facilities to the extent that additional facilities would be required, the construction of which could cause physical environmental impacts. This is considered a ***less-than-significant*** impact. No mitigation measures are required.

Non-Lethal Program Alternative

The non-lethal program alternative would serve to protect livestock, crops, human health and safety and property within the County from wildlife damage through the use of a variety of non-lethal methods. Such activities would not have the potential to increase demand on recreational facilities to the extent that additional facilities would be required, the construction of which could cause physical environmental impacts. This is considered a ***less-than-significant*** impact. No mitigation measures are required.

XVI. TRANSPORTATION & TRAFFIC – Would the project result in:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?			X	
4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
5. Result in inadequate emergency access?			X	
6. Conflict with adopted policies, plan, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			X	

Discussion – All Items:

Proposed Project

Approval of the proposed IWDM Program would enable APHIS-WS to continue to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. None of the wildlife control methods would have the potential to alter circulation patterns within the County, thereby altering emergency access, access to public transit, or the efficacy of any mode of transportation. Much of the wildlife control work within the IWDM Program would be administered through technical support, which can be offered through off-site correspondences. However, some technical support and all direct control methods would require site visits by APHIS-WS staff. Such site visits would happen throughout the County on an as-needed-basis, with APHIS-WS staff visiting individual livestock managers or farmers as requested. Site visits would not be anticipated to result in changes to transportation or circulation within the County because, as noted, APHIS-WS staff would visit diverse areas of the County only in response to requests from County residences. Thus, vehicle trips related to the IWDM Program would be dispersed throughout the County and would not be concentrated on any one intersection or roadway area. Furthermore, site trips are anticipated to occur relatively infrequently, with few, if any, trips occurring each day. Considering that the relatively few trips resulting from implementation of the proposed project would be dispersed throughout the County, and the proposed project would not be anticipated to result in any impacts to roadway operations, a **less-than-significant** impact would result. No mitigation measures are required.

Non-Lethal Program Alternative

The non-lethal program alternative would include activities related to technical assistance and operational assistance similar to the proposed project, with the exception of lethal control methods. Thus, the non-lethal program alternative would involve off-site correspondences as well as site visits. Site visits under the non-lethal program alternative would occur in a similar manner as would occur under the proposed project; that is, the non-governmental agency or outside

governmental agency contracted by the County to implement the non-lethal program alternative would make site visits as requested and needed to individual sites throughout the County. Such site visits would be dispersed throughout the County and would not be concentrated on any one intersection or roadway area. Furthermore, site trips are anticipated to occur relatively infrequently, with few trips occurring each day. Thus, the relatively few trips would be dispersed throughout the County, and the non-lethal program alternative would not be anticipated to result in any impacts to roadway operations. This is considered a ***less-than-significant*** impact. No mitigation measures are required.

XVII. TRIBAL CULTURAL RESOURCES – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or			X	
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			X	

Discussion – All Items:

Proposed Project

The proposed project would involve the control of wildlife through technical assistance and direct control. As discussed in Section V, Cultural Resources, of this Initial Study, the only wildlife control methods with the potential to result in any ground disturbance would be the placement of snares or traps. However, snares or traps are small and require limited ground disturbance during placement. Such disturbance would not be considered substantial.

Considering that the majority of control methods would not result in any ground disturbing activity and the placement of snares or traps would result in extremely limited ground disturbance, the proposed project would not have the potential to result in adverse effects to tribal cultural resources, and a ***less-than-significant*** impact would occur. No mitigation measures are required.

Non-Lethal Program Alternative

The non-lethal program alternative would include all activities as would occur under the proposed project with the exception of lethal control methods. The non-lethal program alternative may include cost-sharing between the private party implementing control methods and the non-governmental or outside governmental agency implementing the non-lethal program alternative. For instance, should wildlife management require installation of fencing, private parties constructing fencing may be reimbursed for some costs. The placement of fencing would require minor ground disturbance for placement and securing of fence posts. Although minor ground disturbance would occur during the placement of fencing, such ground disturbance would be limited to small areas of excavation associated with the placement of fence posts. Such areas of disturbance would be limited spatially and in depth, and the likelihood of encountering any significant resource during post hole digging is low.

It should be noted that a variation to the non-lethal program alternative is also under consideration where lethal methods could be used under extremely limited circumstances where wildlife poses a risk to public health or safety. Similar to the proposed project, lethal methods may include the placement of traps or snares. However, for the reasons discussed above, traps and snares would not be considered significant sources of ground disturbance and placement of such devices would have an extremely low potential for encountering tribal cultural resources.

Considering the above, the non-lethal program alternative and the potential variation to the non-lethal program alternative would not have the potential to result in adverse effects to tribal cultural resources, and a ***less-than-significant*** impact would occur. No mitigation measures are required.

XVIII. UTILITIES & SERVICE SYSTEMS – Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
2. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
3. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
4. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
5. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
6. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
7. Comply with federal, state, and local statutes and regulations related to solid waste?			X	

Discussion – All Items:

Proposed Project

Approval of the proposed IWDM Program would enable APHIS-WS to continue to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. Such activities would not result in development activity nor would such activities have the potential to increase demand on utility infrastructure by increasing demand for water or wastewater treatment. None of the wildlife damage control methods would result in large water demands, the creation of wastewater, or the creation of substantial amounts of solid waste. Therefore, the proposed project would be anticipated to result in a ***less-than-significant*** impact related to Utilities and Service Systems. No mitigation measures are required.

Non-Lethal Program Alternative

The non-lethal program alternative would serve to protect livestock, crops, human health and safety and property within the County from wildlife damage through the use of a variety of non-lethal methods. Considering that the non-lethal program alternative would involve the use of identical wildlife control methods as the proposed project, excluding lethal control methods, the non-lethal program alternative would not have the potential to increase demand on utility infrastructure by increasing demand for water or wastewater treatment. None of the wildlife damage control methods would result in large water demands, the creation of wastewater, or the creation of substantial amounts of solid waste. Therefore, the non-lethal program alternative would be anticipated to result in a ***less-than-significant*** impact related to Utilities and Service Systems. No mitigation measures are required.

XIV. MANDATORY FINDINGS OF SIGNIFICANCE:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation Measures	Less Than Significant Impact	No Impact
1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X			
2. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	X			
3. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X			

Discussion- All Items:

Proposed Project

Approval of the proposed IWDW Program would enable APHIS-WS to provide assistance to landowners to protect livestock, crops, human health and safety and property from wildlife damage using a variety of methods, which have been historically carried out by APHIS-WS in Mendocino County. The wildlife control methods that have previously been implemented within the County by APHIS-WS, and would be implemented under the proposed project, would not result in development activity or changes in land use and would not have the potential to result in the elimination of important examples of the major periods of California history or prehistory.

However, the control of wildlife through lethal or non-lethal methods may result in changes to habitats, reductions in species populations, or the restriction of range or numbers of rare or endangered plants or animals. Chemicals used during the control of wildlife may result in hazards to human health or degradation of the quality of the environment. Such impacts, as well as other potential impacts related to agricultural and forestry resources, biological resources, hazards and hazardous materials, and public services could result in cumulative impacts or significant incremental contributions to cumulative impacts.

Therefore, while the proposed project would not result in the elimination of important examples of the major periods of California history or prehistory, the proposed project would result in **potentially significant** impacts to other environmental resources.

Further analysis of these potential impacts will be discussed in the Integrated Wildlife Damage Management Program EIR.

Non-Lethal Program Alternative

The non-lethal program alternative would serve to protect livestock, crops, human health and safety and property within the County from wildlife damage through the use of a variety of non-lethal methods. Although the non-lethal program alternative would not involve lethal control methods, the non-lethal program alternative would have the potential to result in changes to habitats, reductions in species populations, or the restriction of range or numbers of rare or endangered plants or animals. Furthermore, the County is considering a variation to the non-lethal program alternative wherein lethal methods would be used in strictly limited scenarios where wildlife poses risks to public health or safety. In such cases, toxicants and pesticides may be used, which, as discussed above for the proposed project, may result in hazards to human health or degradation of the quality of the environment. Such impacts, as

well as other potential impacts related to agricultural and forestry resources, biological resources, hazards and hazardous materials, and public services could result in cumulative impacts or significant incremental contributions to cumulative impacts.

However, the non-lethal program alternative would not involve development activity or changes in land use and would not have the potential to result in the elimination of important examples of the major periods of California history or prehistory.

Considering the above, the non-lethal program alternative would not result in the elimination of important examples of the major periods of California history or prehistory, but the non-lethal program alternative would result ***in potentially significant*** impacts to other environmental resources.

Further analysis of these potential impacts will be discussed in the Integrated Wildlife Damage Management Program EIR.

G. DETERMINATION – The County finds that:

<input type="checkbox"/>	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	Although the proposed project COULD have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures described herein have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	The proposed project is within the scope of impacts addressed in a previously-adopted Negative Declaration, and that only minor technical changes and/or additions are necessary to ensure its adequacy for the project. An ADDENDUM TO THE PREVIOUSLY-ADOPTED NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required (i.e. Project, Program, Subsequent, or Master EIR).
<input type="checkbox"/>	The proposed project MAY have a significant effect(s) on the environment, and at least one effect has not been adequately analyzed in an earlier document pursuant to applicable legal standards. Potentially significant impacts and mitigation measures that have been adequately addressed herein or within an earlier document are described on attached sheets (see Section D.f. above). A SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT will be prepared to address those effect(s) that remain outstanding.
<input type="checkbox"/>	The proposed project is within the scope of impacts addressed in a previously-certified EIR, and that some changes and/or additions are necessary, but none of the conditions requiring a Subsequent or Supplemental EIR exist. An ADDENDUM TO THE PREVIOUSLY-CERTIFIED EIR will be prepared.
<input type="checkbox"/>	The proposed project is within the scope of impacts addressed in a previously-certified Program EIR, and that no new effects will occur nor new mitigation measures are required. Potentially significant impacts and mitigation measures that have been adequately examined in an earlier document are described on attached sheets, including applicable mitigation measures that are imposed upon the proposed project (see Section D.f. above). NO FURTHER ENVIRONMENTAL DOCUMENT will be prepared (see CEQA Guidelines, Sections 15168(c)(2), 15180, 15182, 15183).
<input type="checkbox"/>	Other _____

APPENDIX A: AIR QUALITY and GHG MODELLING OUTPUTS

EMFAC2014 (v1.0.7) Emission Rates

Region Type: County

Region: Mendocino

Calendar Year: 2019

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUXE, PBMW and PMTW, g/trip for STREX, HTSE and RUNLS, g/vehicle/day for IDLEX, RESTL and DURN

Region	CalYr	Vehicle Class	Model Year	Speed	Fuel	Population	VMT	Trips	ROG_RUXE	ROG_IDLEX	ROG_STREX	ROG_HOTSOAK	ROG_RUNLOSS	ROG_REST	ROG_IDLX	TOG_RUN	TOG_IDLE	TOG_STRE	HTSE	WOTW	TOG_RUN	TOG_REST	TOG_IDLX	CO_RUMD	CO_IDLEX	CO_STREX	NON_RUN	NON_IDLE	NON_STRE	CO2_RUMD	CO2_IDLE	CO2_STRE	PM10_RUNE	PM10_RL	PM10_OTR	PM10_PN	PM10_PN	PM2_5_RUNE	PM2_5_ID	PM2_5_ST	PM2_5_PN	PM2_5_PN	SON_RUNE	SON_IDLE	SON_STREX
Mendocino	2019	LD12	Automobile	Automobile	GAS	15828.45089	601397.5688	97405.63688	0.04813933	0	0.367069877	0.281883312	1.162155888	0.398782	0.480612	0.069767	0	0.401858	0.281883	1.162156	0.398782	0.480612	1.813832	0	5.216664	0.202195	0	0.50327	396.5846	0	91.46125	0.00207738	0	0.003891	0.008	0.03675	0.001910898	0	0.00266	0.002	0.01575	0.003989	0	0.001006	
Mendocino	2019	LD12	Automobile	Automobile	DSL	14.50125697	670.1753211	89.71468889	0.032456725	0	0	0	0	0	0	0.03695	0	0	0	0	0	0	0	0.247956	0	0	0.215612	0	0	344.7919	0	0	0.017770223	0	0	0.008	0.03675	0.017003491	0	0	0.002	0.01575	0.003292	0	0

Grams Emissions per year							
Vehicle Class	Fuel	VMT	ROG (g/year)	TOG (g/year)	CO (g/year)	NOx (g/year)	PM10 (g/year)
LD12	GAS	53795.2	2589.664891	3793.146974	17573.45393	13718.71349	396.5846139
LD12	DSL	53795.2	6746.081092	1087.723114	13138.81343	11038.86601	953.9237244

Pounds Emissions Per Year							
Vehicle Class	Fuel	VMT	ROG (lbs/year)	TOG (lbs/year)	CO (lbs/year)	NOx (lbs/year)	PM10 (lbs/year)
LD12	GAS	53795.2	3.70622951	5.27452381	23.1110008	14.63179614	0.874318384
LD12	DSL	53795.2	8.449801775	4.862174113	29.48709489	25.57113601	2.007124946

Metric Tons Emissions Per Year			
Vehicle Class	Fuel	CO2 (MT/year)	CO (Tons/year)
LD12	GAS	0.000396528	0.107938484
LD12	DSL	0.00094479	0.245763384

County	Year	Total Miles
Mendocino	2013	50566
Mendocino	2014	55628
Mendocino	2015	53590
Mendocino	2016	53793
Mendocino	2017	55399
Average Miles/year		53795.2