SHASTA COUNTY
USDA APHIS-WS IWDM PROGRAM
COOPERATIVE SERVICE AGREEMENT
FINAL ENVIRONMENTAL IMPACT REPORT

State Clearinghouse No. 2019100323

Prepared for:

SHASTA COUNTY DEPARTMENT OF RESOURCE MANAGEMENT
PLANNING DIVISION
1855 PLACER STREET, SUITE 103
REDDING, CA 96001

Prepared by:

Michael Baker
INTERNATIONAL

2729 PROSPECT PARK DRIVE, SUITE 220
RANCHO CORDOVA, CA 95670

MARCH 2021

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1.0 Introduction

1.1 PURPOSE OF THIS DOCUMENT

This Final Environmental Impact Report (Final EIR) has been prepared for the implementation of an Integrated Wildlife Damage Management (IWDM) program in Shasta County (County) under a Cooperative Service Agreement (CSA) between Shasta County and the US Department of Agriculture (USDA) Animal and Plant Health Inspection Service - Wildlife Services (APHIS-WS) for wildlife damage management assistance in the County (proposed project). The County is the lead agency for the proposed project, which is summarized below and presented in greater detail in Section 3.0, Project Description, of the Draft EIR.

This Final EIR has been prepared in accordance with the California Environmental Quality Act (CEQA; Public Resources Code Sections 21000–21177). The Final EIR for this project comprises this document, together with the Draft EIR (incorporated by reference in accordance with State CEQA Guidelines Section 15150), and will be considered for certification by the County.

This Final EIR contains public comments received on the Draft EIR during the public review period for the proposed project and includes written responses to environmental issues raised in those comments. As required by State CEQA Guidelines Sections 15088 and 15132, the lead agency (in this case, Shasta County) must evaluate comments on environmental issues received from persons who have reviewed the Draft EIR and then prepare written responses to those comments. In accordance with State CEQA Guidelines Section 15088(b), the written responses describe the disposition of significant environmental issues raised. Shasta County and its consultants have provided a good faith effort to respond in detail to all significant environmental issues raised by the comments.

This Final EIR also contains minor corrections and revisions made to the Draft EIR (see Section 4.0, Revisions to the Draft EIR) initiated by County staff and/or its consultant based on their ongoing review.

1.2 PROJECT UNDER REVIEW

The proposed project is the implementation of APHIS-WS IWDM activities that would be provided through a CSA between Shasta County and APHIS-WS. Under the proposed project, the IWDM services would be provided solely by APHIS-WS personnel and only at the request of the resource owner or manager. Shasta County would not decide whether a resource owner or manager should receive assistance, nor would the County be materially involved in conducting any of the IWDM technical assistance efforts or measures to control wildlife damage other than to cost share the financial portion of the program.

Similar to previous CSAs with APHIS-WS, it would be a cost-share agreement for a period of five years under which the County would fund a portion of APHIS-WS's estimated total cost of services. The CSA would require the approval of the Shasta County Board of Supervisors. Section 3.0, Project Description, of the Draft EIR includes a detailed description of the types of activities that would be performed. Activities under the IWDM program would be performed by an APHIS-WS wildlife specialist in accordance with the regulations, standards, and guidelines of the APHIS-WS IWDM program, which are described in Section 2.0, Project Background, of the Draft EIR.

If approved, the CSA would fund the APHIS-WS IWDM program in the County. Because APHIS-WS and the County operate on a fiscal-year basis, a new work plan (scope of services) and financial plan (budget) would be established between the County and APHIS-WS for each fiscal year of the CSA term. Yearly adjustments to the work plan would primarily focus on personnel

and equipment costs. Technical assistance data maintained by APHIS-WS through its Management Information System would also be used to help develop the work plan and budget for subsequent years throughout the term of the CSA.

Neither APHIS-WS nor Shasta County is proposing any changes to the APHIS-WS IWDM program in Shasta County as it historically operated in conjunction with the implementation of the IWDM activities.

The IWDM program (as operated by APHIS-WS and approved by signature of the CSA and work plans) includes the following:

- Assignment of an APHIS-WS wildlife specialist trained in wildlife control methods and state and federal regulations, and certified in the safe handling and use of firearms and other control equipment.

- 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, deterrent methods/devices (including pyrotechnics), traps, snares, trained dogs, all-terrain vehicles, Environmental Protection Agency and Drug Enforcement Administration 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 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.

Under the CSA, APHIS-WS would provide the following services in Shasta 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 through the use of APHIS-WS staff-prepared pamphlets and documentation.

- Provide expertise from wildlife specialists trained in wildlife control methods and state and federal regulations, and certified in the safe handling and use of firearms and other control equipment.

- 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.

- Respond to incidents where wildlife species are threatening public health and safety (in coordination with the California Department of Fish and Wildlife [CDFW] and local law enforcement), including through 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.

Technical assistance would be provided only at the request of affected resource owners or managers. The majority of services would likely be provided for the protection of field crops, apiary, and livestock because that has historically resulted in the most requests for technical assistance. However, technical assistance would also be available for protection of public health and safety (human-animal conflicts) and property. Before wildlife damage management is conducted, a Work Initiation Document (WID) must be signed by APHIS-WS and the landowner or manager. The County would not be involved in this action because it would be an agreement between APHIS-WS and the landowner or manager.

1.3 PUBLIC PARTICIPATION AND REVIEW PROCESS

The County published the Notice of Preparation (NOP) for the Draft EIR on October 17, 2019, for a 30-day comment period ending November 15, 2019. A public scoping meeting was held on October 29, 2019, at the Shasta County Department of Resource Management in Redding, California. There were no attendees. The NOP and written comments received on the NOP during the public review period are included in Appendix A of the Draft EIR.

The Draft EIR was circulated for public and agency review and comment for 45 days. The review period was August 13, 2020, through September 28, 2020. The County provided the Draft EIR to the Office of Planning and Research, State Clearinghouse (SCH), which distributed the Draft EIR to the following state agencies: California Air Resources Board; California Department of Conservation; CDFW, North Central Region 2; California Department of Forestry and Fire Protection; California Department of Parks and Recreation; California Department of Pesticide Regulation; California Department of Transportation, District 2; California Department of Transportation, Division of Aeronautics; California Department of Water Resources; California Energy Commission; California Governor's Office of Emergency Services; California Highway Patrol; California Native American Heritage Commission; California Natural Resources Agency; California Public Utilities Commission; California Regional Water Quality Control Board, Central Valley Sacramento Region 5; California State Lands Commission; Central Valley Flood Protection Board; California Department of Food and Agriculture; California Department of Toxic Substances Control; California State Office of Historic Preservation; State Water Resources Control Board, Division of Water Quality; and State Water Resources Control Board, Division of Water Rights. The SCH posted electronic copies of the Draft EIR and its appendices on its CEQANet website, which is available to the general public.

In addition, the County provided a notice of availability of the Draft EIR to its mailing list and made the document and its appendices available at the Shasta County Department of Agriculture/Weights and Measures and Shasta public libraries (Anderson, Burney, and Redding).

1.4 ORGANIZATION OF THIS DOCUMENT

The Final EIR is organized as follows:

SECTION 1 – INTRODUCTION

This section includes a summary of the project description and the process and requirements for a Final EIR.

SECTION 2 – LIST OF COMMENTERS

This section contains a list of all agencies or persons who submitted comments on the Draft EIR during the public review period.

SECTION 3 – COMMENTS AND RESPONSES

This section contains the comment letters received on the Draft EIR and the corresponding response to each comment.

SECTION 4 – REVISIONS TO THE DRAFT EIR

This section contains minor corrections and revisions made to the Draft EIR initiated by County staff and/or its consultant based on their ongoing review.

SECTION 5 – REFERENCES

This section contains documents referenced in the Final EIR.

2.0 List of Commenters

2.1 LIST OF COMMENTERS

The following submitted comments on the Draft EIR:

Letter/Number	Commenter	Date Submitted
	Agencies	
A	California Department of Fish and Wildlife	September 15, 2020
	Organizations	
1	Animal Legal Defense Fund, on behalf of Animal Welfare Institute, Project Coyote, WildEarth Guardians, Center for Biological Diversity, and Mountain Lion Foundation	September 28, 2020
	Individuals	
	None	

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3.0 COMMENTS AND RESPONSES

3.1 REQUIREMENTS FOR RESPONDING TO COMMENTS ON A DRAFT EIR

CEQA Guidelines Section 15088 requires the lead agency to evaluate all comments on environmental issues received on the Draft EIR and prepare a written response. The written response must address the significant environmental issue raised and must provide a detailed response, especially when specific comments or suggestions (e.g., additional mitigation measures) are not accepted. In addition, the written response must be a good faith and reasoned analysis. However, lead agencies need only to respond to significant environmental issues associated with the project and do not need to provide all the information requested by a comment, as long as a good faith effort at full disclosure is made in the EIR (CEQA Guidelines Section 15204).

Comments that do not raise environmental issues or relate to the adequacy of the information or analysis in the Draft EIR do not require a response, per CEQA Guidelines Section 15132. Comments that relate exclusively to the merits of the proposed project are so noted.

CEQA Guidelines Section 15204 recommends that commenters provide detailed comments that focus on the sufficiency of the Draft EIR in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. CEQA Guidelines Section 15204 also notes that commenters should provide an explanation and evidence supporting their comments. Pursuant to CEQA Guidelines Section 15064, an effect will not be considered significant in the absence of substantial evidence supporting such a conclusion.

3.2 RESPONSES TO COMMENT LETTERS

Written comments on the Draft EIR are reproduced on the following pages, along with responses to those comments. To assist in referencing comments and responses, the following coding system is used:

- Public agency comments are coded by letters, and each issue raised in the comment letter is assigned a number (e.g., Comment Letter A, comment 1: A-1).

- Other letters are coded by numbers, and each issue raised in the comment letter is assigned a number (e.g., Comment Letter 1, comment 1: 1-1).

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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Region 1 – Northern
601 Locust Street
Redding, CA 96001
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

Letter A

September 15, 2020

Paul Hellman, Director
Shasta County Department of Resource Management
1855 Placer Street, Suite 103
Redding, CA 96001

Subject: **Review of the Draft Environmental Impact Report for the Cooperative Service Agreement and Annual Work/Financial Plan Between Shasta County and U.S. Department of Agriculture Animal and Plant Health Inspection Service – Wildlife Services Draft Environmental Impact Report, State Clearinghouse Number 2019100323, Shasta County**

Dear Mr. Hellman:

The California Department of Fish and Wildlife (Department) has reviewed the Draft Environmental Impact Report (DEIR) for the above-referenced project (Project). The Department's review of this Project is pursuant to our role as the State's trustee and responsible agency for fish and wildlife resources under the California Environmental Quality Act, California Public Resources Code section 21000 et seq. The Project as proposed, "*is the establishment and implementation of Cooperative Service Agreement (CSA) between Shasta County and U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service – Wildlife Services (APHIS-WS).*"

The Department commented on this Project on November 15, 2019 during the Notice of Preparation review period. The Department appreciates that its comments were incorporated into the DEIR. Based on the information provided and Department review, we have no comments at this time. If the Project description changes in any way or additional biological resource information becomes available, the Department should be notified and provided an opportunity to offer comments regarding the updated information.

A-1

If you have any questions, please contact Pete Figura, Wildlife Management Supervisor at (530) 225-3224, or by e-mail at Pete.Figura@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Steve Burton
8EB8366F5EFE4F9...

Joe Croteau
Acting Environmental Program Manager Lands and Wildlife

ec: Paul Hellman, Director
Shasta County
phellman@co.shasta.ca.us

Conserving California's Wildlife Since 1870

State Clearinghouse
State.clearinghouse@opr.ca.gov

Amy Henderson and Pete Figura
California Department of Fish and Wildlife
Amy.Henderson@wildlife.ca.gov and Pete.Figura@wildlife.ca.gov

Letter A: California Department of Fish and Wildlife

Response A-1

This comment states that the department had commented on the proposed project during the Notice of Preparation (NOP) review period. The department states it has no comments on the Draft EIR.

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Letter 1

ANIMAL LEGAL DEFENSE FUND EST 1979

525 East Cotati Avenue
Cotati, California 94931

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F 707.795.7280

info@aldf.org
aldf.org

September 28, 2020

Paul Hellman, Director
Shasta County Department of Resource Management
1855 Placer Street, Suite 200
Redding, CA 96001
phellman@co.shasta.ca.us

RE: Comments on the Integrated Wildlife Damage Management Program Draft Environmental Impact Report

Dear Director Hellman,

The Animal Legal Defense Fund (ALDF), Animal Welfare Institute (AWI), Center for Biological Diversity (CBD), Mountain Lion Foundation, Project Coyote, and WildEarth Guardians provide the following comments on the Draft Environmental Impact Report (EIR) for the Integrated Wildlife Damage Management (IWDM) Program (proposed project). We appreciate the County's efforts to prepare an EIR and consider a non-lethal alternative. However, the draft EIR suffers from several deficiencies that need to be addressed in the final EIR.

Specifically, this draft EIR fails to consider a reasonable and feasible alternative, fails to provide information about the importance of the forthcoming EIR and EIS for wildlife damage management in California, and fails to adequately identify and describe the relative effects of the proposed project and the alternatives.

1-1

These deficiencies will need to be addressed in the final EIR. According to the California Environmental Quality Act (CEQA) Guidelines, the final EIR "should focus on the responses to comments on the draft EIR."[1] It is critical that the EIR clearly identifies and accurately describes the environmental impacts the proposed project may pose. CEQA states:

> The purpose of an environmental impact report is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list ways in

[1] Cal. Code Regs. tit. 14, § 15089(b) (2019).

Letter 1 (continued)

> which the significant effects of such a project might be minimized; and to indicate alternatives to such a project.

Id. § 21061. CEQA identifies its legislative intent to "[p]revent the elimination of fish or wildlife species due to man's activities"[2] and to "[t]ake all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities[.]"[3] These vital considerations need to be emphasized throughout the EIR and discussed when evaluating a proposed project.

I. The Final EIR Must Consider the Alternative of an Amended CSA with APHIS-WS.

CEQA Guidelines state that the EIR "*shall* describe a range of reasonable alternatives to the project . . . which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives."[4] Though an EIR "need not consider every conceivable alternative to a project…it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation."[5]

While we appreciate the four alternatives presented in the draft EIR, we request that the final EIR consider a reasonable and feasible alternative of an amended CSA with APHIS-WS. At least two other counties have entered into such agreements with APHIS-WS.[6]

1-2

The amended CSA would prioritize and require the documented exhaustion of non-lethal mitigation methods before APHIS-WS resorts to lethal action. We would like to work with the County and APHIS-WS to draft the detailed amendment, but the key provisions of the amendment would include: 1) no use of snares, 2) no intentional lethal take of beavers, 3) no beaver debris management within specific designated Critical Habitats except where it constitutes an obstruction to fish passage, 4) biannual reporting of urban and suburban property protection incidents, actions taken in protection of other resources, and any nontarget take and/or take in violation of the amendment, and 5) no lethal control of wildlife in urban or suburban areas until all feasible non-lethal mitigation

[2] *Id.* § 21001(c).
[3] *Id.* § 21001(b).
[4] *Id.* § 15126.6(a) (emphasis added).
[5] *Id.*
[6] *See* Humboldt County, *Amendment 1 to the Cooperative Service Agreement (CSA) between Humboldt County (Cooperator) and United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) Wildlife Services (WS)* (May 5, 2020) (attached); Lane County Waste Management Division, *USDA APHIS Wildlife Services Work and Financial Plan* (January 2020) (attached).

2

Letter 1 (continued)

measures to address the conflict are exhausted and except as necessary to address an immediate risk to human health or safety, or wildlife for which the California Department of Fish and Wildlife has already evaluated the conflict and issued a depredation permit.

This alternative differs from the *Shasta County CSA with APHIS-WS to Provide Technical Assistance but No Lethal Control Methods Used* alternative that was rejected from analysis in the draft EIR. Unlike the alternative that was rejected, this alternative allows APHIS-WS to resort to lethal action in limited and specific instances. This alternative not only feasibly attains all of the basic objectives of the proposed project, it lessens the environmental impacts that the proposed project anticipates such as negative impacts on wildlife populations, special-status and protected species and habitat, wildlife corridors, and cumulative impacts.

1-2 cont.

Therefore, the final EIR must consider the alternative of Shasta County entering into an amended CSA with APHIS-WS that prioritizes and requires the documented exhaustion of non-lethal mitigation methods before APHIS-WS resorts to lethal action.

II. <u>The Final EIR Must Include Information about the Importance of the Forthcoming EIR and EIS for Wildlife Damage Management in California.</u>

"The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data."[7] Therefore, the final EIR must present Shasta County with scientific and factual data that will help inform its judgment of the proposed project's effects on the environment.

1-3

As the draft EIR notes, "[i]n 2018, APHIS-WS entered into an MOU with the CDFA to prepare a joint environmental impact statement/environmental impact report pursuant to the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA) that will address APHIS-WS IWDM activities at the statewide level." On September 10, 2020, the notice of intent to prepare an environmental impact statement and proposed scope of study was posted in the Federal Register.[8] This EIR and EIS will "evaluat[e] alternatives for both agencies' involvement in managing wildlife damage and conflict in California."[9]

[7] *Cal. Code Regs. tit. 14, §* 15064(b)(1).
[8] 85 F.R. 55814 (Sept. 10, 2020).
[9] *Id.*

3

Letter 1 (continued)

The scientific and factual data that will be presented and analyzed in the statewide EIR and EIS is crucial to Shasta County's analysis and judgment of the proposed project and the alternatives. Therefore, it is imperative that the final EIR include information about the importance of the forthcoming statewide EIR and EIS. This information includes, but is not limited to, the upcoming timeline of the statewide EIR and EIS and how the scientific and factual data contained in that document may affect the environmental assumptions and analysis in Shasta County's EIR.

1-3 cont.

III. <u>The Final EIR Must Adequately Identify and Describe the Relative Effects of the Proposed Project and the Alternatives.</u>

When evaluating alternatives to the proposed project, CEQA Guidelines state that the EIR "*shall* include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project."[10] Therefore, current scientific evidence regarding the environmental effects, both positive and negative, of both the proposed project and any alternatives, will need to be thoroughly discussed in the final EIR.

1-4

Most importantly, CEQA makes it clear that "public agencies *should not approve projects* as proposed if there are *feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects*, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects."[11]

A. The Ecological Impacts of Removing Carnivores Must Be Evaluated.

The EIR must more thoroughly consider the impacts of the lethal control of predators on biodiversity and ecosystems. Such lethal programs raise significant concerns about the potential for trophic cascades and mesopredator release. Carnivores play important roles in balancing ecosystems. The indiscriminate removal of carnivores from natural systems can lead to ecosystem instability and collapse. Carnivores, such as coyotes, mountain lions, bobcats, bears, and wolves, provide important ecosystem services by helping to control small mammal and certain ungulate populations, which helps to support the health and diversity of

1-5

[10] *Cal. Code Regs. tit. 14, §* 15126.6(d) (emphasis added).
[11] *Id.* § 21061 (emphasis added).

Letter 1 (continued)

riparian plant communities and stream morphology.[12] The EIR must consider the numerous credible studies opposing lethal carnivore control on these grounds.[13]

In Fiscal Year 2018, Wildlife Services reported that it killed/euthanized or removed/destroyed more than 26,500 native animals in California, which included over 3,500 coyotes.[14] As high as these numbers are, reports have indicated that "[t]he field guys do not report even a fraction of the non-target animals they catch."[15] The removal of so many animals from the environment – especially carnivores – certainly alters native ecosystems directly, indirectly, and cumulatively.[16]

Indeed, literature indicates that killing wildlife at this scale has contributed to the localized extinction (extirpation) of many North American species, and has fundamentally altered ecosystems at a local, regional, and continental scale.[17] There is a consensus emerging among ecologists that extirpated, depleted, and destabilized populations of large predators are negatively affecting the biodiversity and resilience of ecosystems.[18] Wildlife Services, however, has recently claimed that it need not consider these impacts because its lethal activities do not affect species at the population level statewide, and that it only kills target animals. The claim is unsupported, however, and in fact is undermined by Wildlife Services' own reporting. Requiring "population-level impacts" is not the proper test for analysis under CEQA. Even if it were, the sheer scale of killing that occurs under the program, particularly on a regional scale, belies Wildlife Services' claims that only a few offending animals are killed. Furthermore, the Forest Service has stated in other contexts that Wildlife Services' failure to analyze the ecological impacts of its activities violates Forest Service policy and would preclude Wildlife Services from

1-5 cont.

[12] Beschta, R.L. and Ripple, W.J. 2012. The role of large predators in maintaining riparian plant communities and river morphology. Geomorphology 157-158: 88-98.
[13] *See* Carter, N. H., et al. (2019). Integrated spatial analysis for human-wildlife coexistence in the American West. Environmental Research Letters (highlighting the need for greater consideration of full ecological impact of predator removal).
[14] USDA-APHIS, Program Data Report G-2018 (2018). Available at: https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/pdr/?file=PDR-G_Report&p=2018:INDEX:.
[15] T. Knudson, *Neck Snare is a 'Non-forgiving and Nonselective' Killer, Former Trapper Says*, SACRAMENTO BEE (Apr. 30, 2012 at 12:00 AM) http://www.sacbee.com/news/investigations/wildlife-investigation/article2574607.html.
[16] John Winnie Jr., Scott Creel; Montana State University. *"The many effects of carnivores on their prey and their implications for trophic cascades, and ecosystem structure and functio*n," Food Webs, Volume 12, September 2017, Pages 88-94.
[17] William J. Ripple, Thomas P. Rooney, and Robert L. Beschta. "Large predators, deer, and trophic cascades in boreal and temperate ecosystems." Trophic cascades: predators, prey, and the changing dynamics of nature (2010): 141-161.
[18] Bradley J. Bergstrom, Carnivore conservation: shifting the paradigm from control to coexistence, Journal of Mammalogy, Volume 98, Issue 1, 8 February 2017, Pages 1–6, https://doi.org/10.1093/jmammal/gyw185

5

Letter 1 (continued)

being able to conduct operations in designated Wilderness areas.[19]

Many of the species targeted by Wildlife Services play critical roles in ecosystems, and their removals result in a cascade of unintended consequences. The loss of top carnivores in particular is well documented to cause a wide range of "unanticipated impacts" that are often profound, altering "processes as diverse as the dynamics of disease, wildfire, carbon sequestration, invasive species, and biogeochemical cycles."[20]

An overview of ecological principles illustrates this. "Predators" are animals that prey on other animals.[21] "Apex" predators such as coyotes and mountain lions have few or no predators of their own and occupy the top of the food chain.[22] Apex predators create a trophic cascade of beneficial effects that flow through and sustain ecosystems and the web of life.[23] For example, coyotes help to control disease transmission by keeping rodent populations in check, consume carrion, remove sick animals from the gene pool, disperse seeds, protect ground-nesting birds from smaller carnivores, and increase the biological diversity of plant and wildlife communities.[24] Additionally, wolves in Yellowstone and Grand Teton National Parks have been found to benefit a host of species, including aspen, songbirds, beavers, bison, fish, pronghorn, foxes, and grizzly bears.[25] By reducing numbers and inducing elk to move, wolves have reduced browsing on aspen and other streamside vegetation, which has benefitted beavers, songbirds and fish populations. Studies have also shown how wolves and coyotes interact, and how wolves can aid

1-5 cont.

[19] K. Connaughton, Comment RE: Gray Wolf Damage Management in Oregon EA (2012).
[20] B.J. Bergstrom et al., *License to Kill: Reforming Federal Wildlife Control to Restore Biodiversity and Ecosystem Function*, 7 CONSERV. LETTERS 131–42 (2013); J.A. Estes et al., *Trophic Downgrading of Planet Earth*, 333 SCIENCE 301–06 (2011).
[21] A.S. LEOPOLD ET AL., CARNIVORE AND RODENT CONTROL IN THE UNITED STATES 9 (1964)("The assertion that native birds and mammals are in general need of protection from native carnivores is supported weakly, if at all, by the enormous amount of wildlife research on the subject conducted in the past two or three decades.").
[22] L. R. Prugh et al., *The Rise of the Mesopredator*, 59 BIOSCIENCE 779–91 (2009).
[23] J.A. Estes et al., *Trophic Downgrading of Planet Earth*, 333 SCIENCE 301–06 (2011); W. J. Ripple, R. L. Beschta, *Trophic Cascades in Yellowstone: The First 15 Years After Wolf Reintroduction*, 145 BIOL. CONSERV. 205–13 (2012); W. J. Ripple, R. L. Beschta, J. K. Fortin, and C. T. Robbins, *Trophic Cascades From Wolves to Grizzly Bears in Yellowstone*, 83 J. ANIM. ECOL. 223–33 (2014).
[24] S. E. Henke and F. C. Bryant, *Effects of Coyote Removal on the Faunal Community in Western Texas*, 63 Journal of Wildlife Management 1066 (1999); K. R. Crooks and M. E. Soule, *Mesopredator Release and Avifaunal Extinctions in a Fragmented System*, 400 Nature 563 (1999); E. T. Mezquida, et al., *Sage-Grouse and Indirect Interactions: Potential Implications of Coyote Control on Sage-Grouse Populations*, 108 Condor 747 (2006). Available at: http://repository.uwyo.edu/cgi/viewcontent.cgi?article=1003&context=zoology_facpub; N. M. Waser et al., *Coyotes, Deer, and Wildflowers: Diverse Evidence Points to a Trophic Cascade*, 101 Naturwissenschaften 427 (2014).
[25] B.J. Bergstrom et al., *License to Kill: Reforming Federal Wildlife Control to Restore Biodiversity and Ecosystem Function*, 7 CONSERV. LETTERS 131–42 (2013); J.A. Estes et al., *Trophic Downgrading of Planet Earth*, 333 SCIENCE 301–06 (2011); W. J. Ripple, R. L. Beschta, *Trophic Cascades in Yellowstone: The First 15 Years After Wolf Reintroduction*, 145 BIOL. CONSERV. 205–13 (2012).

6

Letter 1 (continued)

pronghorn populations because "wolves suppress[ ] coyotes and consequently fawn depredation."[26] Wolves also benefit scavengers by leaving carrion derived from predation; hence, wolf removal leads to reduced abundance of carrion for scavengers in specific areas.[27] For instance, the extirpation of wolves works to the detriment of grizzly bears, which are listed as a threatened species and which, in addition to acting as apex predators, can steal wolf kills. A 2013 study showed that wolves benefit grizzly bears in Yellowstone through another trophic mechanism as well; specifically, wolf predation on elk has led to less elk browsing of berry-producing shrubs, providing grizzlies with access to larger quantities of fruit.[28]

1-5 cont.

The removal of apex predators may have other unexpected outcomes; for example, it can cause the "release" of mid-sized or "mesopredators" like foxes, raccoons, and skunks that are not at the top of the food chain in the presence of coyotes.[29] Increased abundance of mesopredators in turn can negatively affect populations and diversity of other species, including ground-nesting birds, rodents, lagomorphs, and others.[30] In some cases, declines in these species results in reduced prey for other carnivores and contribute to their decline and extirpation.

Studies have also found that coyotes have a positive effect on rodent species diversity. For example, one study determined that Ord's kangaroo rat became the dominant species in areas without coyotes.[31] As their numbers increased, so did their competitive advantage. This had an overall negative effect on species diversity

[26] B.J. Bergstrom et al., *License to Kill: Reforming Federal Wildlife Control to Restore Biodiversity and Ecosystem Function*, 7 CONSERV. LETTERS 131–42 (2013); L. R. Prugh et al., *The Rise of the Mesopredator*, 59 BIOSCIENCE 779–91 (2009); K.M. Berger and E.M. Gese, *Does Interference Competition with Wolves Limit the Distribution and Abundance of Coyotes?* 76 J. ANIM. ECOL. 1075–85 (2007); D.W. Smith, R.O. Peterson, D.B. Houston, *Yellowstone After Wolves*, 53 BIOSCIENCE 330 (2003); R.L. Beschta and W.J. Ripple, *Riparian Vegetation Recovery in Yellowstone: The First Two Decades After Wolf Reintroduction*, 198 BIOL. CONSERV. 93–103 (2016); D.G. Flagel, G.E. Belovsky, and D.E. Beyer, *Natural and Experimental Tests of Trophic Cascades: Gray Wolves and White-tailed Deer in a Great Lakes Forest*, 180 OECOLOGIA. 1183–94 (2016).

[27] W.J. Ripple and R.L. Beschta, *Trophic Cascades in Yellowstone: The First 15 Years After Wolf Reintroduction*, 145 BIOL. CONSERV. 205–13 (2012); C.C. Wilmers, R.L. Crabtree, D.W. Smith, K.M. Murphy, and W.M. Getz, *Trophic Facilitation by Introduced Top Predators: Grey Wolf Subsidies to Scavengers in Yellowstone National Park*, 72 J. ANIM. ECOL. 909–16 (2003); C.C. Wilmers, D.R. Stahler, R.L. Crabtree, D.W. Smith, and W.M. Getz, *Resource Dispersion and Consumer Dominance: Scavenging at Wolf- and Hunter-Killed Carcasses in Greater Yellowstone, USA*, 6 ECOL. LETTERS 996–1003 (2003).

[28] W.J. Ripple, A.J. Wirsing, C.C. Wilmers, and M. Letnic, *Widespread Mesopredator Effects After Wolf Extirpation*, 160 BIOL. CONSERV. 70–79 (2013).

[29] L. R. Prugh et al., *The Rise of the Mesopredator*, 59 BIOSCIENCE 779–91 (2009); K. Crooks and M. Soulé, *Mesopredator Release and Avifaunal Extinctions in a Fragmented System*, 400 NATURE 563–66 (1999) (noting that although coyotes are mesopredators when wolves are present, they can act as apex carnivores where wolves have been extirpated).

[30] Ripple, William J., et al. "Widespread mesopredator effects after wolf extirpation." *Biological Conservation* 160 (2013): 70-79.

[31] S.F. Henke and F.C. Bryan, *Effects of Coyote Removal on the Faunal Community in Western Texas*, 63 J. WILDL. MANAGE. 1066–81 (1999).

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and richness throughout the ecosystem. Correspondingly, coyotes were found to keep kangaroo rat populations in check, which removed their competitive advantage and increased overall rodent species diversity.

1-5 cont.

B. The Effectiveness of Predator Damage Management Must Be Evaluated.

Science shows that lethal predator control is unlikely to prevent future losses of domestic animals. Science also shows there is a high probability that lethal control can exacerbate the situation with counter-productive increases in livestock losses after removal of wolves, cougars, bears, or coyotes.

From 2016-2020 at least six independent scientific teams have published nine reviews of evidence addressing lethal carnivore control in response to livestock losses. The reviews cover every continent and include different worldviews and specialties, and address carnivore species (wolves, grizzlies, black bears, cougars, and coyotes). The scientific consensus is clear that the quality of evidence is higher for studies involving non-lethal methods and that there is better evidence for functional effectiveness in preventing livestock losses from non-lethal methods than from lethal methods. These reviews include:

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1. Eklund, A., López-Bao, J.V., Tourani, M., Chapron, G., Frank, J., 2017. Limited evidence on the effectiveness of interventions to reduce livestock predation by large carnivores. Scientific Reports 7, 2097 | DOI:2010.1038/s41598-41017-02323-w.

2. Khorozyan, I., Waltert, M. (in press) Not all interventions are equally effective against bears: patterns and recommendations for global bear conservation and management Scientific Reports in press.

3. Lennox, R.J., Gallagher, A.J., Ritchie, E.G., Cooke, S.J., 2018. Evaluating the efficacy of predator removal in a conflict-prone world. Biological Conservation 224, 277-289.

4. Miller, J., Stoner, K., Cejtin, M., Meyer, T., Middleton, A., Schmitz, O., 2016. Effectiveness of Contemporary Techniques for Reducing Livestock Depredations by Large Carnivores. Wildlife Society Bulletin 40, 806-815.

5. Moreira-Arce, D., Ugarte, C.S., Zorondo-Rodríguez, F., Simonetti, J.A., 2018. Management Tools to Reduce Carnivore-Livestock Conflicts: Current Gap and Future Challenges. Rangeland Ecology & Management.

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6. Treves, A., Krofel, M., McManus, J., 2016. Predator control should not be a shot in the dark. Frontiers in Ecology and the Environment 14, 380-388.

7. Treves, A., Krofel, M., Ohrens, O., Van Eeden, L.M., 2019. Predator control needs a standard of unbiased randomized experiments with cross-over design. Frontiers in Ecology and Evolution 7 402-413.

8. van Eeden, L.M., Crowther, M.S., Dickman, C.R., Macdonald, D.W., Ripple, W.J., Ritchie, E.G., Newsome, T.M., 2018. Managing conflict between large carnivores and livestock. Conservation Biology doi: 10.1111/cobi.12959.

9. van Eeden, L.M., Ann Eklund, Jennifer R. B. Miller, José Vicente López-Bao, Mikael R. Cejtin, Guillaume Chapron, Mathew S. Crowther, Christopher R. Dickman, Jens Frank, Miha Krofel, David W. Macdonald, Jeannine McManus, Tara K. Meyer, Arthur D. Middleton, Thomas M. Newsome, William J. Ripple, Euan G. Ritchie, Oswald J. Schmitz, Kelly J. Stoner, Mahdieh Tourani, Treves, A., 2018. Carnivore conservation needs evidence-based livestock protection. PLoS Biology https://doi.org/10.1371/journal.pbio.2005577.

Furthermore, the evidence from the latest reviews mentioned above (Khorozyan et al. 2020; Treves et al. 2019, van Eeden et al. 2018) is published in the world's top scientific journals based on the criteria of impact factor and editorial adherence to the independent Committee on Publication Ethics (COPE), whereas the journals that USDA-WS often cite have a poor record of scientific reliability in the topic of predator control (Treves et al. 2016).

1-6 cont.

Strength of inference and lack of bias in scientific studies is paramount to the use of research as evidence, yet multiple studies sponsored by USDA-WS or conducted by that agency in the 1970s-2002 were found to have fatal flaws in research design due to biases, whether intentional or unintentional. Moreover, the few outdated studies that show the desired effects of predation reduction have been shown to have fatal flaws in research design, so their conclusions cannot be trusted. The studies in question are detailed in the attached appendix, reprinted from Webpanel 1 in *Treves, A., Krofel, M., McManus, J., 2016. Predator control should not be a shot in the dark. Frontiers in Ecology and the Environment 14, 380-388.*

The second concern with lethal control, besides its poor history of research design, is that lethal methods have shown recurrent counterproductive effects leading to more livestock losses in Europe and North America. While there are weak correlational studies from Spain and from the Northern Rocky Mountains (the latter in particular received a great deal of attention), the stronger studies have received much less attention. We describe that next.

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While it might seem obvious that killing a lion whose jaws are about to close on a goat would protect the goat, the functional effectiveness of most lethal action against predators is not so obvious. Most lethal control is implemented indirectly with traps, or far from the site of predation, or long afterwards. Perhaps, at a site with few territorial large carnivores, such as African lions, killing a lioness returning to a carcass soon after predation might protect other livestock (Woodroffe and Frank. 2005), but experiments with such methods also show surprisingly high error rates (Sacks et al. 1999). Indeed, recent, independent research in several regions found killing wild animals could exacerbate future threats to human interests, e.g., cougars (Cooley et al. 2009a,b; Peebles et al. 2013), birds (Bauer et al. 2018; Beggs et al. 2019), and wolves (Santiago-Avila et al. 2018) – without requiring us to delve into the unresolved controversy and contested evidence about wolves in the Northern Rocky Mountains, USA or in Southern Europe (Bradley et al. 2015; Fernández-Gil et al. 2015; Imbert et al. 2016; Kompaniyets and Evans 2017; Poudyal et al. 2016; Wielgus and Peebles 2014).

For coyotes, the only reliable study, Conner et al. 1998, shows that the after-effects of lethal control were sometimes positive (lower livestock losses), sometimes ineffective (no change in livestock losses), and sometimes counter-productive (higher livestock losses), with the latter two results predominating in a multi-year dataset. We emphasize only this study for coyotes because previous studies at the same site or in private livestock operations have been judged unreliable.[32] Indeed, other studies show that coyotes compensate powerfully for lethal controls through increased reproductive rates and that destabilizing packs by killing territorial adults exacerbates predation problems. Therefore, the uncertainties about predator removal reflect the indirect application, unlike the lion and the goat hypothetical above.

1-6 cont.

Given the similarity of social systems in wolves and coyotes (cooperatively breeding, pack-living, territorial canids), it seems reasonable to predict that killing one or a few coyotes in an area will leave vacancies and social instability that can invite a greater number of newcomers than the number of residents removed. This occurred with cougars as one resident male killed by trophy hunters was replaced by multiple younger newcomer males. As they jockeyed for social position for years, apparently they killed more livestock than the resident had killed for years previously.[33] Science is still in the early stages of understanding the instabilities created by lethal control, partly because the field has been excessively focused on

[32] Conner, M.M., Jaeger, M.M., Weller, T.J., McCullough, D.R., 1998. Effect of coyote removal on sheep depredation in northern California. Journal of Wildlife Management 62, 690-699.
[33] Cooley, H.S., Wielgus, R.B., Koehler, G.M., Maletzke, B.T., 2009. Source populations in carnivore management: cougar demography and emigration in a lightly hunted population. Animal Conservation 12, 321-328;
Cooley, H.S., Wielgus, R.B., Robinson, H.S., Koehler, G.M., Maletzke, B.T., 2009. Does hunting regulate cougar populations? A test of the compensatory mortality hypothesis. Ecology 90, 2913-2921.

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indirect monitoring and a perspective that only populations matter whereas lethal control emphasizes individuals perceived to be problems and the local effects of killing them.

Recent studies also found that hunting of cougars may increase conflicts with livestock. Specifically, cougar hunting destabilizes the social structure of cougars in the wild, disrupting cougars' sex-age structure and tilting cougar populations so that they are comprised of younger males. Younger males are more likely to engage in livestock depredations than animals in stable, older populations.[34] Additionally, another recent study suggests that carnivores may increase prey kills as a result of stress from hunting.[35]

1-6 cont.

We cannot find any truly meaningful discussion of this issue in the draft EIR. This must be corrected in the final EIR. This issue cuts to the heart of whether the lethal management program is achieving its stated goal of protecting domestic animals, or should be replaced by non-lethal methods except in the rarest extreme. The agency should fully evaluate all studies[36] relevant to this issue.

[34] K.A. Peebles, R.B. Wielgus, B.T. Maletzke, and M.E. Swanson, Effects of Remedial Sport Hunting on Cougar Complaints and Livestock Depredations, 8 PLoS One 1–8 (2013); C. Lambert et al., Cougar Population Dynamics and Viability in the Pacific Northwest, 70 J. Wildl. Manage. 246–54 (2006).

[35] H.M. Bryan et al., Heavily Hunted Wolves Have Higher Stress and Reproductive Steroids than Wolves with Lower Hunting Pressure, 29 Funct. Ecol. 347–56 (2015).

[36] Bauer, S., Lisovski, S., Eikelenboom-Kil , R.J.F.M., Shariati, M., Nolet, B.A., 2018. Shooting may aggravate rather than alleviate conflicts between migratory geese and agriculture. Journal of Applied Ecology 55, 2653-2662; Beggs, R., Tulloch, A.I.T., Pierson, J., Blanchard, W., Crane, M., Lindemayer, D.L., 2019. Patch-scale culls of an overabundant bird defeated by immediate recolonization. Ecological Applications 29, e01846; Bradley, E.H., Robinson, H.S., Bangs, E.E., Kunkel, K., Jimenez, M.D., Gude, J.A., Grimm, T., 2015. Effects of Wolf Removal on Livestock Depredation Recurrence and Wolf Recovery in Montana, Idaho, and Wyoming. Journal of Wildlife Management 79, 1337–1346; Cooley, H.S., Wielgus, R.B., Koehler, G.M., Maletzke, B.T., 2009. Source populations in carnivore management: cougar demography and emigration in a lightly hunted population. Animal Conservation 12, 321-328; Fernández-Gil, A., Naves, J., Ordiz, A.s., Quevedo, M., Revilla, E., Delibes, M., 2015. Conflict Misleads Large Carnivore Management and Conservation: Brown Bears and Wolves in Spain. PLos ONE DOI:10.1371/journal.pone.0151541, 1-13; Imbert, C., Caniglia, R., Fabbri, E., Milanesi, P., Randi, E., Serafini, M., Torretta, E., Meriggi, A., 2016. Why do wolves eat livestock? Factors influencing wolf diet in northern Italy. Biological Conservation 195, 156-168; Kompaniyets, L., Evans, M., 2017. Modeling the relationship between wolf control and cattle depredation. PLos ONE 12, e0187264; Peebles, K., Wielgus, R.B., Maletzke, B.T., Swanson, M.E., 2013. Effects of Remedial Sport Hunting on Cougar Complaints and Livestock Depredations. PLos ONE 8, e79713; Poudyal, N., Baral, N., T., A.S., 2016. Wolf lethal control and depredations: counter-evidence from respecified models. PLos ONE 11, e0148743; Sacks, B.N., Blejwas, K.M., Jaeger, M.M., 1999. Relative vulnerability of coyotes to removal methods on a northern California ranch. Journal of Wildlife Management 63, 939-949; Santiago-Avila, F.J., Cornman, A.M., Treves, A., 2018. Killing wolves to prevent predation on livestock may protect one farm but harm neighbors. PLos ONE 10.1371/journal.pone.0189729; Wielgus, R.B., Peebles, K., 2014. Effects of wolf mortality on livestock depredations. PLos ONE 9, e113505; Woodroffe, R., Frank, L.G., 2005. Lethal control of African lions (Panthera leo): local and regional population impacts. Animal Conservation 8, 91-98.

Letter 1 (continued)

C. The Humaneness of Lethal Methods Must Be Evaluated.

CEQA was enacted to "develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state."[37] Under CEQA, the "environment" includes "physical conditions that exist within the area . . . including . . . fauna[.]"[38] "Fauna" plainly encompasses "animal life,"[39] and thus includes wildlife.

When interpreting CEQA, California courts look to federal case law interpreting the analogous National Environmental Policy Act ("NEPA") as strongly persuasive authority.[40] Federal courts applying NEPA have held animals are indisputably part of the physical environment.[41] A sufficient NEPA analysis must therefore include consideration of the direct and indirect injury or harassment to animals,[42] including animals in captivity and confinement.[43] Both federal and California state courts have held the protections of CEQA are, in fact, *stronger* than those in NEPA[44]—further confirming that the final EIR must consider effects on individual animals under the proposed project.

1-7

[37] *Id.* § 21001(a).
[38] *Id.* at § 21060.5.
[39] *Fauna*, Merriam-Webster Online Dictionary (last visited Aug. 20, 2019), https://www.merriam-webster.com/dictionary/fauna.
[40] *See Envtl. Def. Fund, Inc. v. Coastside Cty. Water Dist.*, 27 Cal. App. 3d 695, 701 (1972) ("The two statutes are so parallel in content and so nearly identical in words that judicial interpretation of the federal law is strongly persuasive in our deciding the meaning of our state statute."), *cited with approval in No Oil, Inc. v. City of Los Angeles*, 13 cal. 3d 68, 86 n.21 (1974); *W. Placer Citizens for an Agric. & Rural Env't v. Cty. of Placer*, 144 Cal. App. 4th 890, 902-03 (2006). *See also Wildlife Alive v. Chickering*, 17 Cal. 3d 190, 201 (1976) ("Recognizing that the California act was modeled on the federal statute, we have consistently treated judicial and administrative interpretation of the latter enactment as persuasive authority in interpreting CEQA."), *cited with approval in Lake Norconian Club Foundation v. Department of Corrections & Rehabilitation*, 39 Cal.App.5th 1044, 1052 n.4 (2019), review denied (Dec. 11, 2019); *Citizens of Goleta Valley v. Board of Supervisors*, 52 Cal.3d 553, 565, n.4 (1990).
[41] *See Sierra Club v. U.S. Army Corps of Eng'rs*, 701 F.2d 1011 (2d. Cir. 1983) (finding that fish are animals, and animals are a part of the environment); Worksheet, Determination of NEPA Adequacy, U.S. Department of the Interior, Bureau of Land Management, Horse Lake Sage-Grouse Habitat Restoration Project, p. 1 (Nevada, 2013) (including benefits to wildlife and domestic animals in a NEPA worksheet).
[42] *See Nat. Resource Def. Council v. Winter*, 645 F. Supp. 2d 841, 849-51 (C.D. Cal. 2007) (NEPA requires analysis of the effects of sonar on whales, to avoid harassment and injury); *Greenpeace U.S.A. v. Evans*, 688 F. Supp. 579, 582-83 (W.D. Wash. 1987) (including harassment to whales' social structure as an effect that the National Marine Fisheries Service must consider in NEPA analysis).
[43] *Fund for Animals v. Norton*, 281 F. Supp. 2d 209 (D.D.C. 2003) (requiring agency to study environmental impacts of killing an invasive species); *Stauber v. Shalala*, 895 F. Supp. 1178 (W.D. Wis. 1995) (noting in dicta that NEPA would have required an analysis of the effects on "human and bovine health and safety" had that not already been completed by FDA).
[44] See *Friends of Santa Clara River v. United States Army Corps of Engineers*, 887 F.3d 906, 914 n.5 (9th Cir. 2018) (explaining that while both NEPA and CEQA have procedural requirements, CEQA

Letter 1 (continued)

The draft EIR fails to examine the humaneness of lethal methods and the impact to individual animals. The draft EIR indicates that the tools used for lethal take include padded leg-hold traps, cage traps, foot and neck snares, conibear, quick-kill, and snap traps, shooting, and the use of dogs and chemicals.[45] Many of these methods are cruel and also pose a danger to people, companion animals, and non-target species, including threatened and endangered species. Evaluating the humaneness of these methods is essential for the public to be able to fully understand the impacts of the proposed action to humans, companion animals, and target and non-target wildlife. Below is a discussion of our concerns regarding several of the methods identified in the draft EIR.

Neck and foot snares are commonly used in Shasta County by Wildlife Services, yet these methods are particularly inhumane. From 2007 to 2018, neck and foot snares were used to trap over 200 black bears, beavers, bobcats, coyotes, and feral dogs.[46] For neck snares, regardless of the intention of the snare set (i.e., killing or restraining) or the type of snare in use, the cruelty associated with these snares is extreme. In kill sets, the snare continues to tighten as the animal struggles until strangulation occurs. In sets intended to restrain the snared animal, the captured animal is held by his or her neck until the technician arrives to euthanize the animal, which in California could be up to 24 hours of neck restraint and exposure to predators and the elements.

1-7 cont.

In their assessment of the literature evaluating the welfare implications of snares, Rochlitz et al. (2010) concluded that "some pest control methods have such extreme effects on an animal's welfare that, regardless of the potential benefits, their use is never justified" and determined that "snaring is such a method."[47] While Rochlitz et al.[48] did not distinguish between neck and foot snares, based on their review of the literature they determined that:

1. Snares do not operate humanely, either as restraining or as killing traps;

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also contains a substantive mandate that agencies cannot approve projects for which there are feasible alternatives or mitigation measures); *Crenshaw Subway Coal. v. Los Angeles Cty. Metro. Transportation Auth.*, No. CV 11-9603 FMO (JCX), 2015 WL 6150847, at *8 (C.D. Cal. Sept. 23, 2015).

[45] DEIR Appendix B.

[46] *Id.*

[47] Rochlitz, I., Pearce, G,P., and Broom, D.M. 2010. The Impact of Snares on Animal Welfare. Report for OneKind. University of Cambridge, Centre for Animal Welfare and Anthrozoology, Department of Veterinary Medicine.

[48] The analysis by Rochlitz et al. was focused on the use of snares in the United Kingdom so while many of the overall findings referenced below are applicable to snare use in the United States, others are not due to difference in state laws and regulations governing snare use and trap check times.

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2. The mortality and morbidity of animals caught in snares is higher than with most other restraining traps, such as box traps;

3. Snares are inherently indiscriminate and commonly catch non-target, including protected, species;

4. Snares can cause severe injuries, pain, suffering, and death in trapped animals (target and non-target species);

5. Stopping of snares may not prevent injury or death in trapped animals (target and non-target species);

6. The free-running mechanism of a snare is easily disrupted and likely to fail, resulting in injury, pain, suffering, and death in trapped animals (target and non-target species);

7. Animals can legally be left in snares for up to 24 hours, exposing them to the elements, to thirst, hunger, further injury and attack by predators;

8. It is difficult to assess the severity of injury in an animal when it is caught in a snare;

9. Animals that escape, or that are released, may subsequently die from their injuries, or from exertional myopathy, over a period of days or weeks;

10. The monitoring of correct snare use is difficult, if not impossible;

11. Neck snares are open to abuse because they are cheap and require minimum effort to set and maintain;

12. Methods used to kill animals caught in snares are not regulated, and may not be humane;

1-7 cont.

In Shasta County, Wildlife Services uses neck snares primarily to capture coyotes,[49] which is a method of particular humane concern for canids. In their analysis of manual and powered neck snares for use in trapping canid species in Canada, Proulx et al. (2015) documented significant welfare concerns associated with the use of neck snares.[50] Their findings included that killing neck snares (manual or powered) did not consistently and quickly render canids unconscious,

[49] Draft EIR Appendix B.
[50] Proulx, G., Rodtka, D., Barrett, M.W., Cattet, M., Dekkers, D., Moffatt, E., and Powell, R. 2015. Humaneness and Selectivity of Killing Neck Snares Used to Capture Canids in Canada: A Review. Canadian Wildlife Biology and Management, 4(1): 55-65.

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were non-selective, and did not routinely capture animals by the neck. Some of the findings of Proulx et al. included:

1. Laboratory researchers failed to achieve exact and ideal positioning of neck snares behind the jaw of the target animal suggesting that, in the field, such exact placement would be far more difficult; For manual killing neck snares, one study of 65 snared coyotes found that 59 percent were captured by the neck, 20 percent by the flank, and 10 percent by the foot, and nearly half of the animals were still alive the morning after being snared;[51]

2. In another study of various manual killing neck snares, between 5 and 32 percent of the snared animals were still alive when found 12 or more hours after capture;[52]

3. The amount of disturbance at a capture site is not indicative of time to death of the captured animal as "captured animals may remain conscious but physically inactive due to distress, shock, injury or pain;"

4. In a thorough evaluation of power killing neck snares, three models rendered 4 of 5 anaesthetized red foxes irreversibly unconscious within 10 minutes but when used on non-anaesthetized animals in a semi-natural environment it was difficult to capture foxes behind the jaw with the snares and to cause irreversible loss of consciousness within 300 seconds.[53]

1-7 cont.

Proulx et al. (2015) noted it is not the placement or operation of the neck snares that can result in suffering, but rather that the anatomy and physiology of canids can exacerbate the suffering associated with the use of neck snares. As reported by Proulx et al., laboratory tests with dogs show that canids have the ability to continue to circulate blood to the brain after bilateral ligation of the common carotid arteries because of the ability of other arteries (e.g., vertebral arteries) situated more deeply within the neck to compensate (Moss 1974; Clendenin and Conrad 1979a, b). Collateral circulation also occurs within the venous blood flow from the brain such that drainage can continue if the internal jugular veins are occluded (Andeweg 1996; Daoust and Nicholson 2004). Because of collateral blood circulation, it is difficult, if not impossible, to stop blood flow to and from the brain by tightening a snare on the neck.

[51] Guthery, F. S., and S. L. Beasom. 1978. Effectiveness and selectivity of neck snares in predator control. Journal of Wildlife Management 42: 457-459.
[52] Phillips, R. L. 1996. Evaluation of 3 types of snares for capturing coyotes. Wildlife Society Bulletin 24: 107-110.
[53] Proulx, G., and M. W. Barrett. 1994. Ethical considerations in the selection of traps to harvest martens and fishers. Pages 192-196 in S. W. Buskirk, A. S. Harestad, M. G. Raphael, and R. A. Powell, editors, Martens, sables, and fishers: biology and conservation. Cornell University Press, Ithaca, New York, USA.

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More recently, in his book Intolerable Cruelty: The Truth Behind Killing Neck Snares and Strychnine,[54] Dr. Proulx reports that when a canid is snared, the thick musculature around the animal's neck allows the carotid artery to continue to supply blood to the brain, but the jugular vein is constricted, cutting off blood back down to the heart. A telltale sign is the grotesquely swollen heads of the snare's victims (which trappers refer to as "jellyheads"). Canids caught in neck snares take hours, if not days, to die.

Furthermore, the non-selectivity of neck snares for target and non-target mammal and bird species was clearly reflected in data presented in Table 1 in Proulx et al. (2015), recreated below:

Species	Number of Cases		
Common name	Injured by snare	Killed by snare	Total snared
Coyote	2	0	2
Gray wolf	4	0	4
Red Fox	1	0	1
American black bear	1	0	1
Bobcat	0	1	1
Canada lynx	0	8	8
Fisher	0	2	2
Mountain lion	0	4	4
Snowshoe hare	0	1	1
White-tailed deer	0	4	4
Wolverine	0	1	1
Bald eagle	4	75	79
Barred owl	0	2	2
Common raven	0	2	2
Golden eagle	2	25	27
Goshawk	0	3	3
Great horned owl	2	2	4
Red-tailed hawk	1	10	11
Rough-legged hawk	0	7	7
Total specimens	17	147	164

Another method of concern is padded steel-jawed leghold traps. The California Fish and Game Code states: "It is unlawful for any person, including an employee of the federal, state, county, or municipal government, to use or authorize the use of any steel-jawed leghold trap, padded or otherwise, to capture any game mammal, fur bearing mammal, nongame mammal, or protected mammal, or any

1-7 cont.

[54] Proulx, G. 2018. Intolerable Cruelty: The Truth Behind Killing Neck Snares and Strychnine. Alpha Wildlife Research and Management Limited.

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dog or cat. The prohibition in this subdivision does not apply to federal, state, county, or municipal government employees or their duly authorized agents in the extraordinary case where the otherwise prohibited padded-jaw leghold trap is the only method available to protect human health or safety."[55] Although Wildlife Services does not appear to have employed padded steel-jawed leghold traps in Shasta County from 2007 to 2018, the draft EIR nonetheless identifies this as a method that may be used.[56] The draft EIR fails to identify what circumstances qualify as an "extraordinary case" that justifies the use of this otherwise banned method.

The draft EIR also fails to consider the inhumaneness of this method in terms of injuries sustained, suffering and potential mortality due to predation or exposure, as well as extended time to death in kill traps, including for animals that are miscaught. Animals caught in traps in California suffer in excruciating pain for up to 24 hours. Many trapped animals will violently struggle when restrained, often biting at the device, which results in broken teeth and gum damage in addition to the damage to the captured limb including lacerations, strained and torn tendons and ligaments, extreme swelling, and broken bones.[57] In the summer heat, many animals cannot survive for long without water. In harsh winter conditions, animals can lose a limb and/or freeze to death after being caught in a trap. At other times of the year, prolonged constriction of a limb in a trap can cut off blood supply to the affected appendage, potentially causing the appendage to be lost due to gangrene. For these reasons, steel-jawed leghold traps have been condemned as inhumane by the World Veterinary Association, the National Animal Control Association of the United States, and the American Animal Hospital Association,

1-7 cont.

Iossa et al. (2007) provided an extensive review of the injury rates associated with multiple trap types, including padded, off-set, enclosed, and unpadded leghold traps.[58] While the percentage of no injuries for some foothold traps for select species were in excess of 50 percent, foothold traps resulted in minor injuries more than 50 percent of the time in the majority of studies reviewed, ranging from 8 percent minor injuries for Canada lynx captured in a padded foothold trap to 100 percent for a bobcat captured in a leg hold snare. For major injuries, the percentage of injuries ranged from 4 percent for red foxes captured in a padded leghold trap to 74 percent for raccoons captured in an unpadded foothold trap.

The types of injuries assessed in evaluating the "humaneness" of traps include: (1) mild trauma, such as claw loss, edematous swelling or hemorrhage,

[55] CA Fish and Game Code, section 3003.1(a)(3).
[56] Draft EIR, Appendix B.
[57] *See. e.g.*, Iossa, G., Soulsbury, C.D., and Harris, S. 2007. Mammal trapping: a review of animal welfare standards of killing and restraining traps. Animal Welfare 2007, 16: 335-352.
[58] Iossa, G., Soulsbury, C.D., and Harris, S. 2007. Mammal trapping: a review of animal welfare standards of killing and restraining traps. Animal Welfare 2007, 16: 335-352. See Tables 4 and 5.

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minor cutaneous laceration, minor subcutaneous soft tissue maceration or erosion, major cutaneous laceration, except on footpads or tongue, and minor periosteal abrasion; (2) moderate trauma, such as severance of minor tendon or ligament, amputation of 1 digit, permanent tooth fracture exposing pulp cavity, major subcutaneous soft tissue laceration or erosion, major laceration on footpads or tongues, severe joint hemorrhage, joint luxation at or below the carpus or tarsus, major periosteal abrasion, simple rib fracture, eye lacerations, and minor skeletal degeneration; (3) moderately severe trauma, including simple fracture at or below the carpus or tarsus, compression fracture, comminuted rib fracture, amputation of two digits, major skeletal degeneration, and limb ischemia; and (4) severe trauma, including amputation of three or more digits, any fracture or joint luxation on limb above the carpus or tarsus, any amputation above the digits, spinal cord injury, severe internal organ damage (internal bleeding), compound or comminuted fracture at or below the carpus or tarsus; severance of a major tendon or ligament, compound or rib fractures, ocular injury resulting in blindness of an eye, myocardial degeneration, and death.

Such injuries, particularly those included in the moderate trauma, moderately severe trauma, and the severe trauma categories, should not be considered acceptable or humane. Any trap set that results in such trauma should not be utilized. In addition to identifiable injuries caused by the trap, when evaluating the impact of predator damage management on target and non-target species it is critical to consider the potential for indirect mortality as a result of capture in a foothold trap, or any restraining device. For non-target species, even if the animal is released with no apparent injuries or injuries deemed to be minor, the animal may still suffer adverse side effects from restraint (including from exposure to the elements for an extended time period) for hours, days, or even weeks after capture. For example, Andreasen et al. (2018) examined cause-specific mortality in mountain lions unintentionally caught in foothold traps set for bobcats from 2009 through 2015 in their study site in Nevada.[59] The authors found that if female mountain lions were captured in foothold traps, it directly reduced their survival by causing injuries that made the animals more susceptible to other forms of mortality. The draft EIR should evaluate such indirect mortality of non-target species.

1-7 cont.

The draft EIR should also disclose whether Wildlife Services would use traps identified as "humane" through the Best Management Practices ("BMP") testing process for all restraining, killing, and foothold traps used in its predator damage management operations. Currently there are 22 species-specific BMP reports.[60]

[59] Andreasen, A.M., Stewart, K.M., Sedinger, J.S., Lackey, C.W., and Beckman, J.P. 2018 Survival of Cougars Caught in Non-Target Foothold Traps and Snares. The Journal of Wildlife Management. DOI: 10.1002/jwmg.21445.

[60] All BMP species-specific trap reports are available at: https://www.fishwildlife.org/afwa-inspires/furbearer-management. The 22 reports include separate reports for eastern and western coyotes and for gray, red, and Arctic fox.

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Each report contains information about several recommended BMP traps that have been evaluated as "humane" including information about any trap accessories (e.g., swivels, springs, anchors) and trap set requirements used to achieve the "humane" rating. The EIR must disclose which BMP traps, trap accessories, and trap set requirements it uses for each species that it traps for predator damage management. Regarding trap accessories, that disclosure should include information on the use of additional springs ("beefer kits"), swivels, and the type of anchors used. For padded traps, the draft EIR should disclose how frequently rubber strips commonly damaged by trapped animals are replaced with new ones. Information on the maintenance routine for traps and snares used by Wildlife Services technicians should be provided as trapping devices that are not working properly due to age, rust, non-working parts, and lack of care are likely to be even more cruel than fully functioning devices.

Enclosed foothold traps (or dog proof traps) are generally used for trapping raccoons and opossums and are included as BMP traps for both species. Notably, such traps are particularly inhumane for raccoons, who experience excruciating pain when one of their front feet is caught due to the hyper-sensitivity of those limbs. While such traps, given their design, are intended to reduce bycatch of non-target species, feral cats and any species with a small paw able to reach into the trap and pull up could be captured in such traps. Even a human, including young children, could be caught in such traps. Despite reducing the potential for non-target captures, enclosed foothold traps can result in injuries, amputations, and mortality.

1-7 cont.

Hubert et al. (1996)[61] evaluated the injury rates associated with the EGG trap (one type of enclosed foothold trap) for capturing raccoons. They used a scoring system that assigned points to different types of documented injuries with the higher scores reserved for the more severe injuries.[62] Of 62 raccoons captured in the EGG trap, there were 125 instances (affecting 82.3 percent of captured raccoons) of edematous swelling and/or hemorrhage, 47 (37.1 percent) cutaneous lacerations greater than or equal to 2 centimeters, and 19 (22.6 percent) instances of damage to the periosteum. Based on the trap scoring system used by Hubert et al., a score >50 is considered serious damage while scores greater than 125 are reflective of severe damage. Of the 62 raccoons studied by Hubert et al., 23 experienced injury scores associated with the EGG trap of 50 or higher with 9 experiencing injury scores of 125 or greater.

When traps are used, a trap monitor should be employed. Wildlife Services' National Wildlife Research Center has found that trap monitors save driving or hiking time, decrease fuel usage and reduce driving time over rough terrain, save

[61] Hubert, G.F. Jr., Hungerford, L.L., Proulx, G., Bluett, R.D., and Bowman, L. 1996. Wildlife Society Bulletin, 24(4): 699-708.
[62] *Id.* Table 1.

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Wildlife Services and its customers money, and prioritize checks of particular traps.[63] This monitoring can decrease the amount of time a captured animal is restrained, minimizing pain and stress and allowing non-target animals to be released in a timely manner. This was demonstrated by Will et al. (2010) in their study of the use of a telemetry-based trap monitoring system on San Nicolas Island off the coast of California during a project to eradicate the island's feral cat population.[64] Given the size of the island and the presence of fewer than 600 island foxes, the trap monitoring system was essential to "remotely check trap status, decrease staff time spent checking traps, and decrease response time to captured animals to limit fox injuries and mortalities due to exposure."[65] In another experiment where Global System for Mobile communication trap alarms were used when capturing otter, Néill et al. (2007) found that functioning alarms permitted trapped otters to be removed within 22 minutes of capture and reduced the injuries suffered by the animals from an average, cumulative score of 77.7 to only 5.5 on the trap trauma scale developed by the International Organization for Standardization, ISO 10990-5 .[66]

1-7 cont.

Leg hold traps used in underwater sets to capture aquatic animals can be particularly inhumane depending on the location of the set. In shallow water, a trapped animal (e.g., beaver, mink, muskrat, and otter) should be able to breathe but could succumb to exposure, exhaustion, malnourishment, or predation depending on trap check times. For underwater sets, trappers commonly use killing or restraining traps. While killing traps, like conibear traps, are intended to kill the trapped animal rapidly, this is not always the case.[67] The use of restraining traps in underwater sets result in death by drowning which is inherently inhumane. In their laboratory study of the time to death of mink, muskrat, and beaver caught in leg hold traps in an aquatic tank, Gilbert and Gofton (1982) measured the time until struggle cessation, brain activity (EEG) loss, and heart activity (EKG) loss.[68] In this experiment, depending on the species, a number 3 or 4 Victor double long spring leg hold trap was set on a feeding platform and/or a floating log. For the 13 minks used

[63] U.S. Department of Agriculture, Animal and Plant Health Inspection Service, National Wildlife Research Center. 2007. Evaluation of Remote Trap Monitors. Available at: https://www.aphis.usda.gov/wildlife_damage/nwrc/publications/Tech_Notes/TN_%20Remote%20Trap%20Monitors.pdf.

[64] Will, D., Hanson, C.C., Campbell, K.J., Garcelon, D.K., and Keitt, B.S. 2010. A Trap Monitoring System to Enhance Efficiency of Feral Cat Eradication and Minimize Adverse Effects on Non-Target Endemic Species on San Nicolas Island. Proceedings 24th Vertebrate Pest Conference (R. M. Timm and K. A. Fagerstone, Eds.), Pp. 79-85.

[65] *Id.*

[66] Néill, L.O., de Jongh, A., Ozolin, J., de Jong, T., and Rochford, J. 2007. Minimizing Leg-Hold Trapping Trauma for Otters With Mobile Phone Technology. Journal of Wildlife Management, 71(8):2776–2780.

[67] Proulx, G., and D. Rodtka. 2019. Killing Traps and Snares in North America: The Need for Stricter Checking Time Periods. Animals, 9, 570; doi:10.3390/ani9080570.

[68] Gilbert, F. F., and N. Gofton. 1982. Terminal dives in mink, muskrat, and beaver. Physiology and Behavior 28:835-840.

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in the experiment, the duration of time before the animals ceased struggling ranged from 1'17" to 4'00" with an average of 2'03" ± 1'32". The time until the loss of EEG activity ranged from 1'37" to 5'30" with an average of 4'27" ± 1'28". For the loss of EKG activity, the time ranged from 5'00" to 18'00" with an average of 8'27" ± 8'26". For the 11 muskrats used in the experiment, the duration of time before the animals ceased struggling ranged from 2'50" to 4'19" with an average of 3'34" ± 52". The time until the loss of EEG activity ranged from 3'30" to 4'17" with an average of 4'03" ± 42". For the loss of EKG activity, the time ranged from 4'00" to 5'00" with an average of 4'21" ± 54". For the 20 beavers used in the experiment, the duration of time before the animals ceased struggling ranged from 3'44" to 12'55" with an average of 8'11" ± 4'50". The time until the loss of EEG activity ranged from 3'38" to 13'50" minutes with an average of 9'11" ± 4'20". For the loss of EKG activity, the time ranged from 11'00" to 24'40" with an average of 16'27" ± 10'32". The prolonged time that these species struggle and take to die indicates these traps are inhumane, which the EIR should evaluate.

1-7 cont.

Denning, which involves the use of gas canisters containing sodium nitrate to kill animals in their dens, is listed as a method in the draft EIR, although with the caveat that denning is not used in Shasta County.[69] Although denning was used in the County in 2001 and 2002, it does not appear to have been used since that time.[70] This is a positive development we hope endures because denning is an inhumane practice. When gas canisters are used, they are ignited, placed inside the active den, and then the den opening is covered with soil. When heated to 1,000 degrees, sodium nitrate explodes and produces toxic fumes of nitrous oxide and sodium oxide.[71] The resulting gas that is released, carbon monoxide, converts the hemoglobin in blood to methemoglobin, which is unable to carry oxygen,[72] effectively suffocating the animals inhabiting the den. If there is a possibility that denning may be used in the future, the EIR should evaluate the potential impacts of a sub-lethal dose of carbon monoxide to target or non-target species in the event a canister is not set correctly or malfunctions, and also address the potential for non-target animals to be killed in denning operations. Indeed, EPA labels for large and small gas cartridges warn against harm to a variety of non-target species.[73]

Lastly, Shasta County has the authority to determine which lethal methods Wildlife Services may use within its borders, and should exercise this authority. The draft EIR states: "[a]s with nonlethal methods, Shasta County would not be

1-8

[69] Draft EIR, Appendix B.
[70] *Id.*
[71] Environmental Protection Agency - Office of Prevention - Pesticides - and Toxic Substances. 1991. RED Facts: Inorganic Nitrate/Nitrite (Sodium and Potassium Nitrates).
[72] *Id.*
[73] Keefover-Ring, W. 2009. War on Wildlife - The U.S.Department of Agriculture's "Wildlife Services" – a report to President Barack Obama and Congress. WildEarth Guardians. Available at: http://wg.convio.net/support_docs/report-war-on-wildlife-june-09-lo.pdf.

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responsible for determining the methods to be used."[74] Shasta County does have a responsibility to ensure that lethal methods used within its borders do not jeopardize the health and safety of humans and companion animals or result in the take of non-target species, including threatened and endangered species. To satisfy this responsibility, the County should modify its contract with Wildlife Services to prohibit the use of the non-selective lethal methods identified in this section, as other counties, including Humboldt County and Lane County, have done.

1-8 cont.

In conclusion, the EIR must not only identify and describe the negative impacts to individual animals under the proposed project, it must also fairly and adequately present the comparative impacts to individual animals under the alternatives.

1-9

D. The Impacts on Threatened and Endangered Species and Other Species Must Be Considered.

The draft EIR fails to meaningfully discuss the impact of the indiscriminate lethal methods identified above on non-target species, including threatened and endangered species, which should be corrected. The draft EIR baldly states that "[b]oth APHIS-WS tool selection and target specific equipment used by APHIS-WS is protective of nontarget species and animals including threatened and endangered species" and that capture of non-target species is "unlikely."[75] But the draft EIR fails to discuss the numerous instances of non-target animals being caught in leghold traps, body-gripping traps, and snares—including companion animals, livestock, and threatened and endangered wildlife.

1-10

Nationwide, these traps and other similarly non-selective lethal control devices have unintentionally killed many pets, vertebrates of 150 species,[76] and thousands of mammals of at least 20 different taxa that are listed as threatened or endangered federally or in certain states.[77] Since 2000, Wildlife Services has killed more than 50,000 members of over 150 non-target species, including red-tailed hawks, great horned owls, kangaroo rats, armadillos, pronghorns, porcupines, long-tailed weasels, javelinas, marmots, snapping turtles, turkey vultures, great blue

[74] Draft EIR at 2.0-8.
[75] Draft EIR, Appendix B.
[76] Knudson, T. The killing agency: Wildlife Services' brutal methods leave a trail of animal death—wildlife investigation. *The Sacramento Bee*, April 29, 2012; *see also* Tom Knudson, *Wildlife Services' Deadly Force Opens Pandora's Box of Environmental Problems*, SACRAMENTO BEE (Apr. 30, 2012 at 12:00 AM) http://www.sacbee.com/news/investigations/wildlife-investigation/article2574608.html; B.J. Bergstrom et al., *License to Kill: Reforming Federal Wildlife Control to Restore Biodiversity and Ecosystem Function*, 7 CONSERV. LETTERS 131–42 (2013).
[77] Bergstrom, B.J., L.C. Arias, A.D. Davidson, A.W. Ferguson, L.A. Randa, and S.R. Sheffield. 2014. License to kill: reforming federal wildlife control to restore biodiversity and ecosystem function. *Conservation Letters* 7: 131-142.

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herons, ruddy ducks, sandhill cranes, and ringtail cats.[78] Some of the animals the agency has mistakenly killed are threatened and endangered species that have been the subject of costly conservation efforts, including Mexican gray wolves, grizzly bears, a California condor, gray wolves, wolverines, river otters, swift and kit foxes, and bald and golden eagles.[79] Even research conducted by USDA's NRCS shows the large number of non-target species that visit their trap sites.[80] These killings undermine federal efforts to conserve and recover the affected species, which often need protection under state and/or federal laws in part due to Wildlife Services' practices.[81] The draft EIR should meaningfully address this issue.

1-10 cont.

In particular, Wildlife Services' indiscriminate methods may incidentally take gray wolves, Sierra Nevada red foxes, and tricolored blackbirds, which are all listed under either the federal Endangered Species Act ("ESA") or the California Endangered Species Act ("CESA"). One of the most common species targeted by Wildlife Services in Shasta County is coyotes, with 1,317 individuals killed from 1999 to 2018.[82] Targeting coyotes could threaten gray wolves and Sierra Nevada red foxes that are present in the County due to the species' morphological similarities. In California, gray wolves are listed as endangered under the ESA[83] as well as under CESA,[84] and Sierra Nevada red foxes have been proposed to be listed as

1-11

[78] Tom Knudson, *Suggestions in Changing Wildlife Services Range from New Practices to Outright Bans*, SACRAMENTO BEE (May 6, 2012 at 12:00 AM) http://www.sacbee.com/news/investigations/wildlife-investigation/article2574659.html.
[79] *Id.*
[80] Shivik, J.A., Gruver, K.S., 2002. Animal attendance at coyote trap sites in Texas. Wildlife Society Bulletin 30, 502-557.
[81] Over the past century, Wildlife Services played a leading role in the decimation of populations of a multitude of wildlife species, contributing to the endangerment of the bald eagle, California condor, Canada lynx, kit fox, swift fox, Utah prairie dog, Gunnison's prairie dog, grizzly bear, gray wolf, Mexican gray wolf, fisher, and others. 41 Fed. Reg. (July 12, 1976) (bald eagle); U.S. Fish and Wildlife Service ("FWS"), ANIMAL DAMAGE CONTROL "MAY AFFECT" DETERMINATIONS FOR FEDERALLY LISTED THREATENED AND ENDANGERED SPECIES, USFWS BIOLOGICAL OPINION 44 (1997) (California condor); FWS, SPECIES ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM, Gunnison's prairie dog (2010); FWS, RECOVERY PLAN FOR UPLAND SPECIES OF THE SAN JOAQUIN VALLEY, CALIFORNIA (1998) (San Joaquin kit fox); FWS, UTAH PRAIRIE DOG (*CYNOMYS PARVIDENS*) REVISED RECOVERY PLAN (2012); FWS, GRIZZLY BEAR RECOVERY PLAN (1993); FWS, NORTHERN ROCKY MOUNTAIN WOLF RECOVERY PLAN (1987); FWS, SPECIES ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM, WEST COAST POPULATION OF FISHER (2012). By targeting carnivores, the Wildlife Services program acts as a subsidy for livestock producers in contravention of other federal expenditures; for example, the federal government spent more that $43 million since 1974 to recover the gray wolf. *See* B.J. Bergstrom et al., *License to Kill: Reforming Federal Wildlife Control to Restore Biodiversity and Ecosystem Function*, 7 CONSERV. LETTERS 131–42 (2013).
[82] Draft EIR at 4.1-13 and Appendix B.
[83] 84 Fed. Reg. 9,648 (Mar. 15, 2019); Colorado Wolf Management Working Group, Findings and Recommendations for Managing Wolves that Migrate Into Colorado (2004). Available at: https://cpw.state.co.us/Documents/WildlifeSpecies/SpeciesOfConcern/Wolf/recomendations.pdf.
[84] California Dept. of Fish and Wildlife, Gray Wolf. Available at: https://wildlife.ca.gov/conservation/mammals/gray-wolf.

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endangered under the ESA[85] and are listed as threatened under CESA.[86] As such, it is unlawful to engage in activities that result in incidental take of these species[87] without first obtaining an Incidental Take Permit from both the U.S. Fish and Wildlife Service as well as the California Department of Fish and Wildlife. The indiscriminate methods used by Wildlife Services to target coyotes, including foot and neck snares, create a significant risk that one or more gray wolves and Sierra Nevada red foxes could be taken, in violation of the ESA and CESA. The EIR must address this issue.

1-11 cont.

The EIR should also more thoroughly address the potential for Wildlife Services' indiscriminate methods to kill tricolored blackbirds, which are listed as threatened under CESA. The species is also currently designated as a sensitive species by the Alturas Field Office (which includes Shasta County) of the Bureau of Land Management and is under formal status review for listing as Endangered under the Federal ESA. Their range includes portions of Shasta County, and they are regularly observed around the County. The draft EIR states that no tricolored blackbirds have been seen in the County since 2014.[88] This is contradicted by the Wintu Audubon Society, which wrote of its observation of a flock of 10,000 black birds in Shasta County in 2017.[89] According to the draft EIR, Wildlife Services killed 60,820 Brewer's, red-winged, and yellow-headed blackbirds as well as European starlings from 2007 to 2018 in Shasta County, overwhelmingly by shooting into flocks.[90]

1-12

These species of birds flock with tricolored blackbirds in the fall and winter making it possible—if not highly likely—that tricolored blackbirds are being dispersed and killed by Wildlife Services. Unintentional mortality from depredation killing was identified as a threat to the species by the California Department of

[85] 85 Fed. Reg. 862 (Jan. 8. 2020).
[86] U.S. Fish and Wildlife Service, Species Report: Sierra Nevada red fox (Vulpes vulpes necator) (Aug. 2015). Available at: https://www.fws.gov/sacramento/outreach/2015/10-07/docs/20150814_SNRF_SpeciesReport.pdf.
[87] Regarding the ESA, section 9 of the Act prohibits "take" of species, which includes "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(18). The prohibitions in Section 9 of the ESA encompass "incidental take," or take that is not a direct goal of the proposed action. Regarding CESA, section 2080 of the Fish and Game Code states: "[n]o person shall . . . take, possess, purchase, or sell within this state, any species, or any part or product thereof, that . . . [is] determin[d] to be an endangered species or a threatened species." "Take" means to hunt, pursue, catch, capture or kill or attempt to hunt, pursue, catch, capture, or kill. Fish & G. Code, § 86. "Person" has been found to include state agencies. *Watershed Enforcers v. Dept. of Water Resources*, 185 Cal. App. 4th 969, 975, 988 (Cal. Ct. App. 2010). The prohibition against take applies to wildlife located on public as well as private land. *See* Fish & G. Code, § 2080.
[88] Draft EIR at 4.1-47.
[89] Dan Greaney, "10,000 Blackbirds Arrived in Shasta County Recently," Wintu Audubon Society (May 23, 2017). Available at: https://www.redding.com/story/life/2017/05/23/10-000-blackbirds-arrived-shasta-county-recently/336827001/.
[90] Draft EIR, Appendix B.

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Fish and Wildlife in its 2018 status review of the species.[91] The draft EIR states: "[n]o mixed flocks that have the potential to contain tricolored blackbird have been removed or dispersed statewide since 2014 when tricolored blackbird was listed."[92] As the California Fish and Game Commission voted to list tricolored blackbird as threatened in 2018,[93] and the species was formally added to CESA's list of threatened species in March 2019,[94] the accuracy of this statement is questionable, and the draft EIR provides no support for this assertion. The EIR should take into consideration the issues identified and provide additional information for the public to rely upon in evaluating whether the impact on this species will be significant or not.

1-12 cont.

The draft EIR also fails to account for and analyze the effects on aquatic species, including threatened and endangered species, of Wildlife Services' killing of beavers. Beaver dams and ponds adjust stream morphology and in-stream habitat in a variety of ways that are beneficial for many freshwater species, including waterfowl and federally protected mussels.[95] Beaver dams retain and conserve water that otherwise would flow more quickly through a watershed, and through that means beaver help to regulate the flow of streams and rivers and dampen the amplitude of fluctuations in flow levels below their dams. Beaver dams create areas of deeper water than would typically be found in small streams, and impounded waters upstream of beaver dams cover much greater surface area than the preexisting stream channels.[96] As a result, beavers give streams a greater carrying capacity of fish.[97] Additionally, beaver ponds and dams dissipate stream energy during floods or high flow events and create areas of slow moving or still water in

1-13

[91] California Department of Fish and Wildlife, Status Review of the Tricolored Blackbird in California at 85-86 (Feb. 2018). Available at: https://nrm.dfg.ca.gov/documents/ContextDocs.aspx?cat=CESA-Listing.
[92] Draft EIR at 4.1-47.
[93] Paul Weiland, California Lists Tricolored Blackbird, Endangered Species Law and Policy, Nossaman LLP (Apr. 20, 2018). Available at: https://www.endangeredspecieslawandpolicy.com/california-lists-tricolored-blackbird.
[94] State of California Office of Administrative Law, In Re Fish and Game Commission (March 18, 2019). Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=166089&inline.
[95] Pollock, M.M., G. Lewallen, K. Woodruff, C.E. Jordan and J.M. Castro (Editors) 2015. The Beaver Restoration Guidebook: Working with Beaver to Restore Streams, Wetlands, and Floodplains. Version 1.0. U.S. FWS, Portland, Oregon. 189 pp. at 4-17, *available at* http://www.fws.gov/oregonfwo/ToolsForLandowners/RiverScience/Beaver.asp.
[96] Naiman, Robert J. et al. 1986. Ecosystem Alteration of Boreal Forest Streams by Beaver (*Castor canadensis*). Ecology 67: 1254, 1258, 1266; Oregon Dept. of Fish and Wildlife. 2005. The Importance of Beaver (*Castor Canadensis*) to Coho Habitat and Trend in Beaver Abundance in the Oregon Coast Coho ESU 2–3, *available at* http://www.dfw.state.or.us/fish/CRP/docs/coastal_coho/reference/ODFW/ODFWBeaverFinalReport.pdf.
[97] Hoffman, W. and F. Recht. 2013. Beavers and Conservation in Oregon Coastal Watersheds, *available at* http://www.martinezbeavers.org/wordpress/wp-content/uploads/2013/05/final-Beavers-and-Conservation-in-Oregon-Coastal-Watersheds.pdf.

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an otherwise moving-water environment.[98] By slowing water velocities and increasing water depth and storage capacity, beaver dams can contribute to groundwater recharge and thereby help increase summer low flows in streams.[99] By slowing river flow and retaining water at ponds, beaver dams can retain sediment, pollutants and nutrients so that the water quality downstream is improved and stream sediment load is reduced.[100] As such, beaver dams can benefit downstream mussel populations.[101] Beaver ponds and dams also create complex shorelines and in-stream habitats.[102] That complexity results in greater aquatic productivity—and thus more food for piscivorous wildlife—than stream reaches that do not have beaver dams.[103] Beaver dams also provide natural cover that is especially important for fish rearing sites.[104]

1-13 cont.

Due to these ecosystem impacts, the killing of beavers may result in the take of aquatic and riparian threatened and endangered animals within Shasta County, such as the Shasta salamander, foothill yellow-legged frog, California red-legged

[98] Oregon Dept. of Fish and Wildlife. 2005. The Importance of Beaver (*Castor Canadensis*) to Coho Habitat and Trend in Beaver Abundance in the Oregon Coast Coho ESU 2–3, *available at* http://www.dfw.state.or.us/fish/CRP/docs/coastal_coho/reference/ODFW/ODFWBeaverFinalReport.pdf; Woo, M.-K., & J.M. Waddington. 1990. Effects of Beaver Dams on Subarctic Wetland Hydrology. Arctic 43: 223, 229–30, *available at* http://pubs.aina.ucalgary.ca/arctic/Arctic43-3-223.pdf.

[99] Leidholt-Bruner, K., D.E. Hibbs, and W.C. McComb. 1992. Beaver dam locations and their effects on distribution and abundance of coho fry in two coastal Oregon streams. Northwest Science 66: 218-223; Pollock, M.M., M. Heim, and R.J. Naiman. 2003. Hydrologic and geomorphic effects of beaver dams and their influence on fishes. Pages 213-234 in S.V. Gregory, K. Boyer, and A. Gurnell, editors. The ecology and management of wood in world rivers. American Fisheries Society, Bethesda, Maryland.

[100] Gurnell A.M. 1998. The hydrogeomorphological effects of beaver dam-building activity. Prog. Phys. Geogr. 22: 167–189; Rosell F., O. Bozsér, P. Collen, and H. Parker. 2005. Ecological impact of beavers and their ability to modify ecosystems. Mammal Rev. 35: 248–276.

[101] Campbell, R.D. 2006. What has the beaver got to do with the freshwater mussel decline? A response to Rudzīte (2005). Acta Universitatis Latviensis 710, Biology: 159–60, *available at* http://eeb.lu.lv/EEB/2006/Campbell.pdf.

[102] Naiman, R.J., C.A. Johnston and J.C. Kelley. 1988. Alteration of North American Streams by Beaver. Bioscience 38: 753, 753–62.

[103] Leidholt-Bruner, K., D.E. Hibbs, and W.C. McComb. 1992. Beaver dam locations and their effects on distribution and abundance of coho fry in two coastal Oregon streams. Northwest Science 66: 218-223; Snodgrass, J.W., and G.K. Meffe. 1998. Influence of Beavers on Stream Fish Assemblages: Effects of Pond Age and Watershed Position. Ecology 79(3): 928–942; Collen, P., and R.J. Gibson. 2001. The General Ecology of Beavers (*Castor* spp.) as Related to their Influence on Stream Ecosystems and Riparian Habitats, and the Subsequent Effects on Fish – a Review. Reviews in Fish Biology and Fisheries 10: 493-461; Pollock, M.M., G.R. Pess, T.J. Beechie, and D.R. Montgomery. 2004. The importance of beaver ponds to coho production in the Stillaguamish River basin, Washington, USA. North American Journal of Fisheries Management 24: 749-760; Smith, J.M., and M.E. Mather. 2013. Beaver dams maintain fish biodiversity by increasing habitat heterogeneity throughout a low-gradient stream network. Freshwater Biology 58(7): 1523–1538.

[104] Reeves, G.H. et al. 1989. Identification of Physical Habitats Limiting the Production of Coho Salmon in Western Oregon and Washington, *available at* https://www.fs.fed.us/pnw/pubs/pnw_gtr245.pdf.

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Letter 1 (continued)

frog, Cascades frog, Oregon spotted frog, willow flycatcher, Shasta crayfish, green sturgeon, southern DPS, rough sculpin, coho salmon, steelhead, chinook salmon, and bull trout. The effects on these threatened and endangered species listed under the ESA and CESA, as well as other aquatic and riparian species, due to the loss of beavers must be analyzed in the EIR. The County must also determine whether an Incidental Take Permit issued by U.S. Fish and Wildlife Service as well as the California Department of Fish and Wildlife is required.

1-13 cont.

The removal of beavers may also harm migratory bird species. Several studies show that beaver ponds attract and support waterfowl. In Maine, McCall et al. (1996) found that ponds with beaver had higher numbers of Canada geese and mallards, and that many Canada geese used abandoned beaver lodges as nest sites.[105] It is well established that wood ducks are often associated with beaver ponds.[106] Other waterfowl are also benefited by beavers and harmed by their removal. In the Appalachian Plateau region of New York, hooded mergansers were found more often at active beaver ponds than at inactive beaver ponds or at the wetlands with no recent record of beaver occupation.[107] When beaver occupied wetlands in Finland and their dam-building created flooding, the green-winged teal became more numerous.[108] Broods of the green-winged teal, mallard and goldeneye all foraged in beaver ponds as did juvenile green-winged teal and goldeneye.[109] The effects of the removal of beaver and the subsequent alteration of habitat on migratory species in Shasta County must be analyzed.

1-14

The County must also evaluate the implications under the Migratory Bird Treaty Act ("MBTA"), 16 U.S.C. §§ 703-712 (§709 omitted). The MBTA provides that it is unlawful to pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg or any such bird, unless authorized under a permit issued by the Secretary of the Interior. 50 C.F.R. § 10.13. Over 800 species are currently on the list of protected migratory

1-15

[105] McCall, T.C., T.P. Hodgman, D.R. Diefenbach, and R.B. Owen. 1996. Beaver populations and their relation to wetland habitat and breeding waterfowl in Maine. Wetlands 16: 163-172.
[106] Carr, W.H. 1940. Beaver and birds. Bird-Lore 42: 141-146; Nevers, H.P. 1968. Waterfowl utilization of beaver impoundments in southeastern New Hampshire. Transactions of the Northeast Fish and Wildlife Conference 25: 105-120; Grover, A.M., and G.A. Baldassarre. 1995. Bird species richness within beaver ponds in Southcentral New York. Wetlands 15: 108-118; Merendino, M.T., G.B. McCullough, and N.R. North. 1995. Wetland availability and use by breeding waterfowl in southern Ontario. Journal of Wildlife Management 59: 527-532; Haemig, P.D. 2012. Beaver and birds. ECOLOGY.INFO, *available at* http://www.ecology.info/beaver-birds.htm.
[107] Grover, A.M., and G.A. Baldassarre. 1995. Bird species richness within beaver ponds in Southcentral New York. Wetlands 15: 108-118.
[108] Nummi, P., and H. Poysa. 1997. Population and community level responses in Anas-species to patch disturbance caused by an ecosystem engineer, the beaver. Ecography 20: 580-584.
[109] Nummi, P., and H. Poysa. 1995. Habitat use by different-aged duck broods and juvenile ducks. Wildlife Biology 1: 181-187.

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Letter 1 (continued)

birds.[110] Loss of beavers could result in habitat loss, disturbance, and displacement or abandonment of important nesting, feeding, molting and staging areas. The EIR should address the County's responsibilities under MBTA. **1-15 cont.**

* * * * * * *

In conclusion, we appreciate the opportunity to provide comments and urge you to consider these comments and the scientific evidence when preparing the EIR. Please contact us with any questions or concerns.

Sincerely,

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[110] U.S. Fish and Wildlife Service, Migratory Bird Treaty Act protected species (10.13 list). 2013. Available at: https://www.fws.gov/birds/management/managed-species/migratory-bird-treaty-act-protected-species.php.

Letter 1 (continued)

Attachments to this letter are included in Appendix A

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Letter 1: Animal Legal Defense Fund, on behalf of Animal Welfare Institute, Center for Biological Diversity, Mountain Lion Foundation, Project Coyote, and WildEarth Guardians

Response 1-1

This is a general comment about the Draft EIR's evaluation of alternatives to the proposed project, the forthcoming statewide wildlife damage management environmental impact report/environmental impact statement (EIR/EIS), and evaluation of project impacts. Responses to specific comments on these topics are provided in Responses 1-2 through 1-15, below.

Response 1-2

One of the key purposes of the Draft EIR is to identify and evaluate comparative environmental effects of the proposed project and its alternatives. The County appreciates the commenter's acknowledgement that the Draft EIR evaluated four alternatives.

The commenter requested that the County evaluate an alternative in which the County would enter into a cooperative service agreement (CSA) with USDA Animal and Plant Health Inspection Services – Wildlife Services (APHIS-WS) in which lethal methods could be used but only after efforts to use nonlethal methods have been documented to be exhausted. The commenter provided two examples of such agreements, one from Humboldt County, California, and one from Lane County, Oregon. These documents, which are included in Comment Letter 1, have been labeled by the County as "Attachment A" (Humboldt County) and "Attachment B" (Lane County) for purposes of this Final EIR and are included in Appendix A.

The process for determining if a lethal method should be used as a control strategy is established in APHIS-WS policies and through the Decision Model, as described in the Draft EIR (page 2.0-3 in Section 2.0, Project Background). As stated on page 2.0-4, removal of animals by lethal methods is only used when other methods of control are not practical or have not been successful. The Decision Model also provides that the results of control actions be monitored and evaluated. The IWDM program, as operated by APHIS-WS and approved by signature of the CSA and work plan, requires data reporting, including control methods and whether species causing loss were removed or released.

The alternative suggested by the commenter is an operational variation to the proposed project. It still provides for removal of targeted common wildlife species by lethal methods. The Draft EIR fully evaluated the potential impacts of lethal removals on species populations and concluded impacts would be less than significant (Impact 4.1-1, Draft EIR pages 4.1-38 through 4.1-45). The Draft EIR also evaluated three alternatives in which there would be no lethal removals (Alternative 1: No Project/No CSA with APHIS-WS; Alternative 3: Shasta County Provides Technical Assistance but No Lethal Controls Used; and Alternative 4: Loss Indemnity and/or Cost-Share Reimbursement Program). As noted by the commenter, the Draft EIR considered an alternative in which the County would have a CSA with APHIS-WS but no lethal methods would be used. This alternative was described on pages 5.0-5 and 5.0-6 in Section 5.0, Alternatives. Although this alternative was rejected for further analysis in the Draft EIR for the reasons stated on page 5.0-6, functionally it would be the same as Alternative 2, with the only difference being which entity would perform the activities.

As such, the commenter's alternative is within the range of potential impacts of the proposed project, which assumes lethal methods, and the nonlethal alternatives examined in the Draft EIR and, for that reason, is not a "new" alternative that should be evaluated in detail in the EIR.

Moreover, the EIR is not required to evaluate the commenter's alternative because it would not avoid or substantially reduce a significant impact of the proposed project, as no significant impacts were identified.

With regard to the Humboldt County example, the conditions stipulated on pages 1 and 2 of Amendment 1 to the CSA under the "Article 5 – APHIS-WS Responsibilities" and Article 9 – Applicable Regulations" subsections were established in the absence of environmental review under CEQA for the Humboldt County program to determine whether there were significant impacts requiring mitigation. In the case of Shasta County, a Draft EIR was prepared, which concluded there would be no significant impacts requiring mitigation measures. The Humboldt County example (and the specific operational, documentation, and reporting terms therein) is, therefore, not required for Shasta County.

The operational change recommended by the commenter by way of the commenter's suggested alternative is nonetheless noted and is included in the record that will be considered by Shasta County Board of Supervisors.

Response 1-3

As noted by the commenter, the Draft EIR acknowledged that a joint environmental impact report/environmental impact statement (EIR/EIS) would be prepared to evaluate APHIS-WS wildlife damage management program at the statewide level. When the Shasta County Draft EIR was made available for public and agency review on August 13, 2020, the CEQA Notice of Preparation (NOP) for the EIR and NEPA Notice of Intent (NOI) for the EIS had not yet been published. The NOP/NOI for the statewide document was released for public review on September 10, 2020, for a 60-day period ending November 10, 2020 (CDFA 2020a; USDA 2020). The Draft EIR has been revised to include information about the publication of the NOP/NOI, and to note that the statewide draft EIR/EIS is not expected to be available until early 2022 (CDFA 2020b) (see Section 4.0, Revisions to the Draft EIR of this Final EIR).

The NOP prepared by the California Department of Food and Agriculture (CDFA), as CEQA lead agency and the agency that will be responsible for implementation, states that the wildlife damage management activities would be carried out by CDFA, counties in California, and APHIS-WS, or any combination thereof. The NOP describes the following: discretionary action and proposed implementation activities; program area; program description, including program objectives and program elements; discretionary actions and APHIS-WS actions; and CEQA process (including scope of CEQA/NEPA coverage). The NOP also identifies issues for detailed consideration in the EIR/EIS, which includes all of the topics listed in Appendix G in the CEQA Guidelines as well as those required for an EIR, such as an alternatives analysis. The public scoping and comment processes are also outlined in the NOP (CDFA 2020a).

The NOI prepared by APHIS-WS lists the following issues that are anticipated to be addressed in the EIR/EIS: impacts on wildlife populations; effects on nontarget animal populations, including species listed under the federal Endangered Species Act; impacts on ecosystem processes (e.g., trophic cascades); impacts on special management areas, including wilderness and wilderness study areas; humaneness of methods; impacts of the alternatives on Native American culture and resource uses; and risks and benefits to human and pet safety. The NOI also identifies alternatives that will be considered, including an alternative that continues APHIS-WS current wildlife damage and conflict management (no action alternative); alternatives with restrictions on integrated wildlife damage management (IWDM) to reduce environmental impacts; alternatives that require varying levels of nonlethal wildlife damage management; and a no APHIS-WS involvement alternative (USDA 2020).

Recognizing the "importance" of the forthcoming EIR/EIS in the Draft EIR, as recommended by the commenter, is not appropriate for the County's Draft EIR, as "importance" is a subjective term and not defined. Neither the NOP nor the NOI speculate what the results of the analysis will be. The statewide joint draft EIR/EIS has not been published. As such, how the "scientific and factual data contained in the [EIS/EIR] may affect the environmental assumptions and analysis in Shasta County's EIR" as requested for inclusion in the Draft EIR is not available for the County's consideration. Absent a publicly available evaluation of data and impacts in the EIR/EIS at this time, there is currently no substantial evidence provided by the statewide EIR/EIS process upon which the County might review the environmental impacts of its CSA with APHIS-WS relative to CDFA's program. Consideration of the statewide EIR/EIS would require the County to speculate what the results of the not-yet-published EIR/EIS may be, which is not required under CEQA (CEQA Guidelines 15145), and such speculation would not provide any meaningful analysis or results.

Response 1-4

This is a general comment about CEQA requirements for an alternatives analysis. Section 4.1, Biological Resources, in the Draft EIR presented a detailed evaluation of the biological resources impacts of the proposed project. The analysis concluded, based on substantial evidence, there would be no significant impacts requiring mitigation measures or alternatives to reduce impacts. Nonetheless, in accordance with CEQA, the Draft EIR included an analysis of four alternatives that meet the CEQA criteria for meaningful evaluation, analysis, and comparison with the proposed project. The alternatives analysis was included in the Draft EIR Section 5.0, Alternatives, which evaluated the following: No Project/No CSA; Shasta County Provides Wildlife Damage Management Services; Shasta County Provides Technical Assistance but No Lethal Control Methods Uses; and Loss Indemnity and/or Cost-Share Reimbursement Program. For each alternative, Subsection 5.4 (Comparative Analyses of Alternatives Evaluated in the EIR) included an analysis of the biological resources impacts of the alternative with those of the proposed project, along with a discussion of feasibility. The Draft EIR adequately identified and described the relative effects of the proposed project and the alternatives. For the foregoing reasons, no revisions to the Draft EIR, as requested by the commenter, are necessary.

Response 1-5

The Draft EIR considered and included information about the potential effects of lethal control of predators on biodiversity and ecosystems on pages 4.1-19 and 4.1-20 in Section 4.1, Biological Resources, which addressed trophic cascades and mesopredator release. The discussion in the Draft EIR explained that there have been numerous studies on this topic, citing references to scientific journal articles, including some specifically referenced by the commenter (e.g., cited in footnote references 18, 20, 22, 24) as well as others that were not mentioned by the commenter (e.g., Gehrt and Clark [2003], Beschta and Ripple [2009]; Henke [1995]; Jackson [2014]).[1] Beyond those already referenced in the Draft EIR, the County has also reviewed the other articles cited by the commenter concerning this topic, many of which, as the comment points out, are about wolves. In its review of the articles, the County notes that 11 of the 21 articles focused on wolves,[2] particularly gray wolf management in Yellowstone and locations other than California and related biodiversity and ecosystem effects, among other topics. Gray wolf is not a species that is managed for predator control in Shasta County. Nine articles provided a general and/or narrow overview of trophic cascade and mesopredator release effects on various species, some of which

[1] Section 7.0, References, in the Draft EIR contains complete bibliographic information.
[2] The number of articles reflects each uniquely referenced article; some articles were referenced more than once.

addressed coyotes, which are managed in Shasta County. Varying opinions were put forth in these articles regarding lethal control of predators relative to ecosystem effects. The commenter's claim there is consensus on effects on lethal controls on biodiversity and ecosystems is not supported by its reference to Carter et al. in footnote 13. In the County's review of that article, staff notes that terms such as mesopredator release, trophic cascade, and lethal carnivore control do not appear in the referenced article. The study examines how human and wildlife data can be used in spatial analysis (also referred to as "social-ecological analysis" in the article) to help inform human-wildlife coexistence and conservation planning.

There is, as yet, no published, definitive research or data specifically applicable to effects of coyote or other predator removals in Shasta County, or widely accepted consensus on this topic, in general (Draft EIR page 4.1-20). Indeed, even the comment appears to contradict itself as to whether coyote is an apex predator or mesopredator and whether removals are beneficial or detrimental, highlighting the need for studies that are relevant to local conditions. Moreover, the type, numbers, frequency, and methods of species removals in Shasta County differ substantially from the conditions reported in the studies, some of which were controlled experiments. The conditions evaluated in published studies to date are not readily transferable to how wildlife damage management to address predation is conducted on land in the County. Other than referencing various studies, the commenter did not provide any data or analysis that clearly demonstrates the applicability of the conclusions of the studies to conditions in Shasta County.

Under the IWDM program, APHIS-WS may selectively remove specific individual animals that cause damage to property, infrastructure, agricultural or livestock commodities, and/or public health and safety, or are non-native. APHIS-WS does not target certain species for reduction. The proposed CSA between the County and APHIS-WS would not provide for large-scale predator removals. For most wildlife damage management, once a damage situation is resolved, APHIS-WS field specialists do not continue to remove additional animals unless a problem reoccurs, there are historical problems, and/or an additional request for assistance is made. As with other cooperative agreements, APHIS-WS targets specific individuals causing damage in response to requests for assistance, and lethal methods are only used when other methods of control are not practical or have not been successful.

After having thoroughly reviewed and considered available information, including the low numbers of predators such as coyote, mountain lion, and bears removed on an annual basis as well as the low percentage of take relative to statewide take and population estimates for those species, the County finds that a significance conclusion regarding ecosystem system as a result of predator removals is too speculative for evaluation. No impact determination is made, as provided for under CEQA Guidelines Section 15145.

The Draft EIR's consideration of population-level impacts on species is appropriate and consistent with established methods used by CDFW (CDFG 2004), as stated on page 4.1-36 in the Draft EIR, and environmental assessments prepared by APHIS-WS (USDA 2005; 2015), as stated on page 4.1-55 in the Draft EIR. The population-based analysis is based on relevant and County-specific data, comprising substantial evidence, to allow for meaningful analysis. The commenter's disagreement with this approach (mentioned on page 6 and elsewhere in the comment letter) is acknowledged, but the commenter did not suggest another established, widely accepted method that should have been used instead.

Response 1-6

This is a general comment about the effectiveness of predator damage management and more specifically about lethal carnivore control in response to livestock losses, particularly with respect to coyote. This comment is directed to project merits and objectives. CEQA does not require evaluation of project merits or objectives. The Draft EIR did include information summarized from various studies about the effectiveness of lethal controls, contrary to the commenter's assertion that such a discussion was not provided. This information was presented in the third and fourth paragraphs on page 2.0-13 in Section 2.0, Project Background, under the "Cost/Benefit Considerations of APHIS-WS IWDM Methods in Shasta County" subheading. Analyzing whether lethal controls are effective is not required under CEQA; an EIR is not required to resolve public concern about this topic, as provided for under CEQA (CEQA Guidelines Section 15131 [Economic and Social Effects]). However, the County recognized this is a potential issue of concern to various organizations and individuals and voluntarily included information for disclosure purposes and to help inform the decision-making process, even though there was no requirement under CEQA to do so. The discussion on this topic in the Draft EIR included references to 20 articles, some of which were also listed in the comment letter either as studies or footnoted references that should be considered in addressing this topic. Some of the Draft EIR's cited references on this topic were not mentioned in the commenter's letter. The County has reviewed the numbered studies beginning on page 8 and continuing on page 9 of the comment letter. As indicated by the references listed on page 2.0-13 in the Draft EIR, items 6 and 9 are cited in the Draft EIR. Items 1 through 5, 7, and 8 as well as others cited in the footnotes provide data and opinion, but none specifically address conditions in Shasta County. For example, results were reported from locations other than California and addressed species such as wolves. The commenter did not provide any data or technical analysis demonstrating the relevance of the studies to Shasta County.

The appendix mentioned in second paragraph on page 9 of the comment letter was not included with the comment letter. However, it appears to reference studies that were cited in Treves, Krofel, and McManus (2016), an article to which the comment letter refers in numbered list item 6 and elsewhere. As noted above, this is one of the articles already cited in the Draft EIR. As such, its contents were considered.

With regard to the second point in the comment concerning livestock loss, in Shasta County, livestock loss is not a primary component of total confirmed damages, as illustrated in Table 2.0-2 (Shasta County Confirmed Wildlife Damages Summary 2007-2018) in Section 2.0, Project Background. The comment letter points to a specific study concerning lethal control of coyotes in response to sheep loss in Northern California (Conner et al. 1998), which is one of the references included in the list of reviewed studies on page 2.0-13 in the Draft EIR. Coyotes are a species managed in Shasta County under the IWDM program, although sheep depredation is negligible. The Draft EIR (page 4.1-20) summarized the results of some studies that indicate that aggressive efforts to remove large numbers of coyotes may change population dynamics, an effect noted by the commenter. However, as demonstrated in the Draft EIR (page 4.1-19), the average number of coyotes removed over the 20-year baseline is approximately 66 per year, or just over 5 per month, which is not substantial, and would not have an adverse effect on coyote population.

The commenter also references studies that address cougar hunting and how that may increase conflicts with livestock. This is not relevant to the evaluation of impacts of implementing the CSA because cougar hunting is illegal in California. Moreover, as indicated on page 4.1-22 in the Draft EIR, the average removal over the 20-year baseline was 9 per year, and take may only occur with authorization from CDFW with a depredation permit.

For the reasons explained above, the Draft EIR has more than adequately addressed the issue of effectiveness of lethal controls, even though there is no requirement under CEQA to do so. Additional discussion or evaluation of this topic, as demanded by the commenter, is not required because it would not affect the conclusions of the biological resources impact analysis.

Response 1-7

This comment addresses the humaneness of IWDM activities and identifies three areas of concern: whether the use of certain lethal methods could harm or kill nontarget animals; whether there are public safety risks associated with the use of lethal methods; and the degree to which certain capture methods may cause pain and suffering of the target animal. Each of these are addressed below.

CEQA Requirements Overview

Humaneness of an activity that would occur as a result of a proposed project is a social, not an environmental, consideration. There is no requirement in CEQA (CEQA Guidelines Section 15131, Economic and Social Considerations) to make an impact determination of significance for this issue, unless a chain of cause and effect wherein significant adverse physical impacts related to the social effect would occur. The purpose of an EIR is to identify and focus on the significant effects of a proposed project on the environment and how a project might result in changes in existing physical conditions (CEQA Guidelines Section 15126.2, Consideration and Discussion of Significant Environmental Impacts).

The result of removing specific targeted wildlife by lethal means (regardless of method) and the effect on a particular species, as a whole, is the physical environmental effect that is appropriately evaluated in the Draft EIR. The Draft EIR evaluated the potential impacts on "fauna" and thus wildlife in Section 4.1, Biological Resources, in Impact 4.1.1 (Common Wildlife Species) and Impact 4.1.2 (Special-Status Species and Species of Special Concern) and, therefore, meets CEQA requirements. Because the intent of CEQA is to evaluate potential physical effects on the environment, which includes animal species as a whole, the Draft EIR appropriately evaluated impacts on species' populations, which comprises individuals within each species. There are no requirements in CEQA, the CEQA Guidelines, or CEQA case law that mandate an evaluation of impacts of specific methods of control on individual animals within a species as a result of a project or its alternatives, as asserted by the commenter. However, to the extent that the use of certain methods may result in incidental or unintentional take of animals or pose a safety hazard to people or the environment, those are topics for consideration, which the Draft EIR has done, as explained below.

Unintentional Effects on Non-Target Animals

Regarding the comment concerning the potential for particular types of lethal methods (e.g., traps, snares, shooting) to pose a danger to companion animals and non-target species, the Draft EIR fully disclosed this information and whether it resulted in a specific animal being freed or killed. The Draft EIR (page 4.1-32) stated that, for the period 1999-2018, some target and non-target animal species were unintentionally killed, but also noted some were freed. The number of individual animals unintentionally killed is low. As indicated on page 4.1-32, for target species, one bobcat, one feral dog, one river otter, and five skunks were unintentionally killed; for non-target species, five bobcats, one deer, one gray fox, and one mountain lion were unintentionally killed. Table C-13b (Target and Non-Target Unintentional Take) in Appendix C listed each animal and the method resulting in its death. In response to a specific comment made on page 18 in the comment letter speculating that a mountain lion could be caught in a trap intended for bobcat,

the mountain lion that was unintentionally killed in Shasta County was not caught using a trap or snare, as shown in Table C-13b. This table also shows which species were freed from a trap or a snare. As shown by the data, no domestic pets, companion animals, or threatened and endangered species were unintentionally killed.

Both APHIS-WS tool selection and target specific equipment used by APHIS-WS are protective of nontarget species and animals, including threatened and endangered species. In the unlikely event a nontarget species is captured (e.g., in a trap, snare, or cage), APHIS-WS is required to make efforts to release it unharmed, unless the animal is injured and the wildlife specialist has determined that it would not likely survive if released. Other than a general comment on this topic, the commenter did not raise a specific issue of concern that was not already addressed in the Draft EIR, nor were any data or analysis presented that contradicts the conclusions of the Draft EIR.

Public Safety Risks

The Draft EIR described the measures that are in place to protect people from potential hazards of lethal methods intended for wildlife. Information was presented on page 3.0-11 in Section 3.0, Project Description, under the "Public Safety Considerations" subheading, which listed specific APHIS-WS Directives concerning capture devices such as traps and snares and chemical use, among others. More detailed information was presented in Appendix B to the Draft EIR, on page B-5 under the "Direct Control Methods" subsection in the "Integrated Wildlife Damage Management Control Methods" section. the Draft EIR evaluated the potential public safety impacts associated with the use of these methods, contrary to the commenter's assertion that the EIR failed to do this. That evaluation was provided in subsection VIII (Hazards and Hazardous Materials) of the Initial Study attached to the NOP circulated for public review in October 2019. The Initial Study was included in Appendix A in the Draft EIR. As stated on page B-6 in Appendix B, APHIS-WS has prepared risk assessments on many of the methods it uses.[3] The risk assessments evaluate the impacts of IWDM methods on people (APHIS-WS employees as well as the public) and the environment. Results of the assessments are also peer-reviewed by non-federal professionals. Other than a general comment on this topic, the commenter did not raise a specific issue of concern that was not already addressed in the Draft EIR, nor were any data or analysis presented that contradicts the conclusions of the Draft EIR.

Humaneness of Lethal Methods

The remainder of this comment is directed to animal welfare, i.e., the humaneness of specific methods that are used to ultimately result in the removal of the animal by lethal means. Although the topic of Comment 1-7 refers to "lethal methods," this part of the comment focuses primarily on traps and snares to capture an individual animal, not methods that are used to euthanize the captured animal. As noted by the commenter, certain traps and snares are tools, but do not necessarily result in the animal's death.

The Draft EIR is not required to evaluate, debate, or resolve controversy concerning this topic. Nor must it evaluate the humaneness of a particular method compared to another, justify or identify specific circumstances under which a particular method may or may not be used, or examine the extent to which a particular method may result in pain or suffering of the target animal. Moreover, as provided under CEQA Guidelines Section 15204 (Focus of Review), CEQA does not

[3] Available at: https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/programs/nepa/ct-ws-risk_assessments.

require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters.

Nonetheless, to be responsive to the comment, the following is provided for informational purposes. APHIS-WS has established policies giving direction toward the achievement of the most humane IWDM programs possible (WS Directives 2.101, 2.105, and 2.201). All capture methods have advantages, disadvantages, and limitations in field applications. APHIS-WS wildlife specialists use the Decision Model (Figure 2.0-1 in the Draft EIR) to select the most humane form of control. As stated on page B-5 in Appendix B, APHIS-WS Directive 2.450, Traps and Trapping Devices (USDA 2014) sets forth the guidelines for the use of certain types of capture devices by APHIS-WS wildlife specialists. Although not explicitly stated in the Draft EIR, APHIS-WS Directive 2.450 specifically references the Association of Fish and Wildlife Agencies (AFWA) "Best Management Practices for Trapping in the United States." Best management practices (BMP) have been developed for the following species that have been or may be routinely managed in Shasta County under the IWDM program: beaver, bobcat, coyote, gray fox, red fox, muskrat, opossum, raccoon, and river otter. The Draft EIR has been revised to include information about the AFWA program and use of BMPs (see Section 4.0, Revisions to the Draft EIR, of this Final EIR).

The Draft EIR included information about traps and snares and their operational characteristics on pages B-6 and B-7. The specific device that would be used for the target animal would be based on the judgment of the APHIS-WS wildlife specialist, taking into account species-specific BMPs. This activity would occur in the field. The Draft EIR cannot speculate which method would be used for a particular situation.

Research continues to improve the selectivity and humaneness of management devices. Beyond the studies about types of snares and ethical considerations cited by the commenter, some of which are recent and some published several decades ago, in 2009 the AFWA published a reference document that assesses snare design relative to performance (e.g., live restraint versus killing potential) (AFWA 2009). More recently, the Animal Care and Use Committee of the American Society of Mammalogists published guidelines that, among many topics, provide guidance on the use of traps and snares to help minimize pain and suffering of individual animals, which updated previous work (Sikes 2016). In addition, many of the newer studies on traps and new capture techniques have been carried out by the National Wildlife Research Center, a research unit of APHIS-WS. Until new findings and products are found practical, a certain amount of animal suffering could occur when some methods are used, when current methods are not practical or effective. However, that does not mean that the EIR needs to investigate and make recommendations about which traps or snares should be used based on past or ongoing research and published recommendations, such as AFWA BMPs.

The commenter's concerns about animal welfare and opposition to operational characteristics of certain types of capture methods that may be used by APHIS-WS are noted, but they do not require resolution in the EIR because they do not raise a significant environmental issue subject to CEQA.

Response 1-8

The County acknowledges its responsibility to ensure the safety of its residents and the environment, and that activities that occur in the County comply with applicable laws and regulations. The comment is directed to the merits of the proposed project and how it would be implemented. This is a general comment that does not address the technical analysis or conclusions of the Draft EIR. The comment will be provide to the Shasta County Board of Supervisors for their consideration in conjunction with project approvals. See also Response 1-2, which addresses the process for determining if lethal methods should be used, and Response 1-10, which addresses companion animals and unintentional take of non-target species.

Response 1-9

The analysis of potential impacts on animals is based on the thresholds of significance listed on page 4.1-36 in the Draft EIR. Standard of significance 1 addresses impacts on any species identified as a candidate, sensitive, or special-status, and standard of significance 7 considers whether a project would reduce the number or restrict the range of an endangered, rare, or threatened animal species, thereby causing the species to drop below self-sustaining levels. Because the intent of CEQA is to evaluate potential physical effects on the environment, which includes animal species as a whole, the Draft EIR appropriately evaluated impacts on species' populations, which comprises individuals within each species. There are no requirements in CEQA, the CEQA Guidelines, or CEQA case law that mandate an evaluation of impacts on individual animals within a species as a result of a project or its alternatives.

Response 1-10

The Draft EIR fully disclosed unintentional take of nontarget species on page 4.1-32 in Section 4.1, Biological Resources, under the "Nontarget Unintentional Take" subheading, contrary to the commenter's assertion that the Draft EIR did not evaluate this topic.

Supporting documentation about unintentional take was provided in the second data table in Table C-13b (Shasta County Non-Target Unintentional 1999-2018) in Appendix C in the Draft EIR. As shown by the data, no domestic pets (companion animals), livestock, or threatened and endangered species were unintentionally killed as a result of activities performed by APHIS-WS under previous CSAs with Shasta County during the 20-year baseline period. In addition, none of the 15 non-target species specifically identified in the comment letter as well as those listed in footnote 81 were removed under previous CSAs. It is, therefore, reasonable to assume future activities would also not result in the unintentional killing of species that are or may be considered for protection in such large numbers that would jeopardize conservation efforts. The Draft EIR adequately disclosed data about unintentional removals, and additional analysis, as requested by the commenter, is not necessary.

Response 1-11

The Draft EIR (page 4.1-30) included information about gray wolf and stated that the species is a federal and state protected species and described its occurrence in Northern California. As explained in the Draft EIR, there are currently no known breeding packs or established territories in Shasta County. Other than conjecture, the commenter did not provide any substantial evidence that wolves are present in Shasta County such that they could be inadvertently taken through the use of foot or neck snares intended for coyotes. Nonetheless, if wolves were to become established in the County, as stated on page 4.1-30 in the Draft EIR, conflicts would be managed through nonlethal controls. Further, as noted in the Draft EIR (page 4.1-31), U.S. Fish and

Wildlife Service (USFWS) has reviewed APHIS-WS actions concerning gray wolf, the consultation results of which are shown in Table C-15 in Appendix C in the Draft EIR. USFWS has concurred that the wildlife damage management activities it performs are not likely to adversely affect gray wolf, even if snares intended for coyotes are used. In the unlikely event a gray wolf is caught in a snare, APHIS-WS would be required to consult with USFWS for direction. No additional analysis of potential impacts on gray wolf to be inadvertently captured in snares, as requested by the commenter, is necessary.

The potential for Sierra Nevada red fox (SNRF), a state-listed threatened species, to be inadvertently caught in a snare intended for coyote is highly unlikely. The geographic range of SNRF in Shasta County is limited to high elevations, where there is neither grazing land nor populated areas where coyotes are managed for coyote-livestock or human-coyote conflicts. As shown in Table C-13a (Shasta County Target Species Dispersed and Freed) and Table C-13b (Shasta County Unintentional 1999-2018), no SNRF has been inadvertently caught or unintentionally taken in the County or statewide. The data provided in those tables is reported by APHIS-WS, and the commenter did not provide any substantial evidence to the contrary. No additional analysis of potential impacts on SNRF, as requested by the commenter, is necessary.

See Response 1-12 for the County's detailed response concerning tricolored blackbirds. Activities under the CSA have not resulted in unintentional take of tricolored blackbirds, as shown by the data in Draft EIR Table C-13a (Target Species Dispersed and Freed) and Table C-13b (Shasta County Unintentional 1999-2018).

Response 1-12

The Draft EIR included information and analysis of potential impacts on tricolored blackbirds (page 4.1-31 and 4.1-47, respectively). The data about observations of tricolored blackbirds in Shasta County presented in the Draft EIR was based on a report prepared by USFWS published in 2019, which evaluated data the agency had collected through 2017. The Draft EIR cited the report and included bibliographic information in Section 7.0, References. The Draft EIR correctly reported the data about tricolored blackbird observations that were made during the most recent statewide survey, which occurred in early April 2017, as well as data from prior triennial surveys.

The County has considered the commenter's reference to an article in the Redding Searchlight about the sighting of ten thousand-plus tricolored blackbirds in late April 2017, as reported by the Wintu Audubon Society (comment letter footnote 89). As noted in the article, the sighting occurred shortly after the most recent statewide USFWS triennial survey was performed in early April 2017. In response to this comment, the County obtained and reviewed raw data about tricolored blackbird sightings in Shasta County from the Cornell Lab of Ornithology (eBird.org), which compiles data provided to it from the public, including the Wintu Audubon Society. These data include the frequency of bird observations, abundance, the number of birds per hour, high count, totals, and average count. Based on that data, the ten thousand-bird sighting appears to be a one-time-only occurrence since at least 2008, which is the earliest reporting year presented in the 2017 triennial survey.

As recorded in the eBird.org database (Cornell Lab of Ornithology 2020), which is separate and independent of the USFWS triennial surveys, the following are the highest total number of birds counted for a specific week (which varied by year) for each year from 2008 through 2020: no data in 2008; 50 in 2009; 55 in 2010; 25 in 2011; 50 in 2012; 200 in 2013; 30 in 2014; 306in 2015; 400 in 2016; 10,004 in 2017; 50 in 2018 ; 275 in 2019; and 200 in 2020. While there is variation in the counts between years, the number of birds each year is well under the 2008 USFWS triennial survey count of 1,030 birds, with the exception of the 2017 count reported by the public to eBird.org. Therefore,

the Draft EIR's description of tricolored blackbird population was representative of best available information that reflects observation data over time and is not contradicted by eBird.org data. However, for completeness, the Draft EIR has been revised (see Section 4.0, Revisions to the Draft EIR, of this Final EIR) to include additional data about the Wintu Audubon Society's one-time observation as well as data from eBird.org, as described above. The addition of this information does not change the conclusions of the impact analysis for tricolored blackbirds.

The commenter states that 60,820 Brewer's, red-winged, and yellow-headed blackbirds and European starlings were killed between 2007 and 2018 primarily by shooting into flocks, and references Appendix B in the Draft EIR. As shown in the data in Draft EIR Appendix B (Shasta County Methods 2007-2018, pdf pages 25 and 26), there were 173 Brewer's blackbirds, 53,393 red-winged blackbirds, and 744 yellow-headed blackbirds, for a total of 54,310 blackbirds, killed by firearms. Only 12 European starlings, which are not a protected species under the California Endangered Species Act (CESA) or under the Migratory Bird Treaty Act, were killed by firearms. As shown by the data in Appendix B, no mixed flocks that would have had the potential to contain tricolored blackbird were killed. In addition, activities under the CSA have not resulted in unintentional take of tricolored blackbird, as shown by the data in Draft EIR Table C-13a (Target Species Dispersed and Freed) and Table C-13b (Shasta County Unintentional 1999-2018). For the period 2007-2018, over 99 percent of the total number of birds dispersed using nonlethal methods were blackbirds (Draft EIR, page 4.1-26). It is reasonable to assume some tricolored blackbirds may have been present in those flocks.

The commenter is correct that the California Fish and Game Commission designated tricolored blackbird as threatened in 2018. However, the efforts to list the species as threatened under the CESA began earlier than 2018. In 2015, the California Fish and Game Commission began to consider formal petitions for listing, which occurred after informal discussions between various state and federal agencies in 2014. The Draft EIR has been revised to clarify the timeline for listing of tricolored blackbird. See Section 4.0, Revisions to the Draft EIR, of this Final EIR. This clarification does not affect the conclusions of the impact analysis.

For the reasons explained above, the Draft EIR's analysis of potential impacts on tricolored blackbird is accurate and relies upon substantial evidence to conclude that impacts would be less than significant. Other than speculation, the commenter did not provide any substantial evidence that APHIS-WS activities would result in adverse impacts on tricolored blackbird. No additional analysis, as requested by the commenter, is necessary.

Response 1-13

The Draft EIR adequately described information about the benefits of beaver activity on aquatic species, contrary to the commenter's assertion that the Draft EIR failed to do so. This information was presented in the Draft EIR on page 4.1-12, which stated "American beaver has a profound effect on its habitat. Its construction of dams and lodges can affect the composition of plant and animal species, change the water table, create meadows and ponds, and cause indirect effects on other wildlife species. American beaver has some positive effects on other species and their habitat. Beaver dams assist in increasing surface water storage, replenishing alluvial aquifers, removing contaminants from water flow, adding complexity to habitats (such as variations in temperatures, depths, and velocities of beaver ponds), creating and/or expanding wetlands, and increasing potential habitat for many species. These changes can increase and enhance habitat for salmonids, among other species." As also noted on page 4.1-46, "American beaver activity may have a beneficial effect on salmonid habitat and populations by increasing and enhancing wetland habitats." This information is consistent with that provided in the comment.

The commenter's assertion that the Draft EIR did not evaluate impacts of beaver removals on listed salmonids and sturgeon is also incorrect. The impact of beaver removals on salmonids and sturgeon was evaluated in Impact 4.1.2 on page 4.1-46 in the Draft EIR under the "NMFS-Listed Salmonid and Sturgeon" subheading.

The impact analysis explained, "APHIS-WS is not allowed to modify sensitive habitat such as that supporting salmonids, which includes removal of beaver dams that may or may not have a localized effect on salmonids. American beaver is removed in Shasta County to control damage to levees, drainage conveyances, and irrigation systems, but these features are not typically located in preferred beaver or salmonid habitat." The analysis also summarized the results of ongoing coordination between APHIS-WS and the National Oceanic and Atmospheric Administration – National Marine Fisheries Service (NOAA-NMFS) regarding aquatic mammal damage management, which includes beaver. As stated in the Draft EIR, APHIS-WS operates within the limitations of an Endangered Species Act (ESA) Section 7(d) Determination that addresses aquatic mammal damage management. During the pendency of its consultation with NOAA-NMFS, APHIS-WS has ceased several aquatic mammal damage management activities in the state that have the potential to affect water abundance or habitat character at fish-rearing sites within ESA-listed salmonid habitat (i.e., designated critical habitat or other habitat occupied by the listed salmonids and sturgeon), and thus would apply to Shasta County. Based on its analysis, as reported in the Draft EIR, APHIS-WS-California staff concluded that managing aquatic mammal damage caused by beaver in accordance with the federal ESA Section 7(d) Determination would not "make an irreversible or irretrievable commitment of resources that have the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures for the protection of listed salmonids, sturgeon, and eulachon, or their critical habitats" (Draft EIR page 4.1-46).

It should also be noted that the number of beavers removed in Shasta County over the 20-year baseline period is not substantial. Between 1999 and 2018, which covers the period of previous CSAs, only 235 beavers were removed, for an average of 12 per year (Draft EIR page 4.1-15 and Table C-3 [American Beaver Population and Take Data] in Appendix C), or approximately one per month. The County beaver population is conservative estimated to range from 1,800 to 23,000, as noted on page 4.1-15. Thus, the number of removals relative to population is approximately 1 percent, and even with the highest historic take (32) in one year represents only approximately 2 percent of the low population. As shown in Table C-3 and as explained in the Draft EIR (page 4.1-15), APHIS-WS activities in the County have not had an adverse effect on beaver population, and it is reasonable to assume the number of beavers removed on an annual basis with implementation of the CSA would be similar to historical removals because no changes are proposed to the CSA (Draft EIR page 4.1-40).

Neither the number of beavers removed nor where they would be removed would be expected to adversely affect salmonid and sturgeon. The Draft EIR concluded the impact would be less than significant. The commenter did not provide any substantial evidence contradicting the results of the Section 7(d) Determination or the conclusion in the Draft EIR.

Potential impacts on the other listed fish species mentioned in the comment (rough sculpin and bull trout) would also not be significant because, as with salmonid and sturgeon impacts, there would be no activities that would modify these species' habitats that are necessary for cover, feeding, or reproduction, and the number of beavers removed on an annual basis, as explained above, is not substantial.

The six amphibian and one bird species mentioned in the comment primarily occur in aquatic and adjacent riparian habitats that are in their natural state and are less likely to occur in human-altered environments where the activities by APHIS-WS for beaver control are performed. As described in Impact 4.1.2 (Draft EIR page 4.1-46) and Impact 4.1.3 (Draft EIR page 4.1-48), APHIS-WS is not allowed to modify sensitive habitats that support protected species, nor does it make that recommendation to resource owners or managers.

APHIS-WS has completed USFWS consultations for California red-legged frog, foothill yellow-legged frog, and Sierra Nevada yellow-legged frog. The results of those consultations are presented in Table C-15 in Appendix C in the Draft EIR. USFWS has concurred that the APHIS-WS activities would have no effect or would not be likely to affect these species. The efforts to protect salmonid and sturgeon, as explained in the Draft EIR and summarized above, including the very low number of beavers that might be removed on an average annual or monthly basis, would be equally protective of the amphibian and bird species listed in the comment as well as others that may be present in aquatic and/or riparian habitats. In the rare case that a beaver may need to be removed in a location such as a bridge crossing or similar feature over or near a natural waterway where beaver activity damage poses a public safety problem, work would be confined to a small area in close proximity to the feature, not the entire length of the waterway. As such, the potential for inadvertently taking a listed amphibian or bird species is remote.

Response 1-14

The proposed project would not result in adverse impacts on migratory waterfowl as a result of beaver removals. The commenter's assertion that the removal of beavers in Shasta County could harm migratory waterfowl such as Canada geese and mallards, which therefore should be analyzed in the EIR, relies on examples about beaver ponds in the northeastern U.S. and Finland. This is not pertinent to the analysis of impacts of IWDM program activities in Shasta County for the reasons explained in the following paragraphs.

In California, Canada goose preferred habitat include lacustrine and fresh emergent wetlands, as well as moist grasslands, croplands, pasture, and meadows. Mallard is California's most abundant breeding duck and is found year-round in fresh emergent wetlands, lacustrine and riverine habitats, ponds, pastures, croplands, and urban parks. Wood duck, green-winged teal, and goldeneye, also mentioned by the commenter, also occur in the County, although the range and seasonal presence of green-winged teal and goldeneye, in particular, are not as great as wood duck. In California, habitat for each varies by species but includes lacustrine and slow-moving riverine habitats with bordering aquatic or riparian habitat (depending on species), nearby grasslands, wet meadows, wet croplands, and pastures (Zeiner et al. 1990).

As described in Impact 4.1.2 (Draft EIR page 4.1-46) and Impact 4.1.3 (Draft EIR page 4.1-48), APHIS-WS is not allowed to modify sensitive habitats that support protected species, nor does it make that recommendation to resource owners or managers. This would include fresh emergent wetlands, lacustrine, riverine, and pond environments. Where beavers are removed in Shasta County to control damage to levees, drainage conveyances, and irrigation systems, those features are not typically located in preferred beaver habitat where beaver activity may have created ponds that could attract and support migratory waterfowl.

As noted in Response 1-13, in the rare case that a beaver may need to be removed near a natural waterway, work would be confined to a small area in close proximity to the feature, not the entire length of the waterway. This would have a temporary and negligible, if any, effect on riverine habitat that could support waterfowl. Finally, as also explained in Response 1-13, only 235 beavers were removed over the 20-year baseline period, for an average of 12 per year (Draft EIR page

4.1-15 and Table C-3 [American Beaver Population and Take Data] in Appendix C), or approximately one per month. As a result, the potential for beaver removals to alter migratory waterfowl habitat is little to nonexistent.

Response 1-15

The EIR addressed the County's responsibilities under the MBTA and evaluated impacts on birds protected under the MBTA. The regulatory context was explained on page 4.1-32 in the Draft EIR under the "Migratory Bird Treaty Act of 1918 (MBTA)" subheading. As explained on page 4.1-26, of the avian species removed under previous CSAs, only blackbirds, coot, cowbird, and sapsucker are protected under the MBTA. Potential impacts on avian species were evaluated on page 4.1-44 in the Draft EIR. As stated therein, APHIS-WS would continue to use nonlethal deterrent methods for bird control in the County to ensure that nests and eggs of birds protected under the MBTA would not be affected. The Draft EIR concluded impacts would be less than significant.

This is a general comment that does not specify which of the hundreds of MBTA-protected birds are of interest as it relates to beaver removals. As explained in Response 1-13 and Response 1-14, the number of beaver removals is minimal; removals are typically limited to areas that are not preferred habitat for beavers; and APHIS-WS is not allowed to modify habitat that might support protected species, which would include birds protected under the MBTA. The commenter's assertion that beavers could result in habitat loss, disturbance, and displacement or abandonment of important nesting, feeding, molting, or staging areas is a general comment and does not provide any data or technical analysis comprising substantial evidence that should be further considered. No additional response is required.

4.0 REVISIONS TO THE DRAFT EIR

4.1 INTRODUCTION

This section presents minor corrections and revisions made to the Draft EIR initiated by County staff and/or the consultant based on their ongoing review. Revisions herein do not result in new significant environmental impacts, do not constitute significant new information, and do not alter the conclusions of the environmental analysis. New text is indicated in underline, and text to be deleted is reflected by a strikethrough unless otherwise noted in the introduction preceding the text change. Text changes are presented in the page order in which they appear in the Draft EIR.

4.2 REVISIONS TO THE DRAFT EIR

SECTION ES.7 (EXECUTIVE SUMMARY: AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED)

Page ES-8

The first paragraph is revised as follows:

> A common, key issue of concern to the public and various organizations at the local and national level is whether lethal controls should be used for wildlife damage management and/or whether APHIS-WS should have contracts with counties to implement activities that would remove wildlife by lethal methods. Another topic of concern is humanness of methods used to capture animals and animal suffering. These are controversial topics subject to much debate and varying opinions, and in some cases litigation, but they are not CEQA issues and, therefore, do not require resolution in the Draft EIR. The Draft EIR does, however, and in accordance with CEQA, evaluate what the potential environmental impacts might be on wildlife species that are removed by lethal methods.

SECTION 2.0 (PROJECT BACKGROUND)

Page 2.0-6

The last paragraph under "Environmental Review of APHIS-WS Activities in California" is revised as follows to indicate the status of the joint environmental impact statement/environmental impact report as of March 2021:

> In 2018, APHIS-WS entered into an MOU with the CDFA to prepare a joint environmental impact report ~~statement~~/environmental impact statement ~~report~~ (EIR/EIS) pursuant to CEQA and the National Environmental Policy Act (NEPA) ~~and CEQA~~ that will address APHIS-WS IWDM activities at the statewide level. The CEQA Notice of Preparation (NOP) prepared by CDFA and the NEPA Notice of Intent (NOI) prepared by APHIS-WS were released for public review on September 10, 2020, for a 60-day period ending November 10, 2020 (CDFA 2020a; USDA 2020). As of ~~August 2020~~ March 2021, the ~~joint~~ draft EIR/EIS ~~document~~ has not been completed. The draft EIR/EIS is expected to be circulated for public and agency review in early 2022 (CDFA 2020b).

SECTION 4.1 (BIOLOGICAL RESOURCES)

Page 4.1-31

The fourth sentence of the first paragraph under the "Tricolored Blackbird" subheading and footnote 9 are revised as follows to report additional data about tricolored bird observations in

Shasta County. The addition of this information does not change the conclusions of the impact analysis for tricolored blackbird.

> Surveys conducted in 2017 by the USFWS as part of its triennial program for monitoring tricolored blackbird populations indicated the statewide population is over approximately 177,000 (USFWS 2019: p. 34). In the "Northeast Interior" region of the survey, there were no tricolored blackbirds observed in Shasta County during the official triennial survey in 2017, but some were reported in the 2008 survey (1,030 birds) and in the 2014 survey (250 birds).[9] The 2017 survey was conducted in early April 2017. According to an article in the *Redding Searchlight* published in May 2017, an individual associated with the Wintu Audubon Society stated that ten thousand-plus tricolored blackbirds had been observed about two weeks after the official survey (Greaney 2017). Based on data provided to the Cornell Lab of Ornithology (eBird.org) by the public, which includes the observation reported in the newspaper article, this large number appears to be a one-time occurrence. The following are the highest total number of birds counted for a specific week (which varied by year) for each year from 2008 through 2020, as reported at eBird.org (Cornell Lab of Ornithology 2020), which is separate and independent of the USFWS triennial surveys: no data in 2008; 50 in 2009; 55 in 2010; 25 in 2011; 50 in 2012; 200 in 2013; 30 in 2014; 36 in 2015; 400 in 2016; 10,004 in 2017; 50 in 2018 ; 275 in 2019; and 200 in 2020. As shown, while there is variation in the counts between years, the number of birds each year is well under the 2008 USFWS triennial survey count, with the exception of 2017.
>
> [9] For purposes of the USFWS study and reporting, the Northeast Interior region consisted of Lassen, Modoc, Shasta, and Siskiyou Counties. There was no triennial survey in Shasta County in 2008 (USFWS 2019).

The third sentence of the last paragraph under the "Tricolored Blackbird" subheading is revised as follows to correct information about the state listing of tricolored blackbird. The species was designated by the California Fish and Game Commission in 2018 as a threatened species under the California Endangered Species Act.

> No mixed flocks that have the potential to contain tricolored blackbird have been removed or dispersed statewide since ~~2014~~ 2015 when tricolored blackbird was first considered for potential listing by the California Fish and Game Commission as a protected species in the state ~~listed~~, and APHIS-WS activities in Shasta County have not resulted in take of tricolored blackbird, specifically.

Page 4.1-47

The second paragraph under the "Tricolored Blackbird" subheading is revised as follows to correct information about the state listing of tricolored blackbird:

> In order to avoid any take of tricolored blackbirds, APHIS-WS does not use any potentially lethal actions in mixed flocks. No mixed flocks that have the potential to contain tricolored blackbird have been removed or dispersed statewide since ~~2014~~ 2015 when tricolored blackbird was first considered for potential listing by the California Fish and Game Commission as a protected species in the state ~~listed~~.

Page 4.1-56

The first paragraph regarding the joint environmental impact statement/environmental impact report is revised as follows:

> To date, no statewide CEQA analysis has been prepared for wildlife damage management carried out by various government partners throughout the state. In 2018, APHIS-WS entered into a Memorandum of Understanding (MOU) with the California Department of Food and Agriculture (CDFA) to prepare a joint environmental impact report ~~statement~~/environmental impact statement ~~report~~ pursuant to CEQA and the National Environmental Policy Act (NEPA) ~~and CEQA~~ that will address APHIS-WS, CDFA, and County activities at the statewide level. The CEQA NOP prepared by CDFA and the NEPA NOI prepared by APHIS-WS were released for public review on September 10, 2020, for a 60-day period ending November 10, 2020 (CDFA 2020a; USDA 2020). As of ~~August 2020~~ March 2021, the ~~joint~~ draft EIR/EIS ~~document~~ has not been completed. The draft EIR/EIS is expected to be circulated for public and agency review in early 2022 (CDFA 2020b).

Page 4.1-59

The second sentence under the "Tricolored Blackbird" subheading is revised as follows:

> Although blackbirds were removed (Table 4.1-4), no mixed flocks that have the potential to contain tricolored blackbird have been removed or dispersed statewide since ~~2014~~ 2015 when tricolored blackbird was first considered by the California Fish and Game Commission for potential listing as a protected species in the state ~~listed~~.

SECTION 7.0 (REFERENCES)

The following bibliographic citations are added to the references:

> CDFA (California Department of Food and Agriculture). 2020a. Notice of Preparation of the California Wildlife Damage Management Environmental Impact Report and Environmental Impact Statement. September 10, 2020.
>
> ———. 2020b. Wildlife Damage Management EIR/EIS Public Scoping Meeting Presentation October 27, 2020. https://californiawdm.org/wp-content/uploads/documents/2020.10.23_WDM_PPT_acc.pdf
>
> Cornell Lab of Ornithology. N.d. eBird database. Search criteria: Shasta County, tricolored blackbird. https://ebird.org/barchart?r=US-CA-089&bmo=1&emo=12&byr=1900&eyr=2020&spp=tribla.
>
> USDA (US Department of Agriculture). 2020. Animal and Plant Health Inspection Service. Notice of Intent to Prepare a Joint Environmental Impact Report and Environmental Impact Statement for Wildlife Damage Management in California. *Federal Register Vol. 85, No. 176*. September 10, 2020. Docket No. APHIS-2020-0081.

APPENDIX B (PROJECT BACKGROUND SUPPORTING DOCUMENTATION)

Integrated Wildlife Damage Management Control Methods Section

Page B-5

The following text is added to the second paragraph under the "Physical Capture and Control Methods Overview" subsection:

> APHIS-WS Directive 2.450 (USDA 2014) sets forth the guidelines for the use of certain types of capture devices by APHIS-WS wildlife specialists. This directive references the Association of Fish and Wildlife Agencies (AFWA) Furbearer Management Best Management Practices (BMPs) Program. The trapping BMPs comprise researched recommendations designed to ensure animals are humanely captured. There are currently 22 BMPs, which are routinely updated (AFWA 2019). BMPs have been developed for the following species that have been or may be routinely managed in Shasta County under the IWDM program: beaver, bobcat, coyote, gray fox, red fox, muskrat, opossum, raccoon, and river otter. Policy 4 of Directive 2.450 directs that the use of all traps, snares (cable device), and other capture devices must comply with applicable federal, state, and local laws and regulations; traps and trapping devices are not to be used unless appropriate authorization is granted by the landowner or designee; and all exceptions must be authorized by the director. Trapping regulations for California are specified in 14 CCR Section 465.5, and County-funded APHIS-WS activities in the County must adhere to those regulations.

Page B-10

The following reference is added to correspond to the revision on page B-5.

> AFWA (Association of Fish and Wildlife Agencies). 2019. Furbearer Management and Best Management Practices for Trapping. https://www.fishwildlife.org/afwa-inspires/furbearer-management

APPENDIX C

Table C-8 (Mountain Lion Population and Take Data)

Note #6 under the "APHIS-WS Annual Take" table on page C-8-1 is revised to correct a typographical error in the reference.

Notes:
1. 1999-2006 data from: USDA (2019c)
2. 2007-2018 data from: USDA (2019b)
3. Calculated from CDFW BIOS dataset CWHR M165 [ds2616] (CDFW 2016) (see Table C-1)
4. Beausoleil (2013). See Draft EIR Section 4.1, Biological Resources, for additional information.
5. Approximate. See Draft EIR Section 4.1, Biological Resources for additional information.
6. ~~Dellinger (2019)~~ Dellinger and Torres (2020). See Draft EIR Section 4.1, Biological Resources, for additional information.

5.0 REFERENCES

These reference materials are available for review upon request. To request or review these items, please contact the Shasta County Department of Agriculture/Weights and Measures, 3179 Bechelli Lane, Suite 210, Redding, CA 96002, (530) 224-4949.

AFWA (Association of Fish and Wildlife Agencies). 2009. *Modern Snares for Capturing Mammals: Definitions, Mechanical Attributes, and Use Considerations*.

———. 2019. Furbearer Management and Best Management Practices for Trapping. https://www.fishwildlife.org/afwa-inspires/furbearer-management

CDFA (California Department of Food and Agriculture). 2020a. Notice of Preparation of the California Wildlife Damage Management Environmental Impact Report and Environmental Impact Statement. September 10, 2020.

———. 2020b. Wildlife Damage Management EIR/EIS Public Scoping Meeting Presentation October 27, 2020. https://californiawdm.org/wp-content/uploads/documents/2020.10.23_WDM_PPT_acc.pdf

CDFG (California Department of Fish and Game). 2004. Draft Environmental Document, Sections 265, 460–467, and 472–480, Title 14, California Code of Regulations Regarding Furbearing and Nongame Mammal Hunting and Trapping.

Cornell Lab of Ornithology. 2020. eBird database. Search criteria: Shasta County, tricolored blackbird. https://ebird.org/barchart?byr=2008&eyr=2020&bmo=1&emo=12&r=US-CA-089&spp=tribla

Sikes, Robert S. 2016. "2016 Guidelines of the American Society of Mammologists for the Use of Wild Mammals in Research and Education." *Journal of Mammalogy*, 97(3):663-688.

USDA (US Department of Agriculture). 2005. Animal and Plant Health Inspection Service – California Wildlife Services Program. Pre-Decisional Environmental Assessment, Mammal Damage Management for the Protection of Human Health & Safety, Property, Agricultural Resources and Natural Resources in California.

———. 2015. Animal and Plant Health Inspection Service – California Wildlife Services Program. Pre-Decision Environmental Assessment, Mammal Damage Management in California APHIS-WS' North District.

———. 2020. Animal and Plant Health Inspection Service. Notice of Intent to Prepare a Joint Environmental Impact Report and Environmental Impact Statement for Wildlife Damage Management in California. *Federal Register Vol. 85, No. 176*. September 10, 2020. Docket No. APHIS-2020-0081.

Zeiner, David C., William F. Laudenslayer, Kenneth E. Mayer, and Marshall White, eds. 1990. *California's Wildlife*. Volume II: Birds. Life History Accounts. B05 (Canada goose), B079 (mallard), B076 (wood duck), B077 (green-winged teal). https://wildlife.ca.gov/Data/CWHR/Life-History-and-Range

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APPENDICES

APPENDIX A – ATTACHMENTS TO ALDF COMMENT LETTER (LETTER 1)

Letter 1 Attachment A

APHIS-WS Agreement Number: 18-73-06-0254-RA
APHIS-WS Account Number (WBS): AP.RA.RX06.73.0123

AMENDMENT 1
to the
COOPERATIVE SERVICE AGREEMENT (CSA)
between
HUMBOLDT COUNTY (COOPERATOR)
and
UNITED STATES DEPARTMENT OF AGRICULTURE (USDA)
ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS)
WILDLIFE SERVICES (WS)

Under the provisions of Article 9, Humboldt County and USDA-APHIS-WS hereby mutually agree to Amend the Cooperative Service Agreement 18-73-06-0254-RA signed by Ryan Sundberg, Chair of the Board of Supervisors – Humboldt County on August 21, 2018 and Dennis Orthmeyer, California State Director USDA APHI WS on August 31, 2018.

The following Articles are hereby amended:

ARTICLE 5 – APHIS-WS RESPONSIBILITIES

To Include:

G. USDA-APHIS-WS agrees to the following additional terms:

   a. Within three days of take by neck snare, report such take in writing to the Agricultural Commissioner with a description of the circumstances warranting use of the neck snare and species taken;

   b. No intentional lethal take of beavers by any method;

   c. No beaver debris management within designated Critical Habitat of Chinook salmon, Coho salmon, and steelhead, including beaver dam removal, except where it constitutes an obstruction to fish passage; and

H. USDA-APHIS-WS will provide the following to the County with a biannual report summarizing:

   a. Urban or suburban property protection incidents, including:

      i. Number of conflicts reported, type of resources damaged, type of non-lethal measures employed, any lethal actions taken, and the time between employing non-lethal and lethal actions.

      ii. Number and circumstances surrounding its activities undertaken for health and human safety, as required by the Stipulated Settlement Agreement referenced above.

   b. Integrated Wildlife Damage Management actions taken in protection of other resources:

      i. The number of technical assistance contacts by species and resource in conflict.

      ii. Target take by species, method, and resource in conflict.

   c. Any nontarget take and/or take in violation of this amendment.

I. Definitions

a. "Urban or Suburban" means the areas of Humboldt County defined in the maps attached herein as Exhibit A.

b. "Body gripping traps" means a trap that grips the mammal's body or body part, including, but not limited to, steel-jawed leghold traps, padded-jaw leghold traps, conibear traps, and snares. Cage and box traps, nets, suitcase-type live beaver traps, and common rat and mouse traps shall not be considered body-gripping trap.

c. "Immediate risk to human health or safety" means any of the following: 1) wildlife that exhibits one or more aggressive behaviors directed toward a person that is not reasonably believed to be due to the presence of responders; 2) wildlife that risks spreading zoonotic disease; or 3) wildlife that poses risk to aircraft at County airports.

d. "Reasonable time" could range from days to weeks depending on which non-lethal methods are employed, but in no case would lethal control be conducted sooner than 48 hours after implementation of the non-lethal measures.

ARTICLE 9 – APPLICABLE REGULATIONS

To Include:

1. Except as necessary to address an immediate risk to human health or safety, or wildlife for which the California Department of Fish and Wildlife has already evaluated the conflict and issued a depredation permit, USDA-APHIS-WS shall not conduct any lethal control of wildlife in urban or suburban areas of the County until all feasible non-lethal mitigation measures to address the conflict are exhausted. In urban or suburban areas, as defined herein, the USDA-APHIS-WS specialist will evaluate the conflict location and make suggestions to the cooperator for non-lethal resolution of the conflict. The USDA-APHIS-WS specialist will document the Cooperator-employed non-lethal damage management methods that must be taken prior to the implementation of lethal control measures. Only after the USDA-APHIS-WS specialist confirms on a subsequent visit that the non-lethal mitigation measures have been implemented for a reasonable time can lethal control be conducted, and only in response to another incident of the wildlife conflict. This paragraph and its restrictions shall not apply to properties in urban or suburban areas on which the property owner or operator engages in the production of agricultural commodities for commercial purposes.
2. In implementing the CSA in the County, USDA-APHIS-WS agrees to comply with the terms of paragraph 2(b) of the Stipulated Settlement dated October 30, 2017 (*Center for Biological Diversity et al.* v. *USDA APHIS Wildlife Services et al.*, No. 3:17-cv-3564-WHA), see Exhibit B. Specifically:
    a. No use of EPA-labeled pesticides targeting mammalian species, including anticoagulant rodenticides, den fumigants, sodium cyanide (M-44) and sodium fluoroacetate (Compound 1080);
    b. No use of lead ammunition, except when dispatching animals for which carcasses will be retrieved from the environment;

c. No use of body-gripping traps or aerial operations in Wilderness Areas and Wilderness Study Areas;

d. Abide by the recommended gray wolf mitigation measures provided in the April 15, 2014, concurrence letter by the U.S. Fish & Wildlife Service.

ARTICLE 11 – EFFECTIVE DATE

This Amendment shall become effective upon approval by the Cooperator's Board of Supervisors and execution by all parties. The date of final signature and shall continue until June 30, 2023. This agreement may be amended at any time by mutual agreement of the parties in writing. It may be terminated by either party upon 90 days written notice to the other party. Further, in the event the Cooperator does not for any reason reimburse expended funds, WS is relieved of the obligation to continue any operations under this agreement.

It is further understood by and between the parties that in all other respects, the terms, conditions, and provisions of Cooperative Service Agreement 18-73-06-0254-RA remain in full force and effect. In the even of a conflict between the body of the CSA and this Amendment, the terms of this Amendment shall control.

AUTHORIZATION:
County of Humboldt
5630 S Broadway
Eureka, CA 95503-6905
Tax Identification Number: 94-6000513

Estelle K Fennell — 5/5/2020

County Representative — Date

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
WILDLIFE SERVICES
3419A Arden Way
Sacramento, CA 95825
Tax Identification Number: 41-0696271

State Director, State — Date

Director, Western Region — Date

EXHIBIT A

Letter 1 Attachment A (continued)

ArcGIS Web Map

Humboldt County Planning and Building Department

0 700 1,400 2,800 Feet

0 0.125 0.25 0.5 Miles

RF= 1:18,056 1 in = 1,505 ft

N W E S

Printed: January 31, 2020 Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:

While every effort has been made to assure the accuracy of this information, it should be understood that it does not have the force & effect of law, rule, or regulation. Should any difference or error occur, the law will take precedence.

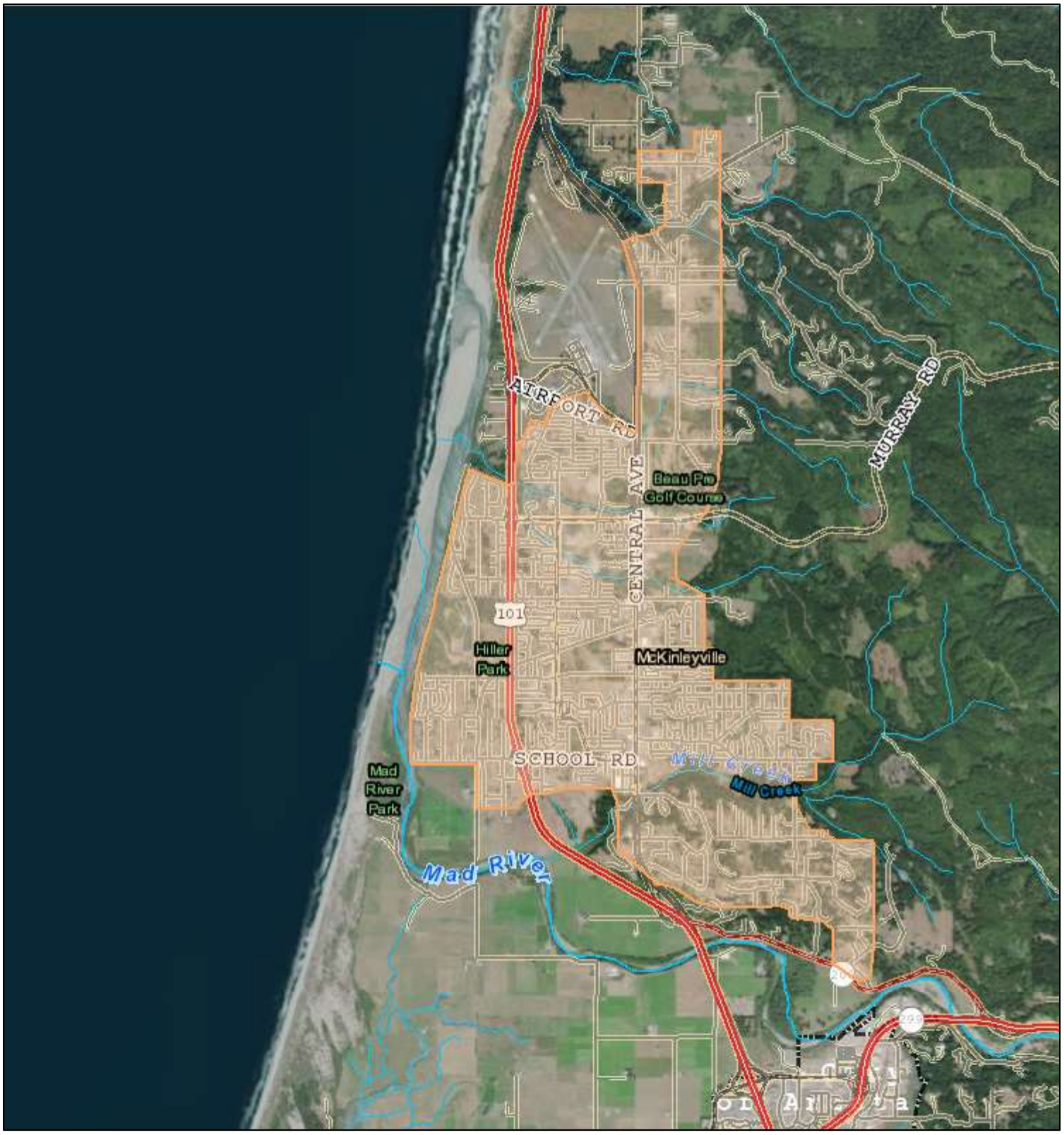
Source: Humboldt County GIS, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

City Boundary

City Boundary (750K)

Counties

Letter 1 Attachment A (continued)



Wildlife Svcs- Mckinleyville - Full Map

Humboldt County Planning and Building Department

0 2,750 5,500 11,000 Feet

0 0.5 1 2 Miles

RF= 1:72,224 1 in = 6,019 ft

N W E S

Highways and Roads

- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified
- Major River or Stream

Blue Line Streams

- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface
- City Boundary
- City Boundary (750K)
- Counties

Printed: January 28, 2020 Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
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Letter 1 Attachment A (continued)

Wildlife Svcs- Mckinleyville

Humboldt County Planning and Building Department

0 700 1,400 2,800 Feet

0 0.125 0.25 0.5 Miles

RF= 1:18,056 1 in = 1,505 ft

N W E S

Highways and Roads

- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified
- Major River or Stream

Blue Line Streams

- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface
- City Boundary
- City Boundary (750K)
- Counties

Printed: January 28, 2020 Web AppBuilder 2.0 for ArcGIS

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Letter 1 Attachment A (continued)

Wildlife Svcs- Mckinleyville - Central

Humboldt County Planning and Building Department

0 1,350 2,700 5,400 Feet

0 0.25 0.5 1 Miles

RF= 1:35,000 1 in = 2,917 ft

N W E S

Highways and Roads
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified

Blue Line Streams
- Major River or Stream
- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface

- City Boundary
- City Boundary (750K)
- Counties

Printed: January 28, 2020 Web AppBuilder 2.0 for ArcGIS

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Letter 1 Attachment A (continued)

Wildlife Svcs- Mckinleyville - South

Humboldt County Planning and Building Department

Highways and Roads

- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified
- Major River or Stream

Blue Line Streams

- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface
- City Boundary
- City Boundary (750K)
- Counties

0 1,350 2,700 5,400 Feet

0 0.25 0.5 1 Miles

RF= 1:35,000 1 in = 2,917 ft

N W E S

Printed: January 28, 2020 Web AppBuilder 2.0 for ArcGIS

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Letter 1 Attachment A (continued)

Wildlife Svcs- Willow Creek

Humboldt County Planning and Building Department

0 387.5 775 1,550 Feet

0 0.05 0.1 0.2 Miles

RF= 1:10,000 1 in = 833 ft

N W E S

Printed: January 28, 2020 Web AppBuilder 2.0 for ArcGIS

Highways and Roads
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified
- Major River or Stream

Blue Line Streams
- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface
- City Boundary
- Counties

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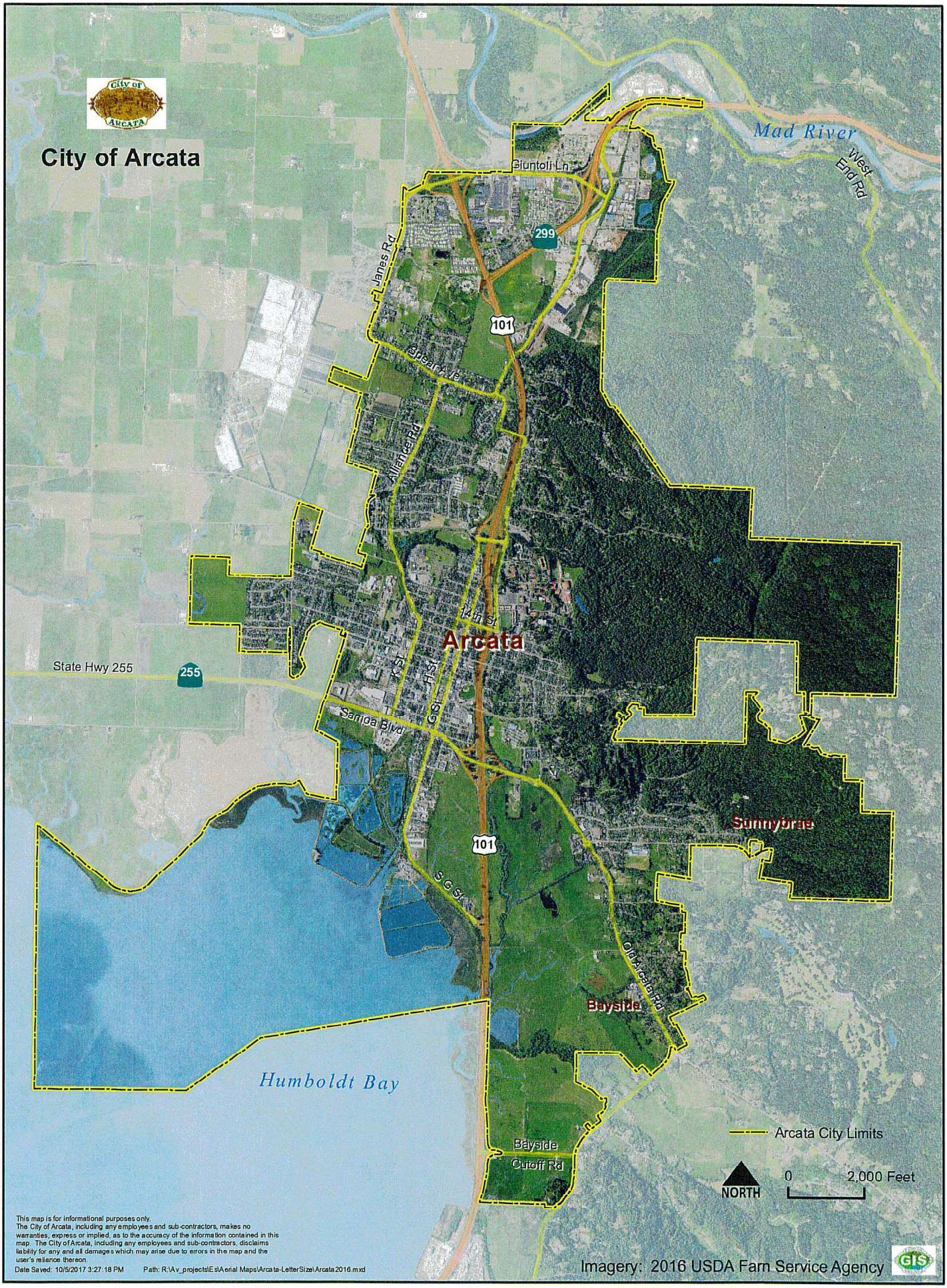
Humboldt County Web GIS
Planning & Building Department
Layer List
Operational Layers
Critical Facilities, Roads and Streams
Jurisdiction Boundaries & Land Use
City of Blue Lake
Blue Lake Rancheria
Blue Lake
Ferrigot Park
Powers Creek
Mad River
Palmer Creek
Historic Layers
Background Layers
Humboldt County Parcels (7.4)
Hazards
Natural Resources
Demographics, Economics, and Mobility

Letter 1 Attachment A (continued)



Letter 1 Attachment A (continued)

Greater Eureka Area

Humboldt County Planning and Building Department

Highways and Roads

- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified
- Major River or Stream

Blue Line Streams

- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface

0 2,750 5,500 11,000 Feet

0 0.5 1 2 Miles

RF= 1:72,224 1 in = 6,019 ft

N W E S

Printed: March 2, 2020 Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
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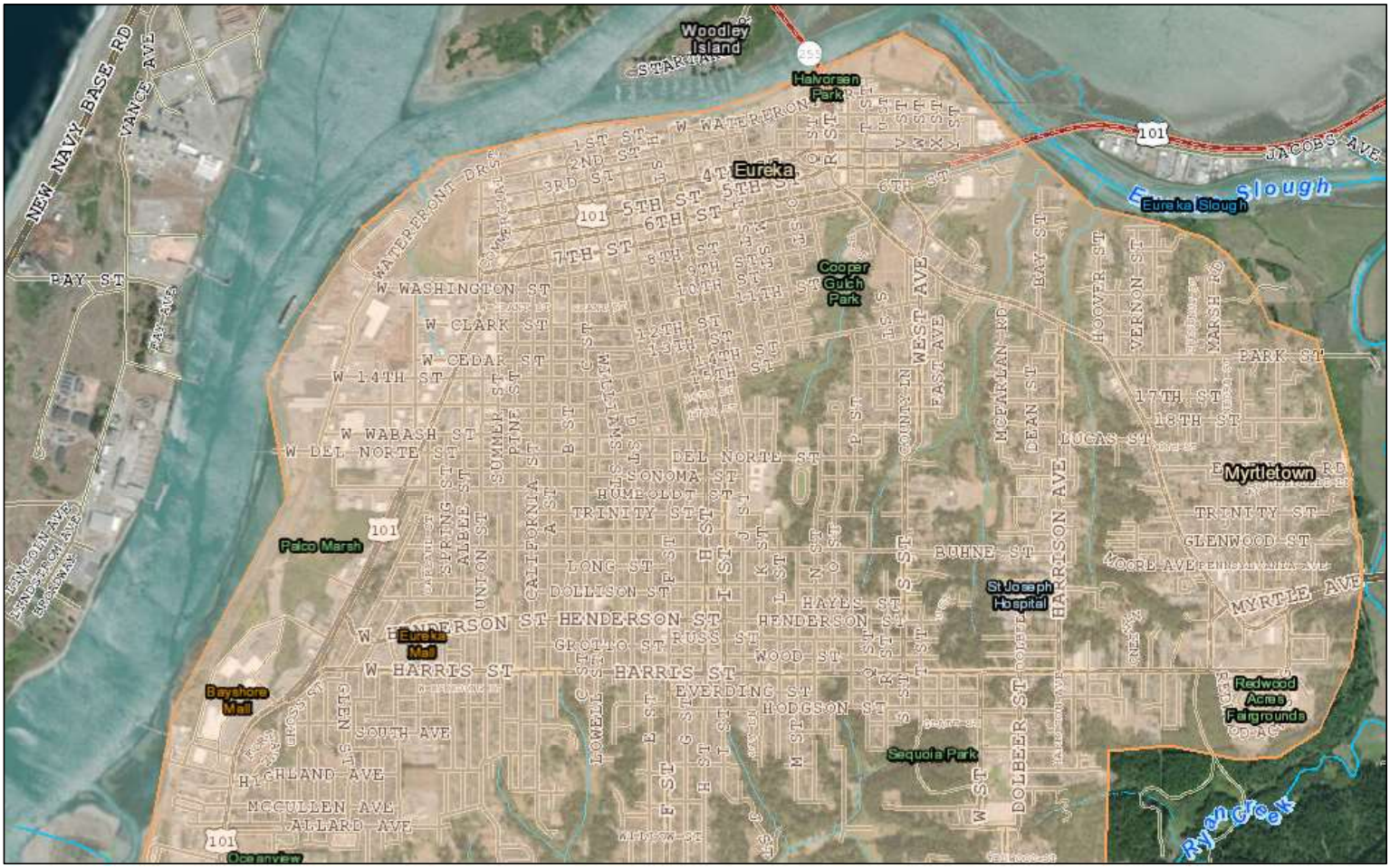
Source: Humboldt County GIS, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Letter 1 Attachment A (continued)



Eureka North

Humboldt County Planning and Building Department

Printed: March 2, 2020 Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
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Highways and Roads
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads

- Private or Unclassified
- Major River or Stream

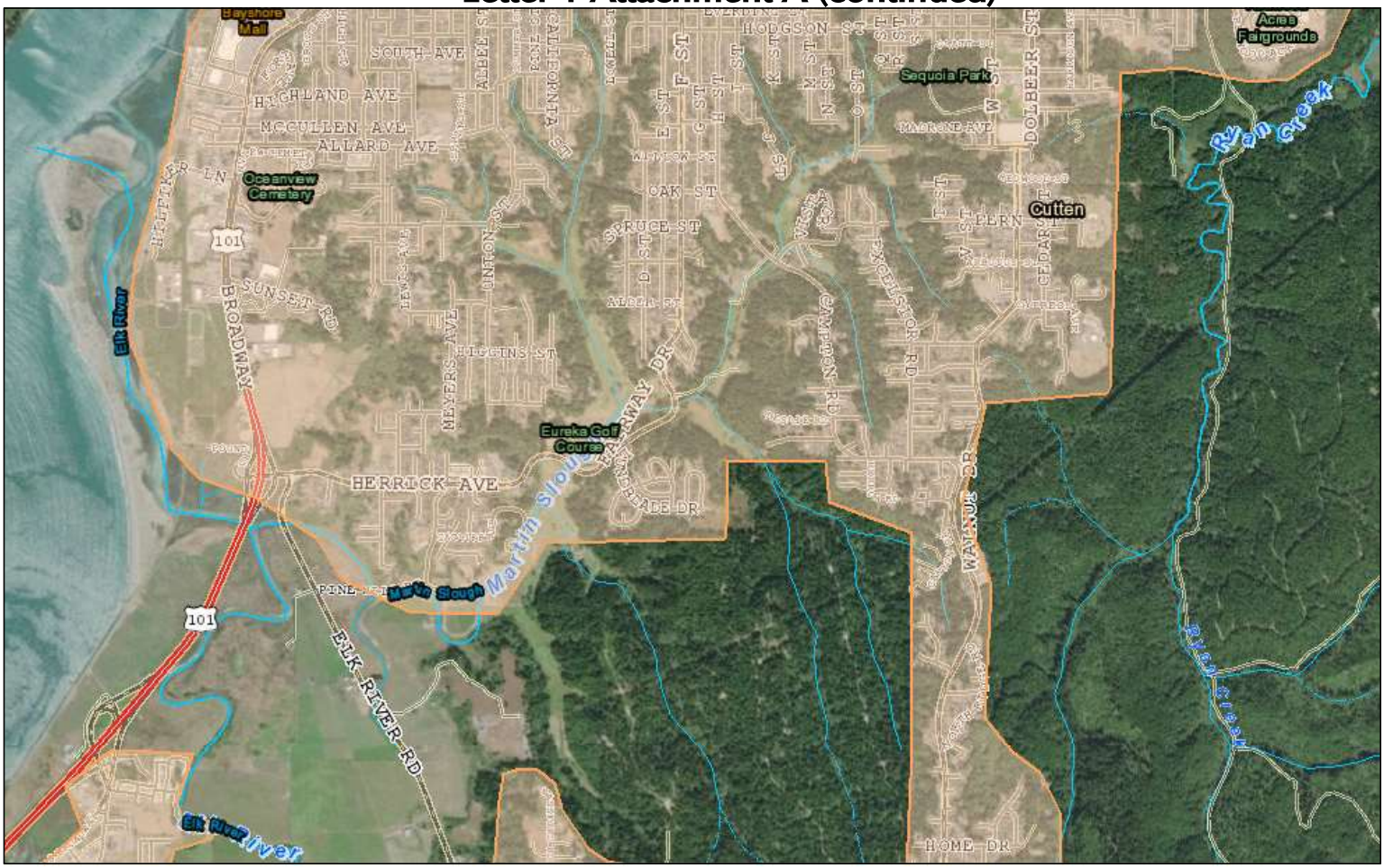
Blue Line Streams
- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface

0 1,400 2,800 5,600 Feet
0 0.25 0.5 1 Miles
RF= 1:36,112 1 in = 3,009 ft

N W E S

Sources: Humboldt County GIS
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Letter 1 Attachment A (continued)



Eureka South

Humboldt County Planning and Building Department

Printed: March 2, 2020 Web AppBuilder 2.0 for ArcGIS

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Highways and Roads
- Principal Arterials
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- Major River or Stream

Blue Line Streams
- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface

0 1,400 2,800 5,600 Feet
0 0.25 0.5 1 Miles
RF= 1:36,112 1 in = 3,009 ft

N W E S

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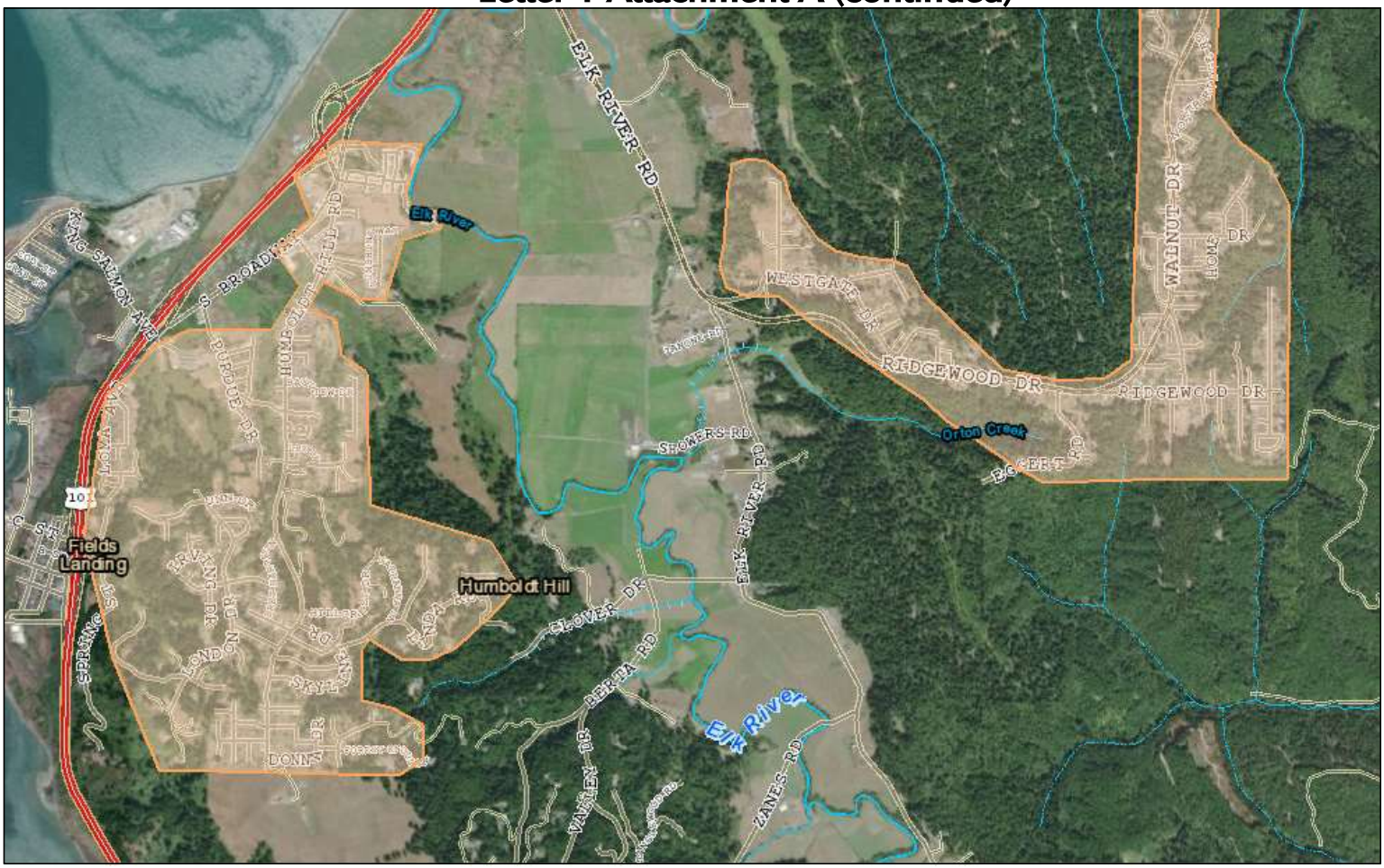
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Letter 1 Attachment A (continued)



Humboldt Hill

Humboldt County Planning and Building Department

Printed: March 2, 2020 Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
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Highways and Roads
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified
- Major River or Stream

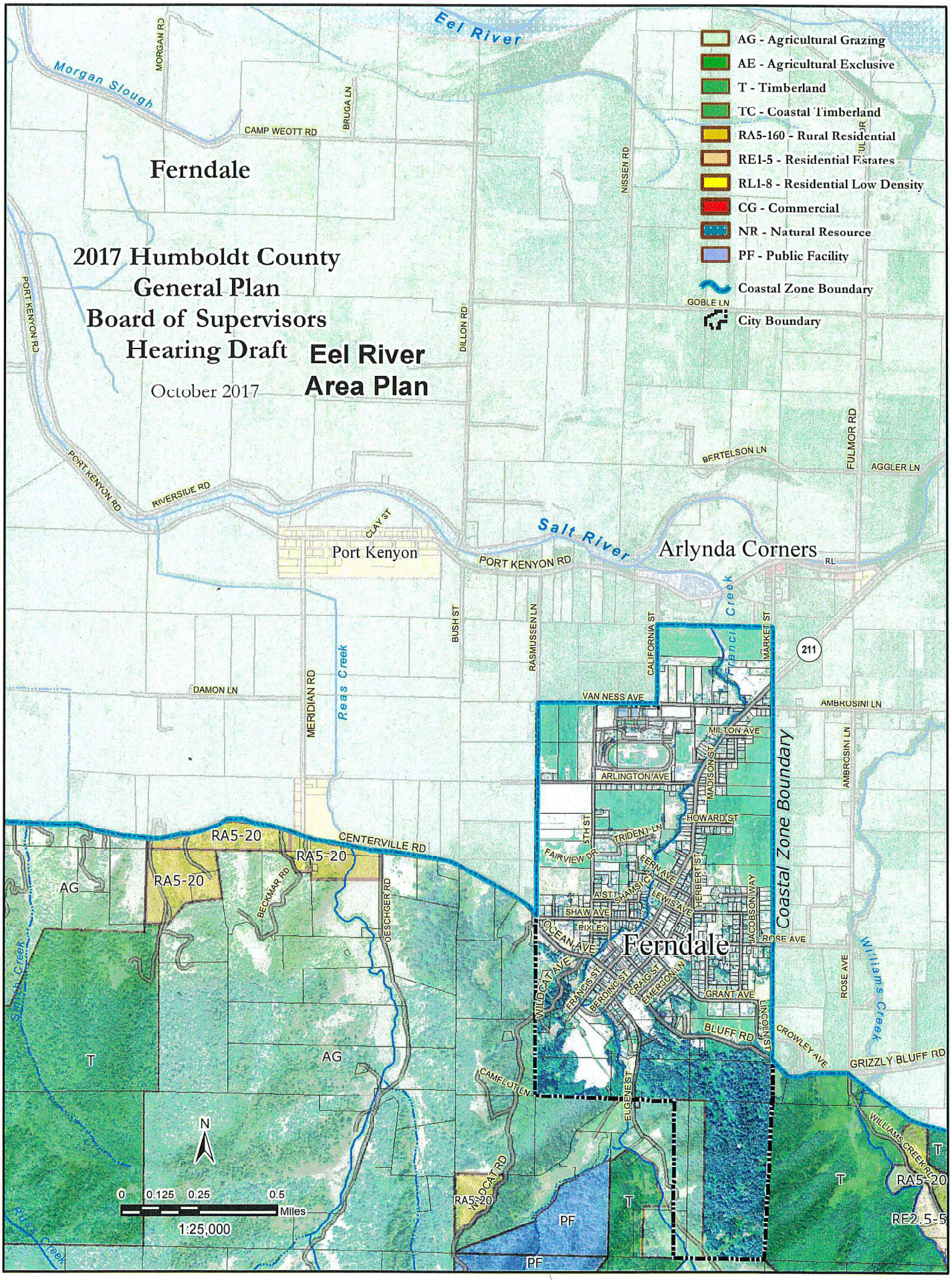
Blue Line Streams
- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface

0 1,400 2,800 5,600 Feet
0 0.25 0.5 1 Miles
RF= 1:36,112 1 in = 3,009 ft

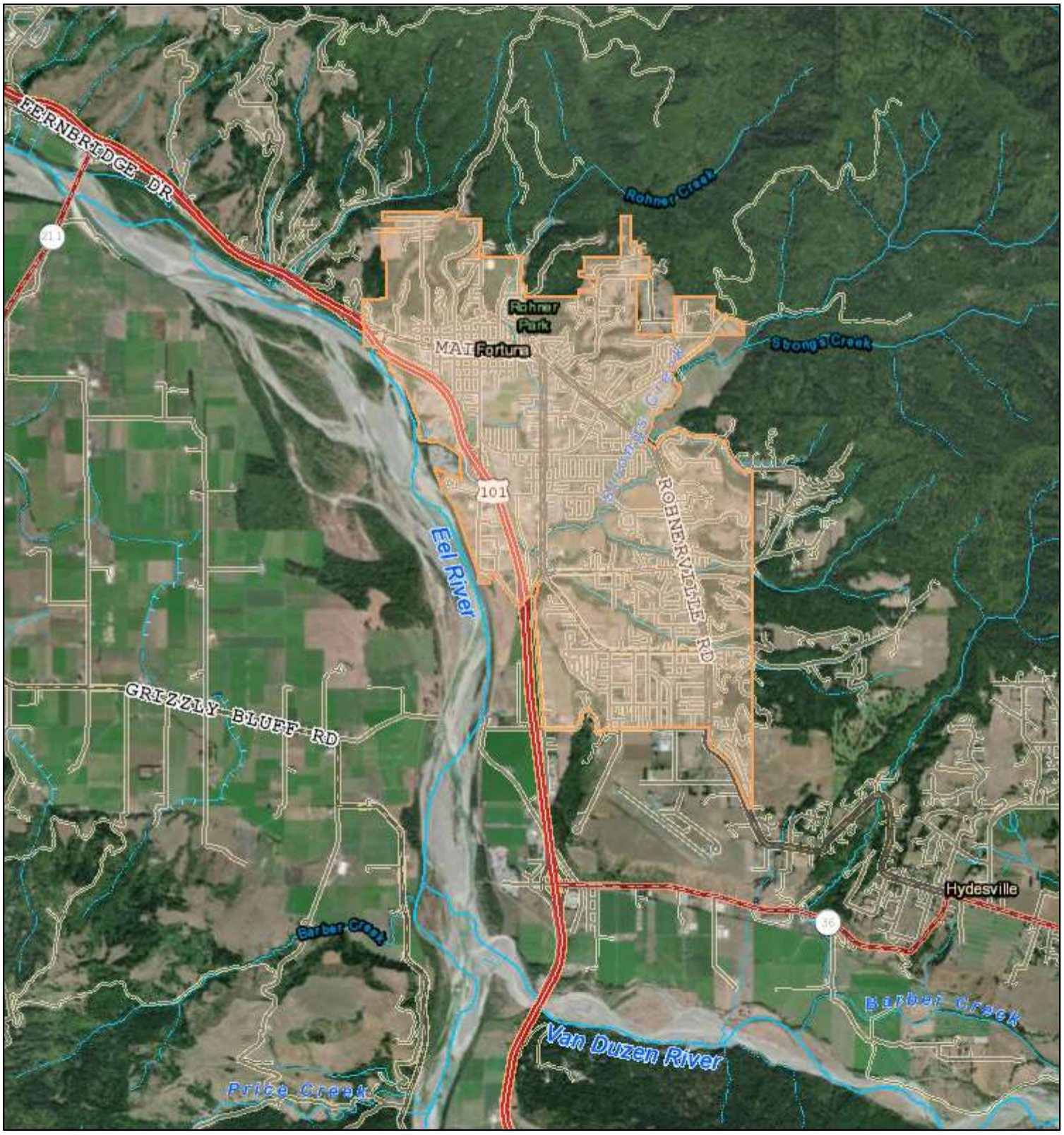
N W E S

Sources: Humboldt County GIS
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Letter 1 Attachment A (continued)



Letter 1 Attachment A (continued)



Fortuna

Humboldt County Planning and Building Department

Highways and Roads

- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified
- Major River or Stream

- Intermittent
- Subsurface

Blue Line Streams

- Perennial 1-3
- Perennial >4

0 2,750 5,500 11,000 Feet

0 0.5 1 2 Miles

RF= 1:72,224 1 in = 6,019 ft

N W E S

Printed: March 3, 2020 Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
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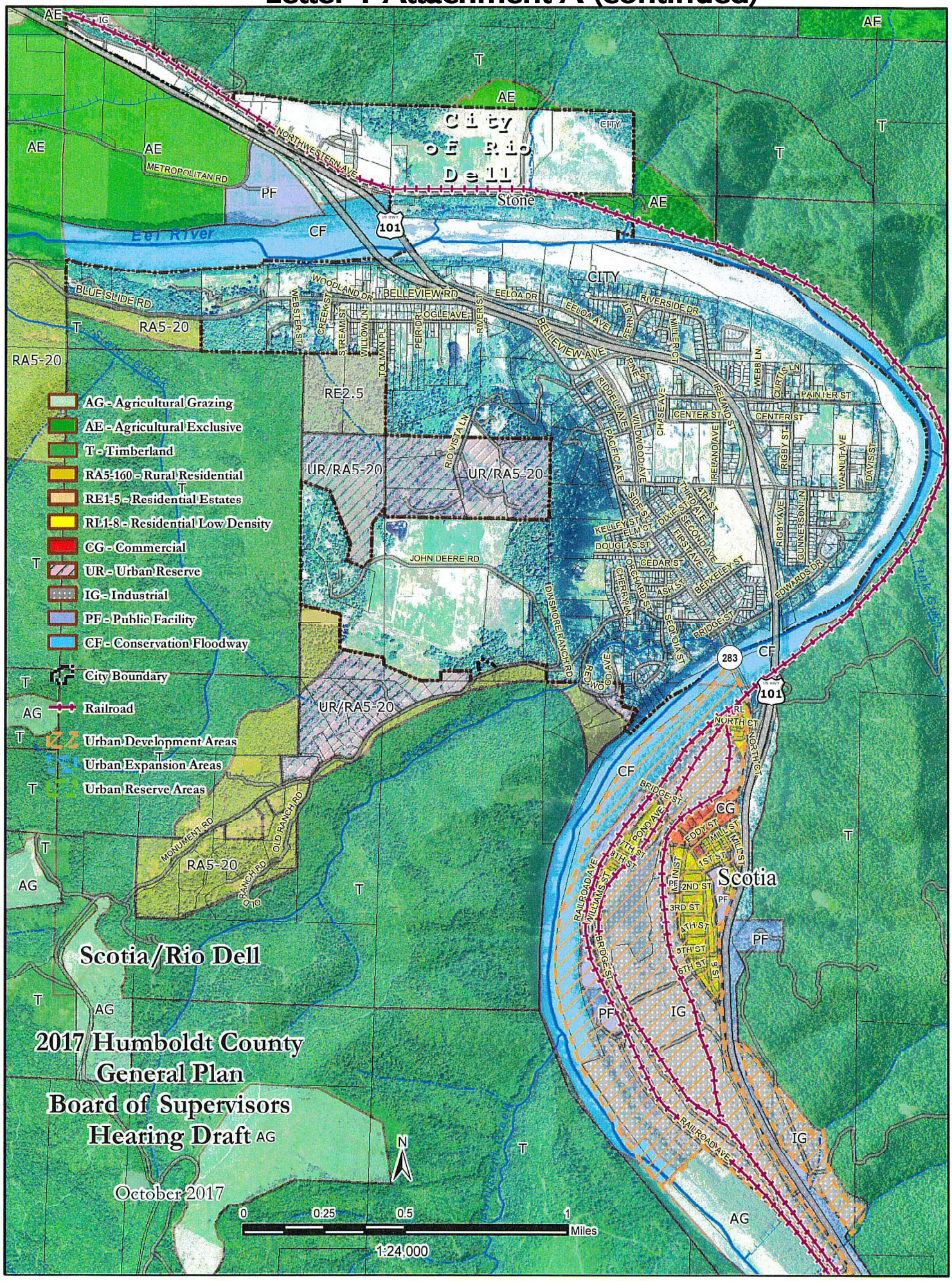
Source: Humboldt County GIS, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Letter 1 Attachment A (continued)



Letter 1 Attachment A (continued)

Wildlife Svcs - Garberville

Humboldt County Planning and Building Department

Printed: January 28, 2020 Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
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Highways and Roads
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified
- Major River or Stream

Blue Line Streams
- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface
- City Boundary
- Counties

0 350 700 1,400 Feet
0 0.05 0.1 0.2 Miles
RF= 1:9,028 1 in = 752 ft

N W E S

Sources: Humboldt County GIS
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Letter 1 Attachment A (continued)

Wildlife Svcs - Redway

Humboldt County Planning and Building Department

Printed: January 28, 2020 Web AppBuilder 2.0 for ArcGIS

Map Disclaimer:
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Highways and Roads
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Local Roads
- Private or Unclassified
- Major River or Stream

Blue Line Streams
- Perennial 1-3
- Perennial >4
- Intermittent
- Subsurface

0 750 1,500 3,000 Feet
0 0.125 0.25 0.5 Miles
RF= 1:20,000 1 in = 1,667 ft

N W E S

Sources: Humboldt County GIS
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

EXHIBIT B

Letter 1 Attachment A (continued)

JEFFREY H. WOOD
Acting Assistant Attorney General
United States Department of Justice
Environment & Natural Resources Division

S. DEREK SHUGERT, OH Bar No. 84188
Trial Attorney
Natural Resources Section
Post Office Box 7611
Washington, D.C. 20044-7611
Phone: (202) 514-9269
Fax: (202) 305-0506
shawn.shugert@usdoj.gov

Attorneys for Federal Defendants

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

CENTER FOR BIOLOGICAL DIVERSITY, *et al.,* Plaintiffs, v. USDA APHIS WILDLIFE SERVICES, *et al*., Federal Defendants.	**Case No. 3:17-cv-3564-WHA** **STIPULATED SETTLEMENT AGREEMENT**

Letter 1 Attachment A (continued)

WHEREAS, Plaintiffs Center for Biological Diversity, Western Watersheds Project, Animal Legal Defense Fund, Project Coyote/Earth Island Institute, Animal Welfare Institute, and Wildearth Guardians ("Plaintiffs"), brought claims pursuant to the Administrative Procedure Act ("APA"), 5 U.S.C. §§ 701-706, alleging violations of the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321-4347, and its implementing regulations, 40 C.F.R. §§ 1500-1508, against the U.S. Department of Agriculture Animal and Plant Health Inspection Service-Wildlife Services ("APHIS-Wildlife Services") and William H. Clay in his official capacity as the Deputy Administrator of APHIS-Wildlife Services ("Federal Defendants");

WHEREAS, Plaintiffs' claims allege that APHIS-Wildlife Services is violating NEPA and the APA by failing or refusing to supplement its NEPA analysis regarding wildlife damage management activities in California's North District;

WHEREAS, Plaintiffs' position is that significant new circumstances and information have emerged since APHIS-Wildlife Services last prepared its 1994 Programmatic Environmental Impact Statement and its 1997 Environmental Assessment ("EA") and Finding of No Significant Impact ("FONSI");

WHEREAS, the Parties have engaged in good faith settlement negotiations in an effort to avoid the time and expense of further litigation;

WHEREAS, Plaintiffs and Federal Defendants believe therefore that it is in the interests of the Parties, and judicial economy to resolve the claims in this action without additional litigation;

NOW THEREFORE, it is stipulated and agreed to by Plaintiffs and Federal Defendants as follows:

1. NEPA Review. APHIS-Wildlife Services entered into a Memorandum of Understanding ("MOU") with the California Department of Food and Agriculture ("CDFA") to collaborate on environmental analysis of wildlife management activities in California's North District. Nothing in this Agreement binds the State of California in any way. It is only an agreement between Plaintiffs and Federal Defendants.
2. APHIS-Wildlife Services commits to the following:

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a. By December 31, 2023, APHIS-Wildlife Services will issue a new Final Environmental Impact Statement ("FEIS") and Record of Decision ("ROD"). If either CDFA or APHIS-Wildlife Services terminates the MOU, APHIS-Wildlife Services agrees that it will unilaterally complete an FEIS and ROD. If APHIS-Wildlife Services anticipates that it will be unable to meet the 6 year deadline set out in this Paragraph, APHIS-Wildlife Services will confer with the Plaintiffs regarding the estimated time for completing the actions specified in this first sentence of this Paragraph and reserves the right to seek to modify the Agreement to extend time for completion of the actions specified in this first sentence of this Paragraph pursuant to Paragraph 7 below. Plaintiffs reserve the right to oppose any such extension.

b. Except activities for the protection of health and human safety,[1] activities targeting invasive species (including feral swine), and activities on behalf of threatened and endangered species, between the date that this Agreement is executed and the date that the ROD is signed, APHIS-Wildlife Services agrees to the following interim measures:

   i. APHIS-Wildlife Services agrees not to use EPA-labeled pesticides targeting mammalian species within the North District;

   ii. APHIS-Wildlife Services agrees to use only non-lead ammunition for all wildlife damage management activities conducted in the North District, except when dispatching animals for which carcasses will be retrieved from the environment, subject to a 60-day transition period from the date of execution of this Agreement;

   iii. APHIS-Wildlife Services agrees not to use body-gripping traps, glue traps, or spring-powered harpoon traps in Wilderness Areas and Wilderness Study

[1] APHIS-Wildlife Services agrees to provide Plaintiffs an annual report of the number and circumstances surrounding activities undertaken for health and human safety that implicate any of the interim measures identified in 2b.

Letter 1 Attachment A (continued)

Areas in the North District;

iv. APHIS-Wildlife Services agrees not to conduct aerial operations in Wilderness Areas and Wilderness Study Areas in the North District;

v. APHIS-Wildlife Services agrees to abide by the recommended gray wolves mitigation measures provided in the April 15, 2014, concurrence letter by the U.S. Fish and Wildlife Service ("FWS").

3. Definitions. The parties agree that the following terms used in this Settlement Agreement have the following definitions:

a. The term "body-gripping trap" is defined as one that grips the mammal's body or body part, including, but not limited to, steel-jawed leghold traps, padded-jaw leghold traps, conibear traps, and snares. Cage and box traps, nets, suitcase-type live beaver traps, and common rat and mouse traps shall not be considered body-gripping trap.

b. The term "in areas occupied by gray wolves" as it appears in the April 15, 2014, concurrence letter from FWS is defined as, consistent with the consultation by FWS, areas where wolves are known to exist through reports and verification by the FWS and/or the California Department of Fish and Wildlife ("CDFW").

c. The term "North District" is defined as areas within the boundaries of the following counties: Butte, Del Norte, Glenn, Humboldt, Lassen, Mendocino, Modoc, Nevada, Plumas, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, and Yuba.

d. The term "protection of health and human safety" is defined as activities, in response to a request by CDFW, to wildlife that demonstrate aggressive action that has resulted in physical contact with a human or exhibits an immediate threat to public health and safety, given the totality of the circumstances. "Immediate threat" refers to wildlife that exhibits one or more aggressive behaviors directed toward a person that is not reasonably believed to be due to the presence of responders. "Public safety" includes situations where a wildlife remains a threat despite efforts to allow or encourage it through active means to leave the area.

Letter 1 Attachment A (continued)

e. The term "activities on behalf of threatened and endangered species" is defined as activities conducted at the direction of, and with the concurrence of, FWS or CDFW on behalf of federally or state listed threatened or endangered species.

4. Attorneys' Fees and Costs. The Parties have agreed to settle any and all of Plaintiffs' claims for attorneys' fees, costs, and expenses associated with this litigation for a lump sum of $6,214.86. This Settlement Agreement represents the entirety of the undersigned Parties' commitments with regard to settlement of claims for attorneys' fees, costs, and expenses.

5. Modification. This Agreement may be modified by written stipulation between the Parties. In the event that either party seeks to modify the terms of this Agreement, the party seeking the modification will confer at the earliest possible time with the other party.

6. Subsequent NEPA Challenges. Nothing in this Settlement precludes any challenge by Plaintiffs to the validity or sufficiency of the NEPA analysis completed pursuant to paragraphs 2 and 3 above. Such challenges shall be made only upon (1) completion of the entire NEPA process following the issuance of APHIS-Wildlife Service's FEIS and ROD, and (2) Plaintiffs' exhaustion of any and all available administrative appeal opportunities. For any such challenge, judicial review will be conducted only to the extent allowed by, and pursuant to, the judicial review provisions of the APA.

7. Dispute Resolution. In the event of a dispute among the Parties concerning the interpretation or implementation of any aspect of this Stipulation, the disputing Party shall provide the other Party with a written notice outlining the nature of the dispute and requesting informal negotiations. The Parties shall meet and confer to attempt to resolve the dispute. If the Parties cannot reach an agreed-upon resolution after 60 days following receipt of a written notice requesting informal negotiations or such longer time agreed to by the Parties, any Party may move the Court to resolve the dispute. No motion or other proceeding seeking to enforce this Stipulation or for contempt of court shall be properly filed unless the Party seeking to enforce this Stipulation has followed the procedure set forth in this Paragraph, and the Party believes there has been noncompliance with an order of the Court. In addition, this

Letter 1 Attachment A (continued)

Stipulation shall not, in the first instance, be enforceable through a proceeding for contempt of court.

8. Representative Authority. The undersigned representatives of Plaintiffs and Federal Defendants certify that they are fully authorized by the party or parties whom they represent to enter into the terms and conditions of this Settlement Agreement and to legally bind those parties to it.

9. Compliance with Other Laws. Nothing in this Settlement Agreement shall be interpreted as, or shall constitute, a commitment or requirement that Federal Defendants obligate or pay funds, or take any other actions in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341, or any other applicable law. Nothing in this Settlement Agreement shall be construed to deprive a federal official of authority to revise, amend, or promulgate regulations, or to amend or revise land and resource management plans. Nothing in this Settlement Agreement is intended to, or shall be construed to, waive any obligation to exhaust administrative remedies; to constitute an independent waiver of the United States' sovereign immunity; to change the standard of judicial review of federal agency actions under the APA; or to otherwise extend or grant this Court jurisdiction to hear any matter, except as expressly provided in the Settlement Agreement.

10. Offsetting debts. Under 31 U.S.C. §§ 3711, 3716; 26 U.S.C. § 6402(d); 31 C.F.R. §§ 285.5, 901.3; and other authorities, the United States will offset against the payment made pursuant to this stipulation Plaintiffs' delinquent debts to the United States, if any. *See Astrue v. Ratliff*, 560 U.S. 586 (2010).

11. Mutual Drafting and Other Provisions.

    a. It is hereby expressly understood and agreed that this Settlement Agreement was jointly drafted by Plaintiffs and Federal Defendants. Accordingly, the Parties hereby agree that any and all rules of construction, to the effect that ambiguity is construed against the drafting party, shall be inapplicable in any dispute concerning the terms, meaning, or interpretation of the Settlement Agreement.

Letter 1 Attachment A (continued)

b. This Settlement Agreement contains all of the agreements between Plaintiffs and Federal Defendants, and is intended to be and is the final and sole agreement between Plaintiffs and Federal Defendants concerning the complete and final resolution of Plaintiffs' claims. Plaintiffs and Federal Defendants agree that any other prior or contemporaneous representations or understandings not explicitly contained in this Settlement Agreement, whether written or oral, are of no further legal or equitable force or effect. Any subsequent modifications to this Settlement Agreement must be in writing, and must be signed and executed by Plaintiffs and Federal Defendants.

c. This Settlement Agreement is the result of compromise and settlement, and does not constitute an admission, implied or otherwise, by Plaintiffs or Federal Defendants to any fact, claim, or defense on any issue in this litigation. This Settlement Agreement has no precedential value and shall not be used as evidence either by Federal Defendants or Plaintiffs in any other litigation except as necessary to enforce the terms of this Agreement.

12. Force Majeure. The Parties understand that notwithstanding their efforts to comply with the commitments contained herein, events beyond their control may prevent or delay such compliance. Such events may include natural disasters as well as unavoidable legal barriers or restraints, including those arising from actions of persons or entities that are not party to this Settlement Agreement.

13. Dismissal. Concurrently with this Settlement Agreement, the Parties shall file a stipulation of voluntary dismissal of this action. That stipulation will request that the Court retain jurisdiction to oversee compliance with the terms of this Stipulation and to resolve any disputes arising under this Stipulation and any motions to modify any of its terms. *See Kokkonen v. Guardian Life Ins. Co. of Am.*, 511 U.S. 375 (1994).

14. Effective Date. The terms of this Agreement shall become effective upon execution of this Settlement Agreement. The parties agree that this Settlement Agreement may be executed in one or more counterparts, each of which shall constitute an original, and all of which, taken

Letter 1 Attachment A (continued)

together, shall constitute the same instrument. Facsimile or scanned signatures submitted by electronic mail shall have the same effect as an original signature in binding the parties.

Respectfully submitted,

DATED: October 30, 2017

JEFFREY H. WOOD
Acting Assistant Attorney General
United States Department of Justice
Environment & Natural Resources Division

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Letter 1 Attachment A (continued)

ATTESTATION OF COUNSEL

I attest that I have secured the concurrence of the counsel whose signature appears above as to the form and contents of this document and his authorization to file this document on his behalf, as evidenced by the conformed signature appearing above.

DATED: October 30, 2017

/s/ S. Derek Shugert
S. DEREK SHUGERT

Letter 1 Attachment A (continued)

CERTIFICATE OF SERVICE

I, S. Derek Shugert, hereby certify that, on October 30, 2017, I caused the foregoing to be served upon counsel of record through the Court's electronic service. I declare under penalty of perjury that the foregoing is true and correct.

DATED: October 30, 2017

/s/ *S. Derek Shugert*
S. Derek Shugert

Letter 1 Attachment B

USDA APHIS WILDLIFE SERVICES
WORK AND FINANCIAL PLAN

COOPERATOR:	**LANE COUNTY WASTE MANAGEMENT DIVISION**
COOPERATIVE AGREEMENT NO.:	**20-7341-6294-RA**
ACCOUNT NO.:	**AP.RA.RX41.73.0103**
AGREEEMENT DATES:	**January 1, 2020 - December 31, 2020**
AGREEMENT AMOUNT:	**$25,000.00**

Pursuant to Cooperative Service Agreement No. 16-7341-6294-RA between Cooperator and the United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services (APHIS-WS), this Work and Financial Plan defines the objectives, plan of action, resources and budget for cooperative wildlife services program.

OBJECTIVES/GOALS

APHIS-WS objective is to provide professional wildlife management assistance to reduce or manage damage caused by birds including starlings, and other nuisance wildlife to protect property and human health and safety.

Specific goals are:

1. To provide direct assistance for Lane County Waste Management Division from wildlife conflicts or damage.
2. To provide assistance in the form of educational information.

PLAN OF ACTION

The objectives of the wildlife damage management program will be accomplished in the following manner:

1. APHIS-WS will provide technical assistance and or direct management at times and locations for where it is determined there is a need to resolve problems caused by wildlife. Lethal management efforts will be directed towards specific offending individuals or local populations. Method selection will be based on an evaluation of selectivity, humaneness, human safety, effectiveness, legality, and practicality.

   Technical Assistance: APHIS-WS personnel may provide verbal or written advice, recommendations, information, demonstrations or training to use in managing wildlife damage problems. Generally, implementation of technical assistance recommendations is the responsibility of the resource/property owner.

   Direct Management: Direct management is usually provided when the resource/property owner's efforts have proven ineffective and or technical assistance alone is inadequate. Direct management methods/techniques may include trap equipment, shooting, and other methods as mutually agreed upon. Non-lethal means will be attempted prior to lethal actions and will be recorded. Lethal action only authorized upon approval from Lane County Waste Management Division Manager, for rural transfer stations, or Landfill Supervisor, if at landfill. Bi-annual report, and an annual summary reports of all wildlife engagement at the landfill and rural transfer stations, excluding landfill bird activity, will be provided. Reports shall include documentation of all nonlethal methods used in operational activities and instances were lethal management was expressly authorized by approved official.

2. APHIS-WS will prepare quarterly surveys of Short Mountain Landfill bird activity to assess wildlife attractant potential and an annual report summarizing quarterly surveys.

3. APHIS-WS District Supervisor Paul Wolf Roseburg, Oregon will supervise this project, (541) 679-1231. This project will be monitored by David E. Williams, State Director, Portland, Oregon (503) 326-2346.

4. APHIS-WS will invoice Lane County Waste Management Division monthly for actual costs incurred in providing service, not to exceed $25,000.00, provided there are billable expenses posted at the time of billing for the month of service. In some cases, the work is done during the period of performance but expenses post outside of the agreement end date, resulting in a final invoice one month after the period of performance has ended.

5. In accordance with the Debt Collection Improvement Act (DCIA) of 1996, bills issued by APHIS-WS are due and payable within 30 days of the invoice date. The DCIA requires that all debts older than 120 days be forwarded to debt collection centers or commercial collection agencies for more aggressive action. Debtors have the option to verify, challenge and compromise claims, and have access to administrative appeals procedures which are both reasonable and protect the interests of the United States.

Letter 1 Attachment B (continued)

PROCUREMENT

Lane County Waste Management Division understands that additional supplies and equipment may need to be purchased under this agreement to replace consumed, damaged or lost supplies/equipment. Any items remaining at the end of the agreement will remain in the possession of APHIS-WS.

STIPULATIONS AND RESTRICTIONS:

1. All operations shall have the joint concurrence of APHIS-WS and Lane County Waste Management Division and shall be under the direct supervision of APHIS-WS. APHIS-WS will conduct the program in accordance with its established operating policies and all applicable state and federal laws and regulations.
2. APHIS-WS will cooperate with the Oregon Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, Oregon Department of Transportation, Oregon Fire marshal's Office, county and local city governments, and other entities to ensure compliance with Federal, State, and local laws and regulations.
3. Wildlife Damage Management: A Work Initiation Document for Wildlife Damage Management (WS Form 12A), a Work Initiation Document for Wildlife Damage Management – Multiple Resource Owners (WS Form 12B) or a Work Initiation Document for Management of Wildlife Damage on Urban Properties (WS Form 12C) will be executed between APHIS-WS and the landowner, lessee, administrator before any APHIS-WS work is conducted.

COST ESTIMATE FOR SERVICES:

Salary including possible overtime, benefits, vehicle, supplies and material costs charged at actual cost. The distribution of the budget for this work plan may vary as necessary to accomplish the purpose of this Agreement.

AUTHORIZATION:

Lane County Waste Management Division
3100 East 17th Avenue
Eugene, Oregon 97403

Representative, Lane County Waste Management	Date

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE WILDLIFE SERVICES

State Director, Oregon	Date
Director, Western Region	Date

Letter 1 Attachment B (continued)

FINANCIAL PLAN

For the disbursement of funds from

Lane County Waste Management Division - Lane County

to
USDA APHIS Wildlife Services
for
Birds and other wildlife management around facilities

from
1/1/2020
to
12/31/2020

Cost Element		Full Cost
Personnel Compensation	$	17,303.80
Travel	$	-
Vehicles	$	1,893.05
Other Services	$	-
Supplies and Materials	$	464.97
Equipment	$	-

Subtotal (Direct Charges)	$		19,661.82
Pooled Job Costs	11.00%	$	2,162.80
Indirect Costs	16.15%	$	3,175.38
Aviation Flat Rate Collection		$	-
Agreement Total	$		25,000.00

The distribution of the budget from this Financial Plan may vary as necessary to accomplish the purpose of this agreement, but may not exceed: $25,000.00