



# MOUNTAIN LION FOUNDATION

## *Saving America's Lion*

Our mission is to ensure America's lion survives and flourishes in the wild.

September 25, 2024

El Dorado County Fish and Wildlife Commission  
El Dorado County  
330 Fair Lane  
Placerville, CA 95667

### **Re: Draft Opinion on Human/Cougar Conflict in El Dorado County**

On behalf of the Mountain Lion Foundation and our members in El Dorado County, we write regarding the draft Opinion letter prepared by the El Dorado Fish and Wildlife Commission. We are writing to offer our support to a number of these recommendations, and to suggest ways that we can work with El Dorado County's leadership to bring them to fruition. Thank you for considering this input. Your letter highlights some important areas of scientific uncertainty, and we hope to work with you to reach out to the scientific community and policymakers to direct attention and funding to new research in these areas. The Opinion letter also offers policy recommendations that are based on existing scientific research. While we strongly agree with some of those policy recommendations, others seem to draw conclusions that are less well-grounded in that research, with troubling implications for public safety. We hope for a chance to discuss those areas in more detail, and we hope to work with you to refine those policy recommendations. Like you, our primary goal is to ensure not only the safety and wellbeing of people, their livestock and domestic animals, but also the health of the lands, waters, and wildlife of El Dorado County—a place where residents live alongside mountain lions.

Over the last several months, the Mountain Lion Foundation staff, volunteers, and partners have worked in and around El Dorado County to educate residents and prevent conflicts with wildlife. We have distributed brochures describing techniques and tools to protect livestock and pets from mountain lions and other carnivores, and we have worked with individuals in the community to develop strategies for their homesteads and their livestock's specific needs. We have hosted a number of public events and presentations to offer the best available science and tools to the community, and to provide an opportunity for questions and discussion about the community's concerns — and we have more coming up in the next couple of months. We have also had productive conversations with public officials, and are working to build relationships with the

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Post Office Box 1896  
Sacramento, CA 95812

[www.mountainlion.org](http://www.mountainlion.org)

[info@mountainlion.org](mailto:info@mountainlion.org)  
(916) 442-2666

state and county officials who work directly with the community when mountain lions create concerns. If there are other ways that we can assist your commission's work, please don't hesitate to reach out.

Of the recommendations in the draft Opinion, the easiest for us to endorse is item 3, regarding wildlife feeding. The science is clear that mountain lions follow deer, and that practices which bring deer nearer to communities and homes can only increase the likelihood of mountain lion encounters. While such encounters are rarely dangerous, in the current moment of high tensions and legitimate concern, discouraging practices which increase the rate of encounters can only help. We would be happy to discuss ways to help with the educational campaign you describe and to lend our support to the proposed amendments to county ordinance.

We also support item 1 in your recommendations, calling for increased CDFW staffing, especially for conflict officers. State budget tightening has reduced conflict staffing throughout the state; we support restoring those positions and would be happy to discuss a coordinated effort to lobby for conflict funding in future state budgets. In the meantime, we will continue our current work with livestock owners in El Dorado County who experience such conflict. Our staff includes a fifth-generation rancher who has researched and successfully deployed carnivore deterrents in a wide range of environments and would be happy to speak with more El Dorado County residents who want to try out proven, successful livestock-prevention tools or who have questions or concerns. If there is a way to include our staff member's contact information among the resources you provide in those moments, please let me know and we will coordinate the best way to connect residents with that one-on-one support.

Our outreach efforts have already included Amador County, and we would be happy to assist in convening and coordinating discussions among north Sierra counties as discussed in item 2. Encouraging increased mountain lion research and research on conflict prevention by CDFW and its partners has been a high priority for us, and this would be an easy area to coordinate on. Public-private partnerships that allow expertise, resources, and lessons learned to be shared and deployed rapidly can be extremely valuable tools in addressing complex issues like mountain lion conflict.

Items 4 and 5 on your list of recommendations are more challenging. While Bart George's research in Washington state has been described in media reports and in Mr. George's podcast interviews and other venues, the research is not yet extensive or robust enough to earn publication in a peer-reviewed scientific journal. Basing policy on unpublished and unverified studies can be a risky move, especially when other, also-unpublished research exists that contradicts Mr. George's results. There is an intuitive appeal to the idea that nonlethal hazing

should “train” cougars to avoid human settlements, but strong evidence that such hazing is effective or necessary does not yet exist. While we applaud the goal of rooting policy in the best science, it is premature to turn this emerging research into policy.

The three step policy (which the Opinion refers to as “the three strike rule”) is a relatively new approach to conflict, and it has largely been effective across the state of California, including in other rural areas that have similarities to El Dorado County. While policy should be adaptive to new evidence and changing circumstances, the evidence described in your Opinion does not justify abandoning that approach, and indeed much of the evidence you cite actually argues *for* the merits of the three step policy’s emphasis on deterrence first. We look forward to a chance to discuss this science in more detail and discuss ways that the three step policy might be refined to address the realities of life in El Dorado County. In that conversation, it will be crucial to develop a shared understanding of the state of mountain lion science, and the science of coexisting with mountain lions.

Numerous research groups have attempted to assess the effects of reducing mountain lion populations, and found that without intensive effort, it is difficult to maintain mountain lion populations substantially below their carrying capacity. That carrying capacity is driven primarily by habitat availability and the deer population. In numerous studies, even intensive efforts to reduce mountain lion populations have shown little effect on deer populations, especially compared to the effects of disease and variation in habitat quality, not to mention the effects of climate — drought, harsh winters, hot summers — and wildfire. It is thus unlikely that marginal changes in CDFW’s policies would dramatically reduce that population.

As the Opinion observes, Kertson and Keren (2021), like other researchers, found that sightings or encounters are not an indication of a growing cougar population. While we appreciate and strongly support the Opinion’s call for more research on California’s mountain lion population and its regional distribution, and would happily discuss the nuances of how populations can best be estimated, there simply is not yet enough data to know for sure whether local mountain lion population sizes have changed significantly in recent years. Research also suggests that anecdotal reports of mountain lion sightings, and even owners’ determination of how missing domestic animals died, can be unreliable as indicators of mountain lion activity. We would of course be happy to discuss those data and the best ways to intake and respond to such reports to address the community’s valid concerns.

As the Opinion notes, El Dorado County has served as a “sink” habitat for mountain lions for quite some time. Dr. Dellinger’s published research on this draws not only on recent depredation responses, but also the history of bounty kills before that system was abolished over 50 years

ago. Sink populations are those where mortality rates exceed birth rates, and where population stability is maintained through the immigration of young, mostly male, mountain lions into the area. By contrast, in demographically stable mountain lion populations, established older individuals drive out those younger (mostly male) lions. This dynamic has a few important consequences when we discuss conflict.

First, young male mountain lions have more unpredictable behavior and are statistically those most prone to conflict. They are smaller and less experienced, and the fact that they travel long distances means they do not have local knowledge about the best areas to hunt their preferred prey (deer and elk), nor about areas to avoid (including dangerous road crossings or areas near humans). They also may be physically taxed from long-distance dispersal. All of this makes them less selective in their hunting and sometimes more likely to mistake domestic animals for an appropriate food source.

Second, those young mountain lions are less effective at maintaining their own territory. That means that a territory which one older individual might have maintained could be taken over in the short term by multiple younger individuals when that older one dies. Mountain lion biologists have been known to quip that “when one mountain lion dies, five more come to dinner.”

The consequence of these two facts is that high mortality rates (whether caused by hunting, authorized depredation responses, unauthorized “shoot, shovel, and shut up” poaching, or car strikes) can increase conflict rates and increase local population densities in that sink habitat. Dr. Dellinger’s paper concludes that past conflict removals are one of the strongest predictors of increased future conflict rates — and this point is especially relevant to El Dorado County. His conclusion matches peer-reviewed findings by other authors in other places and using different datasets, which provides a strong foundation for scientific inferences. There are strong scientific grounds to believe that the already high rates of mortality in El Dorado County may be driving any increase in conflict rates you have seen with domestic animals. If that is true, the policy implications differ from those proposed in this Opinion letter.

As Dr. Dellinger’s paper explains: “Most significantly, it appears that if small-scale agricultural operations and pet owners can improve animal husbandry standards with the purpose of mitigating depredation, depredation rates throughout California could decrease substantially and maybe even more than might be expected, as depredation rates are positively influenced by previous lethal removal.”

It is because of findings like Dr. Dellinger’s that the Mountain Lion Foundation’s work has focused on providing tools for nonlethal deterrence of carnivores, and on working with communities to promote peaceful coexistence between communities, livestock, and their

neighboring wilderness. It may seem counterintuitive that removing lions can lead to *more* conflict, but given the implications for public safety, this conclusion from decades of scientific research must be taken very seriously. Our fundamental goal is ensuring the safety and wellbeing of people, livestock, and wildlife such as mountain lions, and to do that, we are guided by the best scientific research. Reviewing your Opinion letter, it is clear that you are driven by those same desires, including an intention to ground your work and policies on the best available science. We look forward to discussing that science and the best way to turn it into effective action.

As noted above, the Mountain Lion Foundation stands ready to support many of the proposals offered in this Opinion letter. We look forward to continuing the work we've been doing in El Dorado County, especially where we can find ways to partner with El Dorado County's leadership and on-the-ground staff.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Brent Lyles", with a stylized flourish at the end.

R. Brent Lyles  
Executive Director  
(916) 442-2666 ext. 103  
blyles@mountainlion.org