



# MOUNTAIN LION FOUNDATION

## *Saving America's Lion*

September 3, 2018

### Executive Director

Lynn Cullens

### Board of Directors

Toby Cooper

*Chair*

Elizabeth Sullivan

*Vice Chair*

Ann Hamilton

*Treasurer*

Donald Molde, M.D.

*Secretary*

Rabbi Joseph Hurwitz

Bob McCoy

Jonathan Naimon

Chris Tromborg, Ph.D.

### Honorary Board

Robert Bateman

Doris Day

Mr. & Mrs. Gordon P. Getty

Marian Heiskell

Sandy Lerner

Barry Lopez

Hon. William Newsom

Alan Rabinowitz

Robert Redford

Nathaniel P. Reed

Dr. George Schaller

Robert Wagner

**30**  
YEARS OF  
Saving America's Lion

**1986 ~ 2016**

Post Office Box 1896  
Sacramento CA 95812  
[www.mountainlion.org](http://www.mountainlion.org)  
[info@mountainlion.org](mailto:info@mountainlion.org)  
(916) 442-2666

John V. Howard, Chair  
Colorado Parks and Wildlife Commission  
Division of Parks and Wildlife  
1313 Sherman Street  
Denver, CO 80203

**Emailed To:** [dnr\\_cpwcommission@state.co.us](mailto:dnr_cpwcommission@state.co.us)

### **RE: Chapter W-2, "Big Game" 2 CCR 406-2, Mountain Lion Hunting**

Dear Chairman Howard and Members of the Commission,

The Mountain Lion Foundation and its supporters in Colorado asks that you consider the following concerns raised by the 2018-19 mountain lion (*Puma concolor*) trophy hunting recommendations put forth by the Colorado Parks and Wildlife. The proposed increase in quotas from 654 to 677 for the upcoming hunting season through March 31, 2019 is unsustainable for Colorado's mountain lion populations. The proposed overall quota of 677 mountain lions amounts to 22.5% to 29% of Colorado's mature lion population—at least double the number that CPW's own biologists have identified as a safe offtake amount.

Trophy hunting is the greatest source of mortality for mountain lions throughout the majority of their range in the United States.<sup>i</sup> Conservation biologists have established that the practice of trophy hunting is destructive and unnecessary as it profoundly disrupts a population's social structure.<sup>ii</sup> Hunting mountain lions results in additive mortality – rates that far exceed what would happen in nature<sup>iii</sup> – and can lead to population instability and decline, as well as an increase in conflicts with humans and domestic animals.<sup>iv</sup>

Current population estimates in Colorado suggest that between 3500-4500 mountain lions reside within the state. CPW biologists have recommended increasing the number of permits available to hunters from 654 to 677 for the 2018-19 hunting season. Approximately 67%, or around 2345 to 3015 individuals, of the current population estimate would be comprised of adults and subadults that could be targeted by hunters. Essentially, around 22.5% to 29% of the population could be killed by hunter. The proposed increase would far exceed the sustainable threshold of 12-14% of the population established by researchers.<sup>v</sup>

The Foundation, which is strongly opposed to the proposed increase, respectfully requests that the Commission reject the recommended increase and, instead, reduce the quota to the sustainable limit established by peer-reviewed, scientific studies. The Foundation asks that the limit be reduced to 10% or less than that of the known population to account for additional human-caused mortality including vehicle strike, incidental snaring or trapping, poaching, public safety removal, orphaning and so on. Additionally, we request that the use of hounds to pursue mountain lions no longer be permitted as this practice is not ethical and is not considered to be fair chase.

The Foundation requests these actions for the reasons outlined below:

- 1. The quota should be reduced to 10% of the known population to account for any additional human-caused mortality.**

In order to sustain viable populations of mountain lions, prevent human-wildlife conflict and avoid compromising the long-term viability by failing to account for all human-caused sources of mortality, hunting of adult lion populations should not exceed the intrinsic growth rate of the population of interest.<sup>vi</sup> The intrinsic growth rate for mountain lion populations has been established by researchers to be between 15-17%.<sup>vii</sup> Setting human-caused mortality limits at 10% or less of the adult population facilitates the maintenance of home ranges and social stability, reducing the likelihood of increased conflict with humans and population decline.<sup>viii</sup>

Additionally, trophy hunting of mountain lions leads to an increase in kitten mortality in heavily hunted populations<sup>ix</sup>, as is the case in Colorado already. Killing an adult female with kittens results in the death of her dependent young by dehydration, malnutrition, predation and exposure; even those that are at least six months old<sup>x</sup>. This impacts a population's ability to recruit new members if too many adult females are removed, making the population less resilient to hunting and other causes of mortality<sup>xi</sup>; both human and natural.

As such, we ask that the quota in Colorado be reduced to 10% or less of the total adult and subadult population to account for additional human-cause mortality and that hunt units be closed immediately once the limit has been reached to avoid overharvesting and to maintain healthy, stable lion populations.

## **2. Killing mountain lions is unnecessary and results in an increase in conflicts with humans and domestic animals.**

Studies have shown that mountain lion populations are self-regulating and that killing established adult lions may actually lead to increased conflict with humans as a result of the disruption of mountain lion social structure and increased immigration of dispersing individuals.<sup>xii</sup>

Mountain lions occur at low densities relative to their primary prey.<sup>xiii</sup> In order to survive, their numbers are self-regulating by staying at a smaller population size relative to their prey's biomass or they risk starvation.<sup>xiv</sup> In other words, when prey populations decline, so do mountain lion populations. Because of these predator-prey dynamics, mountain lion populations do not need to be managed by humans.

When a dominant adult is removed from its territory, younger dispersing males seeking territories of their own will move into the unoccupied area. This results in a younger overall age structure, which increases the likelihood of conflict with humans.<sup>xv</sup> Conflicts with mountain lions are exceedingly rare, but overhunting will disrupt resident populations, eventually leading to an increase in conflicts with people, pets and livestock.

A study conducted at Washington State University showed that, as wildlife officials increased quotas and lengthened hunting seasons, complaints about conflict with mountain lions increased rather than decreased. The heavy hunting pressure resulted in a higher ratio of younger males in the population as a result of immigration and emigration.<sup>xvi</sup> Contrary to popular belief, killing mountain lions results in an increase in complaints and livestock depredation due to disruption of their social structure.<sup>xvii</sup>

To ensure healthy social structures and territorial behavior, mountain lion populations should not be hunted for trophies or recreation. In Colorado, mountain lion quotas should be reduced; not increased. Doing such will ensure stability within the state's mountain lion populations, as well as a decrease in conflicts with humans and domestic animals.

## **3. Using hounds to pursue mountain lions is unethical and is not considered to be fair chase.**

Hounding is an inhumane and outdated sport that has been banned in two-thirds of the United States. Hounding poses significant risk to the hounds as well as to young wildlife, including dependent kittens and cubs, who may be attacked and killed by hounds.<sup>xviii</sup> Hounds also disturb or kill non-target wildlife and trespass onto private lands.<sup>xix</sup> This practice is not fair chase and is highly controversial, even among hunters.<sup>xx</sup>

Fair chase hunting is based upon the premise of giving the animal an equal opportunity to escape from the hunter.<sup>xxi</sup> Using hounds, especially those equipped with GPS collars, provides an unfair advantage to hunters.

Many proponents of hound hunting claim that hunters can be more selective using this technique. Since hunters can get so close to a treed animal, hound hunting advocates assert that hunters can determine the sex, size, and general age of an animal before determining whether or not they are permitted to harvest that individual. Knowing the sex and other demographic status of the individual being hunted could be helpful in maintaining a viable

population. A review of 30 years of records from game managers throughout the western United States found that, although technically feasible, most hunters could not tell the size and sex of an animal up a tree. Hunters had roughly 50% accuracy when determining sex; the same as if they had determined the sex with a coin toss.

To summarize, we are asking that the Commission reject the recommended quota increase as it could jeopardize the health and stability of Colorado's mountain lion population. Instead, we request that the limit be reduced to 10% or less of the total adult and sub-adult population. Doing so would be more in line with current research and will ensure that Colorado's mountain lion populations are better protected for the state's consumptive and non-consumptive wildlife stakeholders. We are also asking that hounds are not permitted at any time to aid trophy hunters in their pursuit of mountain lions. The use of hounds is inhumane, does not constitute as fair chase and offers hunters an unfair advantage.

We would like to remind the Commission that the majority of Colorado's residents value mountain lions as an important part of their heritage and would prefer not to see them hunted to appease a handful of consumptive users.<sup>xxii</sup>

Thank you for your consideration. Please make this comment letter a part of the official record regarding this decision.

Respectfully,



Lynn Cullens

EXECUTIVE DIRECTOR

(916) 606-1610

LCullens@MountainLion.org

Questions or requests regarding this comment letter may be directed to:

Denise Peterson

Visibility Specialist

(801) 628-1211

visibility@mountainlion.org

## REFERENCES

- Anderson, C. R., and F. G. Lindzey. 2005. **Experimental evaluation of population trend and harvest composition in a Wyoming cougar population.** *Wildlife Society Bulletin* 33:179–188.
- Ausband, D. E., C. R. Stansbury, J. L. Stenglein, J. L. Struthers, and L. P. Waits. 2015. **Recruitment in a social carnivore before and after harvest.** *Animal Conservation* 18:415–423.
- Batavia, C., M. P. Nelson, C. T. Darimont, P. C. Paquet, W. J. Ripple, and A. D. Wallach. 2018. **The elephant (head) in the room: A critical look at trophy hunting.** *Conservation Letters.*
- Beausoleil, R. A., G. M. Koehler, B. T. Maletzke, B. N. Kertson, and R. B. Wielgus. 2013. Research to regulation: **Cougar social behavior as a guide for management.** *Wildlife Society Bulletin.*
- Cooley, H. S., R. B. Wielgus, G. M. Koehler, H. S. Robinson, and B. T. Maletzke. 2009. **Does hunting regulate cougar populations?** A test of the compensatory mortality hypothesis. *Ecology* 90:2913–2921.
- Cougar Management Guidelines. 2005. **Cougar Management Guidelines.** WildFutures, Bainbridge Island, WA.
- Creel, S., and J. J. Rotella. 2010. **Meta-Analysis of Relationships between Human Offtake, Total Mortality and Population Dynamics of Gray Wolves (*Canis lupus*).** *PLoS ONE* 5.
- Darimont, C. T., C. H. Fox, H. M. Bryan, and T. E. Reimchen. 2015. **The unique ecology of human predators.** *Science.* 349:858-860.

- Eberhardt, L. L., P. J. White, R. A. Garrott, and D. B. Houston. 2007. **A Seventy-Year History of Trends in Yellowstones Northern Elk Herd.** *Journal of Wildlife Management* 71:594–602.
- Elbroch, L. M., B. D. Jansen, M. M. Grigione, R. J. Sarno, and H. U. Wittmer. 2013. **Trailing hounds vs foot snares: comparing injuries to pumas *Puma concolor* captured in Chilean Patagonia.** *Wildlife Biology* 19:210-216.
- Hristienko, H., and J. McDonald, John E. 2007. **Going in the 21st century: a perspective on trends and controversies in the management of the black bear *Ursus*.** 18:72-88.
- Lindzey, F. G., W. D. Vansickle, S. P. Laing, and C. S. Mecham. 1992. **Cougar Population Response to Manipulation in Southern Utah.** *Wildlife Society Bulletin* 20:224-227.
- Logan, K. A., and L. L. Swenar. 2001. **Desert puma: evolutionary ecology and conservation of an enduring carnivore.** Island Press, Washington, DC.
- Maletzke, B. T., R. Wielgus, G. M. Koehler, M. Swanson, H. Cooley, and J. R. Alldredge. 2014. **Effects of hunting on cougar spatial organization.** *Ecology and Evolution*.
- Peebles, K. A., R. B. Wielgus, B. T. Maletzke, and M. E. Swanson. 2013. **Effects of Remedial Sport Hunting on Cougar Complaints and Livestock Depredations.** *PLoS ONE* 8.
- Posewitz, J. 1994. **Beyond Fair Chase: The Ethic and Tradition of Hunting.** Falcon Press, Helena, Montana.
- Robinson, H.S. DeSimone, R. 2011. **The Garnet Range Mountain Lion Study: Characteristics of a Hunted Population in West-Central Montana.** Final Report. Montana Fish, Wildlife & Parks. Helena, MT.
- Stoner, D. C., M. L. Wolfe, and D. M. Choate. 2006. **Cougar Exploitation Levels in Utah: Implications for Demographic Structure, Population Recovery, and Metapopulation Dynamics.** *Journal of Wildlife Management* 70:1588–1600.
- Teel, T. L., R. S. Krannich, and R. H. Schmidt. 2002. **Utah stakeholders' attitudes toward selected cougar and black bear management practices.** *Wildlife Society Bulletin* 30:2-15.
- Teichman, K. J., B. Cristescu, and C. T. Darimont. 2016. Hunting as a management tool? **Cougar-human conflict is positively related to trophy hunting.** *BMC Ecology* 16.
- Vucetich, J. A., D. W. Smith, and D. R. Stahler. 2005. **Influence of harvest, climate and wolf predation on Yellowstone elk, 1961-2004.** *Oikos* 111:259–270.
- Wallach, A. D., I. Izhaki, J. D. Toms, W. J. Ripple, and U. Shanas. 2015. **What is an apex predator?** *Oikos* 124:1453–1461.
- Wielgus, R. B., D. E. Morrison, H. S. Cooley, and B. Maletzke. 2013. **Effects of male trophy hunting on female carnivore population growth and persistence.** *Biological Conservation* 167:69–75.

---

<sup>i</sup> Cougar Management Guidelines (2005)

<sup>ii</sup> Batavia et al. (2018)

<sup>iii</sup> Vucetich et al. (2005), Eberhardt et al. (2007), Darimont et al. (2015)

<sup>iv</sup> Creel and Rotella (2010), Ausband et al. (2015), Darimont et al. (2015)

<sup>v</sup> Maletzke et al. (2014)

<sup>vi</sup> Beausoleil et al. (2013)

<sup>vii</sup> Robinson & DeSimone (2011)

<sup>viii</sup> Maletzke et al. (2014)

- 
- ix Stoner et al. (2006), Wielgus et al. (2013)
- x Stoner et al. (2006)
- xi Anderson and Lindzey (2005)
- xii Tiechman et al. (2016)
- xiii Stoner et al. (2006)
- xiv Wallach et al. (2015)
- xv Cooley et al. (2009)
- xvi Tiechman et al. (2016)
- xvii Peeble et al. (2013)
- xviii Lindzey et al. (1992), Logan and Sweanor (2001), Elbroch et al. (2013)
- xix Hristienko and McDonald (2007)
- xx Posewitz (1994), Teel et al. (2002), Cougar Management Guidelines (2005)
- xxi Posewitz (1994)
- xxii Teel et al. (2002)