



September 25, 2024

Stephanie Rissler, Commission Chair
South Dakota Game, Fish and Parks
501 Bulow Street
Vermillion, SD 57069

Tom Kirschenmann, Director of Wildlife
South Dakota Game, Fish and Parks
523 East Capitol Ave
Pierre, SD 57501

RE: Draft 2024-2028 Mountain Lion Action Plan (Updated: Population Objective Reductions)

Dear Chair Rissler, Director Kirschenmann and Members of the Commission:

On behalf of the Humane Society of the United States and our supporters in South Dakota, I thank you for this opportunity to submit comments on South Dakota Game, Fish and Parks' (GFP) Draft 2024-2028 Mountain Lion Action Plan. We strongly oppose the proposal to decrease the so-called mountain lion "population objective" from 200-300 to 150-250. Any population objective is completely arbitrary, and lowering the population objective to excuse unsustainable, unjustifiable, and counterproductive levels of trophy hunting is counter to science-based wildlife management and the ethics and values of South Dakotans. Further, it risks inbreeding depression and threatens the long-term viability of mountain lions in South Dakota. Gilbert et al. (2016) even found that mountain lions protect human life by reducing deadly vehicle-deer collisions, saving South Dakotans \$1.1 million annually.

We oppose the use of hounding to pursue mountain lions, and the year-round season outside of the Black Hills Fire Protection District (BHFPD). These practices harm the small mountain lion population in South Dakota and potentially increase conflicts with livestock. We urge you to revise the Draft Action Plan to end, or at the very least significantly reduce, these practices so that hunting opportunity is not privileged to the detriment of conflict reduction and the ecological and social value of mountain lions.

The Humane Society of the United States is categorically opposed to the trophy hunting of mountain lions in South Dakota. This practice is not only cruel and unnecessary, but researchers have found that excessive hunting of mountain lions leads to increased conflicts with humans, pets and livestock.¹ Furthermore, trophy hunting and predator control of mountain lions indirectly harms ungulates because predators target sick animals, including those with chronic wasting disease.² Finally, a national survey conducted by the National Shooting Sports Foundation and Responsive Management show that only 29% of Americans approve of trophy hunting.³

For these reasons, and those outlined in Appendix A of these comments, we request that SDGFP revise the Draft Mountain Lion Action Plan, end the use of hounds to pursue or hunt mountain lions, and protect mountain lions from trophy hunting now and in perpetuity.

If GFP is to continue allowing the trophy hunting of mountain lions, we request the agency limit the practice to sustainable levels (defined below) to protect South Dakota's iconic mountain lion population from excessive killing and to limit conflicts caused by indiscriminate hunting of these native cats. Specifically, we request the following changes:

1.) At the very least, do not lower the population objective, and ideally, lift the arbitrary population objective of 200-300 total mountain lions. The annual hunting limit should not exceed 14% of South Dakota's adult and subadult mountain lion population. GFP estimates that 176 adult and subadult lions live in South Dakota as of January 2024. GFP should count its lions using contemporary methods and not allow hunters to kill



more than South Dakota's mountain lion population growth rate. Non-spatial population models overestimate mountain lion populations by an average of 63%, and many jurisdictions count dependent kittens in their estimates.⁵

According to GFP's current, and likely unreliable, estimate of adult and subadult mountain lions, hunter kill exceeded 25% of the adult and subadult population in the 2023-2024 season. Beausoliel et al. (2013) suggest that in the absence of population data, agencies should not set quotas that exceed 14% of the mountain lion population to avoid destabilizing social structures and increasing conflicts.⁶ Colorado Parks and Wildlife (CPW) recently adopted a cap of 14% on mountain lion hunting quotas as part of their new West Slope Mountain Lion Management Plan.⁷ Additionally, CPW has adopted a cap of 16% on total human-caused mortality to account for other sources of lion deaths. Washington state has also recently adopted a conservative more conservative mountain lion quota in order to maintain stable mountain lion social structures to minimize conflicts.⁸ Since South Dakota's mountain lion population is especially isolated from dispersal to and from other populations, an even more conservative hunter offtake should be implemented.

GFP's Draft Action Plan continues to authorize trophy hunting of mountain lions that exceed sustainable levels, threatening the stability of South Dakota's mountain lion population To quote directly from materials provided by GFP itself to the Commission at its July 2023 meeting:

If the four-year average of 26 females is harvested next year, the population is expected to decrease to just over 200 by December of 2024.... Alternatively, if the harvest limit is achieved and 40 females are harvested next year, the population is expected to decrease to under 200 mountain lions, and below the population objective of 200 to 300.¹⁰

The Commission's reaction to this information should be to seriously reconsider the truly excessive level of recreational hounding and trophy hunting of mountain lions. Any population objective, especially one that was already low, is entirely arbitrary and does not allow for a species to fulfill their essential ecological niche. Just lowering a population objective when a population is disastrously declining is simply backward. Not only would this move destabilize social structures, increase conflicts, and put unnecessary stress on an already small population, it also flies in the face of so-called "sustainable yield" hunting principles to ensure wildlife remains for future generations. Even if hunting opportunity is the only priority of the Commission, lowering the population objective without scrutinizing human-caused mortality is harmful in the short and long term.

Any species needs robust numbers to maintain genetic fitness. Small populations experience inbreeding depression, bottlenecking, and genetic drift, increasing the incidence of detrimental traits, potentially reducing reproductive success, and increasing susceptibility to disease.¹¹ Other large carnivore populations that are larger and more connected experience this risk. *Effective population size*—that is the number of individuals who are participating in the genetic health of the population—is just a fraction of the number of individuals counted (or population census).¹² The effective population size could be just 10% of the census population, or lower.¹³ For example, the Greater Yellowstone Ecosystem population of grizzly bears was found to be at risk of genetic drift due to their isolation from other populations and low effective population size, with their population numbering approximately 1,000.¹⁴ South Dakota's mountain lion population is already isolated and precariously low. The state's efforts must urgently go toward stewarding South Dakota's few remaining mountain lions to ensure their short- and long-term survival and fitness.



We therefore call on the agency to count South Dakota's mountain lions using contemporary spatial-model methods, implement at most a 14% cap on hunting mortality and a 16% cap on total human-caused mortality based on adult/subadult population estimates while doing away with the agency's arbitrary population objective, and instead direct resources toward conserving the remaining population and educating and assisting residents in nonlethal strategies. Please see Section 4 of Appendix A for a detailed discussion of how excess hunting destabilizes mountain lion social structures, exacerbating conflicts, as well as effective nonlethal strategies to prevent conflict.

3.) Prohibit the hunting of mountain lions with hounds throughout South Dakota and reject any proposed rule that would expand hound hunting.

As detailed in Appendix A, using radio-collared hounds to chase mountain lions and bay them into trees or rock ledges so a trophy hunter can shoot at close range is unsporting, unethical and inhumane.¹⁶ Hounds kill kittens, and mountain lions often injure or kill hounds.¹⁷ The practice is exceedingly stressful and energetically taxing to mountain lions.¹⁸ Furthermore, hound hunting is not considered "fair chase" hunting by most.¹⁹ Hounds also chase and stress non-target wildlife, from porcupines to deer,²⁰ trespass onto private lands,²¹ and have adverse interactions with the public.²² If GFP is to continue allowing the hunting of mountain lions, the agency must prohibit the use of hounds and reject hound hunting in the Black Hills Fire Protection District.

In conclusion, the Humane Society of the United States strongly urges GFP to revise its Draft Mountain Lion Action Plan as it seeks only to maximize trophy hunting opportunities, not conserve mountain lions. South Dakota's mountain lions are a vital component of our natural wild heritage and deserve reasoned management for long-term conservation.²³ If GFP is to continue allowing hunting of mountain lions, the agency must limit the practice to no more than 14% of the adult/subadult population so that it does not exceed sustainable levels. Additionally, total human-caused mortality must be limited to no more than 16% of the mountain lion population. Lastly, hound hunting of mountain lions must be prohibited throughout South Dakota. Thank you for your consideration.

Sincerely,

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Appendix A

1. Mountain lion trophy hunting is unsustainable, cruel and harmful to family groups

Trophy hunting is the greatest source of mortality for mountain lions throughout their range in the United States.²⁴ The practice is harmful to more than just the wild cats who are killed. Conservation biologists have condemned this practice as unnecessary and wasteful. Batavia et al. (2018) write that compelling evidence shows that the animals hunted as trophies have sophisticated levels of “intelligence, emotion and sociality,” which is “profoundly disrupted” by trophy hunting.²⁵ For these reasons, GFP must not allow trophy hunting of mountain lions in South Dakota.

- A. *Trophy hunting is unsustainable and cruel:* Large-bodied carnivores are sparsely populated across vast areas, invest in few offspring, provide extended parental care to their young, have a tendency towards infanticide, females limit reproduction and social stability promotes their resiliency.²⁶ Human persecution affects their social structure,²⁷ and harms their persistence.²⁸

Conservation biologists have shown that trophy hunting results in *additive mortality*, meaning that trophy hunting and even other human-caused mortality increases the total mortality to levels that far exceed what would occur in nature.²⁹ In fact, the effect of human persecution is “super additive,” meaning that hunter kill rates on large carnivores has a multiplier effect on the ultimate increase in total mortality over what would occur in nature due to breeder loss, social disruption and its indirect effects including increased infanticide and decreased recruitment of their young.³⁰ When trophy hunters remove the stable adult mountain lions from a population, it encourages subadult males to immigrate, leading to greater aggression between cats and mortalities to adult females and subsequent infanticide.³¹

Biologists Wolfe et al. (2015) recommend that states manage mountain lions at a metapopulation level rather than at the single population level—which is critical for South Dakota’s tiny mountain lion population that is reliant on dispersers from Wyoming. They further add, “We recommend a conservative management approach be adopted to preclude potential over-harvest in future years.”³² Instead, South Dakota’s mountain lions experience *additive* levels of mortality.³³ Extensive research shows that this additive mortality caused by high levels of hunting results in population sinks.³⁴ High hunting mortality does not result in decreased numbers and densities of mountain lions because of compensatory emigration and immigration responses, typically by dispersing subadult males.³⁵

- B. *Trophy hunting is particularly harmful to kittens and their mothers:* In heavily hunted populations, female mountain lions experience higher levels of intraspecific aggression (fights with other cats) resulting in predation on themselves and their kittens.³⁶ Over-hunting harms a population’s ability to recruit new members if too many adult females are removed.³⁷ A Utah study shows that trophy hunting adult females orphans their kittens, leaving them to die of dehydration, malnutrition, and/or exposure.³⁸ Kittens are reliant upon their mothers beyond 12 months of age.³⁹
- C. *Trophy hunting harms entire mountain lion communities:* A recent study on mountain lions shows that mountain lions are quite social and live in “communities,” with females sharing kills with other females, their kittens and even with the territorial males. In return for these meals, the adult males protect the females and their kittens from incoming males.⁴⁰ Disrupting these communities leads to deadly



intraspecific strife, including infanticide and social chaos within the family groups.⁴¹ Trophy hunting destabilizes mountain lion populations, which may cause increased conflicts with humans, pets and livestock.⁴²

- D. *Trophy hunting is unnecessary, as mountain lions are a self-regulating species:* Mountain lions occur at low densities relative to their primary prey, making them sensitive to bottom-up (prey declines) and top-down (human persecution) influences.⁴³ Their populations necessarily stay at a much smaller size relative to their prey's biomass or risk starvation.⁴⁴ They do this by regulating their own numbers.⁴⁵ When prey populations decline, so do mountain lion populations.⁴⁶ Mountain lion populations also require expansive habitat, with individual cats maintaining large home ranges that overlap with one another.⁴⁷
- E. *Killing large numbers of mountain lions halts their ability to create trophic cascades in their ecosystems, which benefits a wide range of flora, fauna and people:* Mountain lions serve important ecological roles, including providing a variety of ecosystem services.⁴⁸ As such, conserving these large cats on the landscape creates a socio-ecological benefit that far offsets any societal costs.⁴⁹ Their protection and conservation has ripple effects throughout their natural communities. Researchers have found that by modulating deer populations, mountain lions prevented overgrazing near fragile riparian systems, resulting in greater biodiversity.⁵⁰ Additionally, carrion left from mountain lion kills feeds scavengers, beetles, foxes, bears and other wildlife species, further enhancing biodiversity.⁵¹
- F. *Hound hunting is harmful to mountain lions, hounds and non-target wildlife:* Using radio-collared trailing hounds to chase mountain lions and bay them into trees or rock ledges so a trophy hunter can shoot them at close range is unsporting, unethical and inhumane.⁵² Hounds kill kittens, and mountain lions often injure or kill hounds.⁵³ The practice is exceedingly stressful and energetically taxing to mountain lions.⁵⁴

To escape from the hounds, mountain lions use evasive maneuvers such as running in figure eights, scrambling up trees or steep hillsides and using quick turns to evade the pursuing pack of barking hounds. As a result, mountain lions could exceed their aerobic budgets causing their muscles to go anaerobic—while hounds are capable of running a steady pace with little ill effect.⁵⁵ For every one minute the hounds chased a mountain lion, it cost the cat approximately five times what would have been expended if the cat had been hunting. A 3.5-minute chase, according to Bryce et al. (2017), likely equaled 18 minutes of energy the mountain lion would have expended on hunting activities necessary to find prey.⁵⁶

Hounding is not considered “fair chase” hunting by most.⁵⁷ Fair chase hunting is predicated upon giving the animal an equal opportunity to escape from the hunter.⁵⁸ The use of hounds provides an unfair advantage to trophy hunters who rely on hounds to do the bulk of the work in finding and baying a mountain lion. GFP Wildlife Program Administrator Andrew Norton stated to the Commission in 2023, “As you can imagine, success is much higher with hounds. We see on average about twenty times as high success when hounds are used compared to boot hunting in South Dakota.”⁵⁹ In Custer State Park, hunters relying on hounds experience an astounding 63% success rate in killing mountain lions, compared to a success rate of 3.5% for boot hunters.⁶⁰ Hounds also chase and stress non-target wildlife, from porcupines to deer,⁶¹ cause adverse interactions with bystanders, and trespass onto private lands.⁶²



Grignolio et al. (2011) found that hounding was highly costly to non-target deer. Hounding changed deer behaviors, including deer inside a protected refuge.⁶³ While the hounds were chasing other species, they caused non-target deer, especially younger animals, to panic and huddle in an inferior habitat (in this case: a protected, high-elevation, snow-covered reserve during the wintertime hunting season when foraging was difficult). Hounds also significantly increased deer home range sizes—meaning deer had to expend extra energy to distance themselves from the hounds. Furthermore, Grignolio et al. (2011), citing several others, indicated that hounding highly disturbs deer, likely reducing individual fitness and reproductive success while harming deer populations on the whole. If GFP’s conservation goals include conserving deer populations, then unleashing packs of loose dogs in their habitat to spook, harass, and chase wildlife during a sensitive time of the year is quite counter to that goal.

2. Hunting mountain lions does not boost prey populations

Research shows that ungulates are ultimately limited more by their food resources and other habitat factors (“bottom-up” limitations) than by their predators (“top down” regulators).⁶⁴ However, when herds lose their predators, they suffer poorer health and body condition, as well as more degraded habitats.⁶⁵ With a healthy assemblage of native carnivores, ecosystems enjoy the benefits from top-down regulation, which increases the health of ungulate herds with which they are integrally coevolved.⁶⁶

The best available science demonstrates that killing native carnivores to increase ungulate populations is unlikely to produce positive results. Numerous recent studies demonstrate that predator removal actions “generally had no effect” in the long term on ungulate populations.⁶⁷ Because ecological systems are complex, heavily persecuting mountain lions will fail to address the underlying malnutrition problems that deer face. Research also shows that disruption by oil and gas drilling does, in fact, greatly harm mule deer populations.⁶⁸ If South Dakota wants to grow its ungulate populations, then GFP must foster survival of adult female mule deer and elk to stem declines; and it must improve nutritional conditions for ungulates as these factors are the most important for mule deer survival.⁶⁹ It must also eliminate hound hunting of mountain lions as it is an unnatural stressor on deer.⁷⁰

Persecuting mountain lions will not help bighorn sheep recruitment, either. It is clear from the literature that bighorn sheep populations are in decline in the U.S. because of unregulated market hunting, trophy hunting, disease from domestic sheep,⁷¹ resource competition by livestock, and loss of habitat.⁷² Sawyer and Lindzey (2002) surveyed more than 60 peer-reviewed articles concerning predator-prey relationships involving bighorn sheep and mountain lions, concluding that while predator control is often politically expedient, it often does not address underlying environmental issues including habitat loss, loss of migration corridors, and inadequate nutrition.⁷³ The best available science suggests that persecuting mountain lion populations is not a solution for enhancing bighorn sheep numbers. That is because mountain lion predation upon bighorn sheep is a learned behavior conducted by a few individuals who may not repeat their behavior.⁷⁴ Similar behavior has been documented on endangered mountain caribou in the southern Selkirk Mountains, where trophy hunting disrupted sensitive mountain lion communities, female lions took to higher altitudes to avoid incoming, infanticidal young males, and preyed upon mountain caribou there.⁷⁵

South Dakota can better plan for bighorn sheep management by selecting relocation sites for bighorn sheep that have little stalking cover.⁷⁶ Escape terrain that contains cliffs, rocks, and foliage makes excellent ambush cover for a mountain lion and should be avoided.⁷⁷ The amount of mountain lion predation is also generally greater on



small-sized bighorn sheep populations (those with fewer than 100 individuals) than on other larger bighorn sheep populations.⁷⁸ A host of authors reviewed by McKinney et al. (2006) and Ruth and Murphy (2010) recommend only limited mountain lion removals to benefit bighorn sheep populations.⁷⁹

3. Mountain lions provide significant ecosystem benefits to their prey and other wildlife, as well as economic benefits to South Dakotans

Mountain lions help prevent deadly deer-vehicle strikes⁸⁰ that can result in numerous human mortalities and pose significant financial and ecological costs to society.⁸¹ In fact, by reducing vehicle collisions with deer, mountain lions saved drivers \$1.1 million in collision costs annually in South Dakota.⁸² Additionally, highways fragment wildlife habitats, which can lead to both genetic inbreeding problems and direct mortality from vehicle collisions.⁸³ The cost of vehicle-animal collisions can be mitigated with the construction of highway structures that are designed to draw specific species such as deer across them, not only preventing vehicle strikes but protecting species and people while saving millions of dollars annually.⁸⁴

Moreover, mountain lions help maintain the health and viability of ungulate populations by preying on sick individuals, reducing the spread of disease such as chronic wasting disease (CWD) and brucellosis.⁸⁵ For example, during a study in Rocky Mountain National Park, researchers found mountain lions preyed on deer infected with CWD.⁸⁶ The study concluded that adult deer preyed upon by mountain lions were more likely to have CWD than deer shot by hunters. According to the study, “The subtle behaviour changes in prion-infected deer may be better signals of vulnerability than body condition, and these cues may occur well before body condition noticeably declines.”⁸⁷ This demonstrates that mountain lions select for infected prey and may be more effective at culling animals with CWD, including during the early stages of the disease when they are less infectious, than hunters who rely on more obvious signs of emaciation that occur in later stages of the disease, when they are more infectious. Moreover, the mountain lions consumed more than 85% of carcasses, thereby removing a significant amount of the disease from the environment.⁸⁸

This ecosystem benefit is increasingly important as CWD infection continues to grow in prevalence and distribution in South Dakota⁸⁹ and neighboring states. Hammering our state’s mountain lion population through extremely high and irresponsible levels of trophy hunting relative to the estimated population, and the setting of an arbitrarily low population objective for mountain lions, undermine one of our best defenses against the spread of this deadly disease.

4. Trophy hunting increases human-mountain lion conflict and livestock losses

Trophy hunting and predator control of mountain lions results in increased conflicts because lions’ social structure are destabilized.⁹⁰ A review of predator-removal studies found that the practice is “typically an ineffective and costly approach to conflicts between humans and predators” and, as a long-term strategy, will result in failure.⁹¹ Instead, the authors concluded, non-lethal alternatives to predator removal, coupled with coexistence (husbandry techniques) may resolve conflicts.⁹²

A Washington state study shows that as mountain lion complaints increased, wildlife officials lengthened seasons and increased quotas to respond to what they believed was a growing lion population. However, the public’s perception of an increasing population and greater number of livestock depredations was actually the result of a declining female and increasing male population.⁹³ Heavy hunting of mountain lions skewed the ratio



of young males in the population by causing compensatory immigration and emigration, even though it resulted in no net change in the population.⁹⁴

Study authors found that the trophy hunting of mountain lions to reduce complaints and livestock losses had the opposite effect. Killing mountain lions disrupts their social structure and increases both complaints and livestock losses.⁹⁵ Peebles et al. (2013) write:

. . . each additional cougar [i.e. mountain lion] on the landscape increased the odds of a complaint of livestock depredation by about 5%. However, contrary to expectations, each additional cougar killed on the landscape increased the odds by about 50%, or an order of magnitude higher. By far, hunting of cougars had the greatest effects, but not as expected. Very heavy hunting (100% removal of resident adults in 1 year) increased the odds of complaints and depredations in year 2 by 150% to 340%.⁹⁶

Similarly, a study published recently shows the very same result – lethal removal of mountain lions is associated with increased conflicts, especially on small hoofstock including sheep and goats.⁹⁷ Dellinger et al. (2021) state:

Removals can thus create a negative-feedback loop that leads to increasing conflict and lethal removal, which could begin to negatively impact the mountain lion population via reduced gene flow and population viability (Hiller et al. 2015, Vickers et al. 2015, Benson et al. 2019). Thus, maintaining an older age structure by reducing lethal removal of resident adults could mitigate depredations (Logan 2019).⁹⁸

Hunting disrupts mountain lions' sex-age structure and tilts a population to one that is composed of younger males, who are more likely to engage in livestock predation than animals in stable, older populations.⁹⁹ In 2019, the Humane Society of the United States published a report on livestock losses from mountain lions using the U.S. Department of Agriculture's data.¹⁰⁰ For South Dakota's cattle and sheep ranchers, 2015 data show that most livestock losses came from illnesses, birthing problems, weather and theft, with far fewer losses coming from native carnivores and domestic dogs combined.¹⁰¹ In 2015, nearly 96% of unwanted cattle losses in South Dakota were from maladies with only 0.17% coming from mountain lions, according to the USDA.¹⁰² And USDA data show that in 2014, zero sheep were lost to mountain lions in South Dakota.¹⁰³

Rather than allowing mountain lion trophy hunting, GFP must make a concerted effort to utilize non-lethal methods (described below) when rare conflicts occur, prioritizing these tools above lethal removal of mountain lions. The current reliance on lethal removal of mountain lions that enter a human community is cruel, unsustainable, and not in line with best management practices for mountain lion conservation.¹⁰⁴ A recent Utah study found that mountain lions selected for native prey even within urban-wildland interface habitat, with only 2% of 540 prey animals consisting of domestic animals.¹⁰⁵ Techniques such as hazing and relocation are viable options that prevent unnecessary killing and are largely supported by the majority of South Dakotans, as detailed within the Plan.¹⁰⁶ According to surveys of South Dakota residents in 2018, public education, relocation and hazing are by far the most widely supported methods for addressing human, pet and livestock conflicts with mountain lions.¹⁰⁷

Furthermore, GFP must work with livestock owners to ensure they are adequately and appropriately employing nonlethal predator deterrence techniques. Installing predator-proof enclosures, using livestock guardian animals, or utilizing frightening devices are all effective strategies to prevent conflicts with mountain lions and



other carnivores. Other livestock husbandry practices are also essential at reducing conflicts with carnivores. Livestock operators should:

- Practice sanitary livestock carcass removal to avoid scavenging and habituation.
- Keep livestock, especially in maternity pastures, away from areas where wild cats have access to ambush cover.¹⁰⁸
- Keep livestock, especially the most vulnerable—young animals, mothers during birthing seasons and hobby-farm animals—behind barriers such as electric fencing and/or in barns or pens, or kennels with a top.¹⁰⁹ The type of enclosure needs to be specific to the native carnivore to prevent climbing, digging or jumping.¹¹⁰
- Move calves from pastures with chronic predation problems and replace them with older, less vulnerable animals.¹¹¹
- Concentrate calving season (i.e., via artificial insemination) to synchronize births with wild ungulate birth periods.¹¹²
- In large landscapes, use human herders, range riders and/or guard animals.¹¹³ Guard dogs work better when sheep and lambs are contained in a fenced enclosure rather than on open range lands where they can wander unrestrained.¹¹⁴
- Suspended human clothing, LED flashing lights (sold as “Foxlights”) and radio alarm boxes set off to make alarm sounds/noises near pastures are some of the low-cost sound and/or visual equipment that deters wild cats.¹¹⁵
- Studded leather collars can be very effective at protecting cattle from big cats.¹¹⁶

According to USDA data from 2015, only an estimated 11.2% of cattle and calf operations in South Dakota used any nonlethal predator control methods.¹¹⁷ Expanding the use of suitable techniques that are landscape and animal specific is essential to reducing conflicts and preventing the death of livestock as well as wild carnivores. We urge GFP to focus resources on further educating the public on how to share the landscape with carnivores, rather than only attempting to maximize trophy hunting opportunity.

5. Trophy hunting of mountain lions is not economically sound or supported by the majority of Americans who want to see wildlife protected

Trophy hunting of mountain lions is not in the best interest of this iconic species, nor does it represent the interests of the public majority. The practice deprives citizens of their ability to see, view tracks of, or photograph wild mountain lions, and deprives them of the important ecosystem services mountain lions provide in our landscapes. Nonconsumptive users are a rapidly growing stakeholder group that provides immense economic contributions to the communities in which they visit.¹¹⁸ The U.S. Fish and Wildlife Service’s 2016 survey on wildlife recreation indicates that wildlife watchers nationwide have increased 20 percent from 2011, numbering 86 million and spending \$75.9 billion, while all hunters declined by 16 percent, with the biggest decline in big game hunter numbers, from 11.6 million in 2011 to 9.2 million in 2016.¹¹⁹ Altogether, hunters spent \$25.6 billion in 2016, about one-third that spent by wildlife watchers (Fig. 2).¹²⁰



Figure 2: Wildlife recreation participation & expenditures, 2011 vs. 2016 data			
Numbers	2011	2016	Change
Wildlife watchers	71.8M	86.0M	+14.2M (+20%)
All hunters	13.7M	11.5M	-2.2M (-16%)
Big game	11.6M	9.2M	-2.4M (-20%)
Small game	4.5M	3.5M	-1M (-22%)
Migratory birds	2.6M	2.4M	-0.2M (-8%)
Other animals	2.2M	1.3M	-0.9M (-41%)
Expenditures	2011	2016	Change
Wildlife watchers	\$59.1B	\$75.9B	+\$16.8B (+28%)
All hunters	\$36.3B	\$25.6B	-\$10.7B (-29%)

The public values mountain lions and views them as an indicator of healthy environments while posing little risk to people living near them.¹²¹ A new study indicates that Americans highly value wildlife, including top carnivores such as mountain lions, and are concerned about their welfare and conservation.¹²² The landmark America’s Wildlife Values report found that the percentage of South Dakotans who fall into the traditionalist values system – those who view wildlife as a resource to be used for human benefit – decreased by four percent between 2004 and 2018, while the percent of mutualists – those who value living alongside wildlife - rose significantly, with an increase of 7.5% in the same time period.¹²³ South Dakotans increasingly value their wildlife alive and thriving. Surveys also show that the majority of Americans do not support trophy hunting.¹²⁴ An additional study showed that most believe mountain lions are the best representative of the Southern Rockies heritage and landscape.¹²⁵ A continued trophy hunting and hounding season is not in the best interest of South Dakotans who prefer that these large cats remain on the landscape, without threat of persecution.

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