



MOUNTAIN LION FOUNDATION

Saving America's Lion

The mission of the Mountain Lion Foundation is to ensure that America's lion survives and flourishes in the wild.

August 16, 2024

Stephanie Rissler, Chair
South Dakota Game, Fish and Parks
523 East Capitol Ave
Pierre, SD 57501

RE: Mountain Lion Action Plan and proposed population reductions

Dear Chair Rissler and members of the South Dakota Game, Fish and Parks Commission,

We write to you on behalf of our South Dakota members to voice our concerns with the draft Mountain Lion Action Plan for 2024-2028. While there is much in this plan to praise, the proposal to reduce population targets is deeply concerning and risks reversing progress South Dakota has made in restoring this species. We urge you to reject the proposed reduction in target population and retain the current goal of 200-300 mountain lions and set a goal for further research on South Dakota's unique mountain lion population to set science-based targets for the Black Hills and other areas of the state with breeding populations.

South Dakota Game, Fish and Parks (SDGFP) prepared this plan with input from a stakeholder group which was weighted heavily toward hunting groups and livestock owners. There was limited input from conservationists or from scientists outside the department. The Mountain Lion Foundation requested a chance to participate in that meeting, but the request was declined. That group ultimately did not recommend reducing the population target for mountain lions, nor increasing the harvest limits. There was no such recommendation from agency staff and scientists at the stakeholder group, no such request was raised by others at the stakeholder meeting, and no scientific grounds were presented to justify this change in population target at the commission meeting of September 5, 2024.

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The prior population target was based on the department's field research and accumulated wisdom and research from states with a longer history of managing mountain lions. Mountain lions self-regulate their densities, and do not generally require hunting by humans to manage their population size. Research in many western states, from Washington to Arizona, has confirmed that independent-aged mountain lions (18 months and older) generally operate at a density of roughly 2.2 mountain lions per 100 km². In the Black Hills, that would place a stable population at 200-300. Research has shown that it is difficult to maintain a population well below that density, and that doing so often results in severe disruption to the social structure of mountain lions. That disruption has several harmful consequences beyond the immediate harm to the big cats.

Healthy, stable mountain lion populations self-regulate in part because older, established males drive off younger males as they disperse in from more distant areas. Young females tend to find home ranges near their mothers'. High mortality rates, especially from trophy hunting by humans, tends to remove the oldest individuals, those who are most effective at driving out younger males. Young male mountain lions are statistically the most prone to conflict. Young mountain lions are also less experienced and may be less physically able to kill their preferred prey: deer and elk. Starving young mountain lions can thus be more likely to pursue other prey, including rabbits, raccoons, and other wildlife, but sometimes also domestic animals. In addition, because they are less effective at defending a territory, local densities can actually *increase* after older individuals are killed. High rates of hunting mortality thus open up territory that will be occupied by more young individuals which are more prone to conflict. This tendency increases as mortality levels rise, with numerous researchers across multiple states finding this same pattern: increased killing leads to more conflict.

That substantial research literature was developed in states and Canadian provinces where mountain lions were never extirpated. In those areas, individuals could disperse into heavily-hunted sink habitats from multiple areas. South Dakota is unusual in being one of the few states where mountain lions have returned since their extirpation a century ago. The brief window in which the state has had a breeding population has not allowed rigorous study that might be compared directly to the research conducted further west, and so the results of this uncontrolled experiment on the population is harder to predict than it might be elsewhere. Rushing into this decision without a scientific basis is risky and ill advised. It creates new and unpredictable risks for the state's livestock owners.

The proposal to reduce this population by up to half also threatens the growth and restoration of this beloved species within South Dakota and in other states. Dispersers from South Dakota often are found to be the pioneers heading east into Minnesota and states further east where the species has not yet returned to breeding. In addition, South Dakota's mountain lions operate in a metapopulation of relatively isolated patches of high quality habitat ranging from

Nebraska to North Dakota. Those states, like South Dakota, have relatively new breeding populations, and this dramatic increase in mortality could threaten the stability of the populations in those neighboring states as well.

In short, this proposal creates unnecessary risks and will provide no clear benefits. It is unlikely to significantly reduce conflict rates, and may increase them. It will undercut the progress South Dakota has made to restore ecological balance that apex carnivores provide to ecosystems. Mountain lions have been documented as having more ecological connections to other species than any other carnivore, standing as a key “ecological broker” in ecosystems where they live. Harming them harms the entire ecosystem. Rather than a rushed move, the Commission and staff should move deliberately to evaluate the ecological and social risks from this dramatic change in management that was not requested by the department’s stakeholder group.

We urge that you return to the draft plan’s recommendation to hold hunting rates steady. While the current rate at which mountain lions are killed by hunters is higher than we would recommend, and higher than is necessary for the ecology of mountain lions (which do not require hunting to maintain their population), the decision to hold hunting steady is a recognition that the current hunting regime is at the limit of what the comparatively new mountain lion population in South Dakota can sustain, and that in order for mountain lions to recover the population that was extirpated by excessive hunting in the 19th and early 20th centuries, it is necessary not to further increase hunting. Mountain lions have slowly spread east into the Dakotas and Nebraska in the last decades, and there is a strong desire to see mountain lions recover further east in those states, and indeed throughout the eastern United States. Current policy in South Dakota unfortunately does not protect mountain lions outside of the Black Hills, a policy which necessarily limits the natural spread of that population.

Discussing those areas outside the Black Hills, the Action Plan notes that there is no population objective for populations in the prairie, in part due to the lack of substantial population surveys of those areas. The Action Plan notes that “these areas are managed primarily to abate potential livestock losses on private property while at the same time to provide recreational hunting opportunity.” We would suggest that developing scientific surveys of the prairie populations would be a valuable contribution to the scientific literature, documenting the behavior and ecology of the species as it recolonizes former territory. It would also allow development of management objectives that reflect the ecological benefits mountain lions provide, and not merely address the risk of livestock conflict. We urge that such research be added as an objective in the action plan.

The Action Plan correctly observes “To help minimize [livestock] conflicts when possible, GFP must ensure that mountain lion populations are managed proactively and that management goals are being met.” Minimizing conflict is an important goal and one that SDGFP can play a

critical role with. Research throughout the range of mountain lions shows, consistently across states and multiple independent studies, that increased hunting does not reduce conflict. Indeed, multiple research groups independently find that hunting tends to *increase* conflict with livestock. There are several proposed reasons for this phenomenon, rooted in the biology of the species. While it is a somewhat counterintuitive finding, it is important to emphasize that the intuitive belief that killing mountain lions reduces conflict is not borne out by empirical study. We urge that management goals for mountain lions reflect the best available science and not rely on the hunting of mountain lions as a mechanism for addressing conflict. Instead, management should emphasize the use of nonlethal deterrents, especially livestock guardian dogs, adequate fencing, and well-designed enclosures for livestock, and a combination of public education and landowner outreach to ensure that livestock owners understand the tools available to help them and their livestock live safely and confidently alongside these native carnivores as the species recovers its population.

The Action Plan notes that SDGFP is pursuing exactly that course. It explains: “Furthermore, GFP is currently working on an informational brochure which demonstrates successful techniques used to protect chicken and other domestic animals from mountain lions.” The Mountain Lion Foundation has worked with state fish and wildlife agencies in several states to develop exactly such brochures, and it would be our pleasure to collaborate with SDGFP as well, or to share our experience in writing and distributing those educational materials. Please don’t hesitate to reach out if we can be of assistance in those valuable efforts.

We also reiterate longstanding areas of concern with mountain lion management in South Dakota. The Action Plan Objective 2 sets out the goal to “manage mountain lion populations for both maximum and quality recreational hunting opportunities, considering all social and biological inputs.” Maximizing human killing of mountain lions is not ecologically necessary, and as discussed above, poses a real risk of increasing conflict and potentially harming ungulate populations. As apex carnivores, mountain lions do not require hunting to maintain stable populations in balance with their prey. Research throughout the West has shown that increased hunting does not benefit deer or elk populations. Because of their territorial behavior, killing established resident lions can cause local populations of mountain lions to actually *increase*, placing further pressure on prey populations temporarily. Those overhunted populations can also be more prone to conflict with livestock, as they tend to be dominated by younger, inexperienced male mountain lions. Numerous studies show that this is the most conflict-prone demographic. Reducing objectives for human killing of mountain lions would benefit this ecologically-sensitive species, and could bring benefits for hunters and livestock owners.

In this vein, we also have concerns about part b of Objective 2, which sets a goal to “maximize hunting opportunity for hunters with dogs” in the Custer State Park unit. Hound hunting poses risks to other wildlife, livestock, and pets. Hounds travel across park boundaries, and can

become distracted by pets or livestock on the property they are trespassing on and can attack or injure park visitors, pets, or livestock. In addition, hound teams that encounter a female who is caring for young are more likely to kill the cubs or to drive the mother far from her family, making it harder for hunters to avoid orphaning those cubs. When a pack of GPS-collared hounds are set to chase a mountain lion, the chances of a kill on that hunt is higher than for a boot hunt. This higher killing efficiency is particularly challenging for a small and recovering population like South Dakota's. Prioritizing boot hunting would do more to protect park visitors, neighbors, and wildlife in the park.

Instead of managing primarily with the goal of maximizing hunting today, we urge the Commission to set a goal of long-term recovery of mountain lions throughout South Dakota, and the health and stability of the metapopulation of mountain lions throughout the Plains states. South Dakota's population is essential to the future recovery of mountain lions in states further east, and its mountain lions disperse to and sustain the genetics of surrounding states including North Dakota, Nebraska, Wyoming, and Montana, and is in turn sustained by immigration of mountain lions from those states. The killing of lions in South Dakota affects all those states. Managing with an eye toward overall stability would, as emphasized above, require further study of the prairie populations outside the Black Hills. It would also require coordination with Tribal governments to monitor the number of mountain lions killed by all hunters and all responses to conflict within South Dakota's borders. And it would require the state to consider dispersal corridors and highway crossings to ensure the ready movement of mountain lions between population in and around South Dakota. Restoring the statewide range of mountain lions, and allowing the species to recover in neighboring states as well, would have ecological and social benefits, discussed above. Reducing the state's mountain lion population would be a move in the wrong direction, harming all of those goals, risking increased conflicts with livestock, and harming the many South Dakotans who sincerely wish to see this beloved species fully recover in South Dakota and throughout its historic range. While we would hope the state would consider the wisdom of this choice, we note that this recovered population could also allow greater hunter opportunity throughout the state than would be possible with a population limited to the Black Hills.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Rosenau', with a long horizontal flourish extending to the right.

Joshua Rosenau
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