

SD MOUNTAIN LION MANAGEMENT PLAN—PUBLIC COMMENTS

1. If you are dropping deer tags because of lower numbers I think you need to look at getting rid of a lot more. If that's why the deer and elk population are falling. And some day a human may be next. I think it's a bigger problem than what's been said.
2. Hunting season for mountain lions should run the same time as other hunting seasons such as deer season and elk season. This would give those hunting another chance at another big game species. It would also sell more licenses. Numbers around the 150 would be more manageable and allow the elk herd to populate.
3. Manage mountain lions to get the population in the hills to 175 ASAP to slow movement to other areas.. Treat mountain lions as an unprotected varmint elsewhere. The population is so high that they are breeding on the prairie and it is only a matter of time before someone gets hurt. I had a report yesterday of a kitten seen at a distance of 20 feet and for enough time to positively ID. This was in the center of the state in cattle country where they will not be tolerated. Public support depends on farmers and ranchers and your looney get a license first idea will be ignored on the prairie.
4. Leave the cats live. It is people moving in on them. Yes the population needs to be controlled realistically, but I think 175 give or take 25 can jeopardize them. My biggest question is how has the reintroduction of the wolf population to Yellowstone effected the mountain lions in the hills? Is this why we are seeing greater numbers in the big cats? And lastly do we have any wolfpacks in the hills or nearby?
5. I grew up in South Dakota, worked in the Black Hills while going to college, and have family living in the Hills. Even though I no longer live in South Dakota, the state is very dear to me and I feel that my opinion counts. Your report on reducing the mountain lion population lists several items that you considered to be benefits. I feel that the mountain lions are not the biggest problem; I believe that over-development is the cause of mountain lion issues and many other current problems. In addition, I believe that the current over-development will cause the Game, Fish and Parks Department more significant problems in the future.
6. Nice plan – nice document. This is a good step. I think I would like a more of a reduction (down to 125 or 150), but probably as good of a compromise as we can get.
7. Sir, I have written before but think my comments are falling on deaf ears. I have left messages with Blair Waite and never had him return my calls. I started hunting the black hills 35 years ago. At first I seldom saw lion footprints. But, for the last 16 years I have seen a minimum of one and max of 5 every year since.

Last year I saw 2 black ones. Sgt Daly from the Pennington county sheriff's office also said he one around Hermosa when he patrolled that area. I am retired Law Enforcement and do volunteer work for Penn. co. sheriff's office on a weekly basis. My idea as to why you have to lower the deer and elk tag allotment is that you issued too many doe and cow permits and not enough lion permits just for the Deerfield area. Last year I saw at least 6 deer that lions had killed and 2 elk. Before that I saw 2 or 3 kills on deer and sporadic elk each year. From other hunters that use Deerfield area they have seen more lions then me. But, it could be that we're seeing the same ones. Hope this helps.

8. Please see the message below. Can you comment on the inaccuracies indicated by MLF regarding the proposed new mountain lion management plan in south Dakota? As im sure you are aware, the plains ecosystem is currently experiencing a dearth of top predators. Stressing mountain lion numbers by allowing recreational hunting seems to be the wrong approach. Please rethink the policy. Seven years ago, the South Dakota Department of Game, Fish & Parks (SDGF&P) presented the world with their version of a mountain lion management plan. In that plan was the proposal for an "experimental" mountain lion hunting season. They justified this action as "just another step in the evolution of responsible mountain lion management," and because it "would communicate to some people that mountain lions are being managed responsibly." Now, five hunting seasons later, SDGF&P is kowtowing to special interest hunting groups and proposing anew mountain lion management plan where the recreational hunting of lions is no longer considered as experimental, but is the cornerstone of their entire management program. Granted at first look the new plan appears to be based on scientific facts, with actions proposed for the good of the species, but on closer review the document is full of incorrect numbers, flawed mathematical equations, a series of bad scientific practices and assumptions, and a complete disregard of the basic biological and behavioral qualities of the species. If this new management plan had been forced to pass peer review its presenters would have been laughed out of the scientific community. Setting aside their ever-changing numbers, and incorrect mathematic equations, SDGF&P's basic premise is that there are too many mountain lions for the Black Hills region of the state to support, and hunting is needed to "thin out the herd" so to speak. They base this assumption on their belief that seventy percent of South Dakota's lions are female and that they are breeding like rabbits. What's more they seem to think that South Dakota's mountain lion kittens are tougher than those in other states because the Department's population calculations have almost all of them surviving despite being orphaned at an early age. Let's look at the facts: SDGF&P claims that the Black Hills region can only support a population of somewhere between 150 to 200 lions. In 2009, Department researchers claimed that there were 251 mountain lions in South Dakota's Black Hills with a population breakdown of 138 adults and an unbelievable 113 kittens. Of course, SDGF&P counts those 113 kittens (statistically half of which would still be breast feeding) as if they are all adults, using the same resources and taking up the same territorial space as full grown mountain lions, to justify the need to increase the annual hunting quota. During

the first 41 days of this year, 40 adult mountain lions (24 female, 16 males) were killed during the 2010 mountain lion hunting season. Thereby reducing the estimated adult lion population to 98. Despite the Department's misinterpretation of the Logan and Sweanor's research on the subject, the death of 24 female mountain lions would also cause the unnoticed deaths of at least six litters of kittens, for an additional 18 lion mortalities. Not to mention, this would also orphan 18 "teenage" lions ranging in age from 12 to 24 months -- lions, which as they grow up are now most likely to prey on domestic animals because they didn't have mothers to teach them what to hunt. Recreational hunting isn't the only way South Dakota's mountain lions die. Based on SDGF&P's 2008, 2009 mountain lion mortality data, approximately 36-37 mountain lions die from non-hunting related causes each year. Based on SDGF&P's sex assumptions that means that 25 more female lions will perish in 2010 and there will be twenty additional kitten mortalities, and of course, twenty additional teenage lions running around getting into trouble. That brings South Dakota's estimated lion population down to 61 adults, and 75 kittens(38 of who are orphaned and on their own). Note: Florida has close to 100 adult mountain lions and that population size is considered so vulnerable to extinction and inbreeding that the animals are protected by the Federal Endangered Species Act. During South Dakota's five mountain lion hunting seasons, the annual harvest quota and mortality totals has steadily increased (2005-13, 2006-16, 2007-19, 2009-30, 2010-40), and the new management plan proposes even greater recreational hunting quotas. In South Dakota's proposed 2010-2015 Mountain Lion Management Plan, SDGF&P proudly states that "With the use of science-based knowledge to make management decisions, this plan will ensure a healthy, self-sustaining population of mountain lions in the Black Hills of South Dakota." If SDGF&P's biologists truly believe that statement, then they have a really twisted idea of what a healthy, self-sustaining population of mountain lions truly is. Back in 1889, the first time South Dakota had a mountain lion "management" plan they managed to eradicate the species from the entire state in 17 years. I wonder how long it will take to achieve the same results if this new management plan is approved unchanged.

9. People love to see Elk and deer but you Idiot's at the game and fish think it is wonderful to have all these predators! For whatever reason these violent beast seem to be more important that a majestic Elk. Elk and deer bring in revenue and these predators drive it away. Why don't you just look the other way; problem solved!!!! If you wiped everyone out they would be back in a matter of months. I know for a fact that the GF&P released mountain lions in eastern SD to control the deer population. Nice move!! How much revenue dose hunting bring into the state. If there is nothing to hunt "no revenue".
10. This should be a 2-3 year plan not 5 years +. The population objective should be 100 – 125. The elk, deer, bighorn sheep, etc... need to increase. We are seeing lower fertility rates in the Black Hills ungulates because of the stress that lions put on the pregnant mothers. There is no place for lions in the Black Hills, but would settle for the 100 -125 pop objective.

- 11.** Recently the Sioux Falls Argus Leader carried an article on the State's plan to reduce the mountain population in the Black Hills. To me that makes a lot of sense. A proactive approach is much wiser than reaction. Those who oppose the plan want proof of the dangers of overpopulation, which means that GF&P should wait until data has been established on how many human attacks have occurred, how many pets killed, how many residential area close encounters, etc. Data has already been established on lion habits and dangers and is contained in at least two books in the Custer library. Both books "Cat Attacks" and "The Beast In The Garden" relate scary and factual accounts. Black Hills lions are no different than lions anywhere else. The frequent encounters with lions within city limits are testimonials of lion overpopulation in the Black Hills and warrant controlling measures by GF&P.
- 12.** I don't think the plan is aggressive enough. I used to go to Custer every year and the deer and Elk were everywhere, now you don't hardly see them at all. I am not for exterminating all the cats, but I believe the population estimate to be on the low side. I would be in favor of a two month season with no quota, without the use of dogs you would not kill all the cats but the ones that are left should be afraid of humans so seeing them would be the exception instead of the rule. If you don't get aggressive there will be no deer and Elk left to hunt, just look at what has happened to the Elk herd in Custer State Park this should say it all.
- 13.** After carefully examining the new mountain lion management program and doing the numbers with out taking my shoes off, it's clear the plan is designed to eradicate lions in SD much to the delight of uninformed and biased interest. Farmers & Ranchers._Why not adopt Florida's plan and place them on the in-dangered specie list so as to save them as a natural resource forever.
- 14.** According to the Fish and Games recent survey of SD residents and how they feel about the lion population, the majority of respondents said that they would like the lion population to stay the same. Additionally, Fish and Game's data shows that the population has stablized or decreased in the past 2 years. PLEASE DON'T GIVE-IN TO GREEDY HUNTERS AND IRRATIONAL FEARS OF PREDATORS AND RAISE THE HUNTING QUOTAS! You are the ones educated in wildlife biology and hired to make decisions in the best interest of our wildlife. Don't let the outcry from those with other motives influence your decision regarding lion management.
- 15.** I am a dedicated volunteer at a Big Cat rescue facility in Tampa, FL. I was alarmd to hear of your "management" plan for Mountain Lions...it is VERY flawed. Another member of our team wrote you a most logical and thoughtful letter, I could not have expressed myself better so I will copy it below. PLEASE consider what impact you may have on the future of this species if the gene pool is reduced as it has been with the ENDANGERED Florida Panther....To quote Julie Hannan: I read, with much consternation, the current proposal for a new

mountain lion management plan in South Dakota. Since I live in Florida and am involved in big cat rescue, I am keenly aware of the problems presented by population control of this species. That recreational hunting is being considered as the cornerstone of your management program is shocking. Consider the following: In 2009, your department claimed that there were 251 mountain lions in South Dakota's Black Hills with a population breakdown of 138 adults and 113 kittens. These kittens are being counted as if they are adults; i.e. using the same resources and taking up the same territorial space as full grown adults. Yet, statistically, half of these would still be breast feeding. Is this error made in order to justify the need to increase annual hunting quotas? If you take into account that, during the first 41 days of this year, 40 adult mountain lions (24 female, 16 males) were killed, then the adult lion population has now been reduced to 98. The death of these 24 females would cause the deaths of at least 6 litters of kittens, too. Thus, an additional 18 lion mortalities. Besides hunting deaths, 36-37 lions die each year. In 2010, this means that 25 more female lions will die (based on your sex assumptions) and 20 more kittens will die. Now, we are down to a TRUE mountain lion population of 61 adults and 75 kittens (38 of whom are orphaned and on their own). In my state, with close to 100 panthers, our population is so vulnerable to extinction and inbreeding that the animals are protected by the Endangered Species Act. South Dakota does not have the option of steadily increasing annual harvest quotas, despite the intense pressure you receive from hunting enthusiasts and lobby groups. The population will not be healthy, will not be self-sustaining. Please reconsider your stand on increasing quotas and, instead, protect America's native big cats. For the cats!!

- 16. OPEN SEASON LIKE IT STARTED NOV 1 DURING DEER SEASON. BE LOT MORE HUNTERS OUT THEN.**
- 17. This so called lion management plan is just another way to let hunters to kill as many lions/cubs as they please without any concern for the survival for this species. In 2009, there were 251 lions; but in reality 113 of them were cubs (some were still feeding on their mothers' milk). Yet somehow, over forty adult female lions were killed (some no doubt had young cubs that need their mothers' care). In another words, if these cubs somehow manage to locate prey, they will take down livestock since livestock are easy! Then naturally these orphans are damned to be livestock raiders and must be killed. When a state only has a hundred or so breeding adult wild animals, they are usually classified as endangered species. Thus protection from human killing is forbidden. But not in this case and not for this species! And this lion management plan of the past only managed to kill them all! So is this plan the same as the past? Since there are a large portion of adult females have been killed for fun and profit? And no rescue or compassion for their orphans are taken?**
- 18. Please stop hunting our beautiful mountain lions to extinction, as so many states have done in the centuries preceding this moment. You have the ability to counter the genocide and save North America's last big cat. In many North**

American Indian tales - a woman might marry a man, who turns out to be a bear. Or a man's wife might be a snake, or a mountain lion. In these stories, the happy couple visit their in-laws - and the human/animal tribe co-exists. These are not superstitious tales of a simple people — these stories carry stewarding strategies. For if we're married to snake, bear, lion, etc., then we will not exterminate these species because they are our kin. We are family. Mountain lions are fierce, pride, wild creatures. They are our brothers. Please make and keep the kind of laws that will help the balance of nature. Mountain lions already have so many obstacles that face them - highway deaths, development and lack of wild terrain, lack of healthy breeding partners, over hunting and poaching, etc. Please reflect on this and find your voice to speak compassionately on their behalf.

- 19.** I live in a state that has badly mismanaged its wildlife and now our Florida Panther has little chance of survival due to over hunting and little protection. You are in the position to reverse that same fate for the SD cougar and be known to all future generations as a hero and an icon, or you can continue to allow the hunting of this necessary creature and go down in history as the one who failed to act in time.
- 20.** Please do not decimate the population of mountain lions by allowing humans to take them home as "trophies." Please protect this small population of native cats.
- 21.** The cougar management plan is riddled with mathematical errors and bad assumptions.
- 22.** SDGF&P claims that the Black Hills region can only support a population of somewhere between 150 to 200 lions. (Nonsense). In 2009, Department researchers claimed that there were 251 mountain lions in South Dakota's Black Hills with a population breakdown of 138 adults and an unbelievable 113 kittens. Of course, SDGF&P counts those 113 kittens (statistically half of which would still be breast feeding) as if they are all adults, using the same resources and taking up the same territorial space as full grown mountain lions, to justify the need to increase the annual hunting quota. During the first 41 days of this year, 40 adult mountain lions (24 female, 16 males) were killed during the 2010 mountain lion hunting season. Thereby reducing the estimated adult lion population to 98. Despite the Department's misinterpretation of the Logan and Sweanor's research on the subject, the death of 24 female mountain lions would also cause the unnoticed deaths of at least six litters of kittens, for an additional 18 lion mortalities. Not to mention, this would also orphan 18 "teenage" lions ranging in age from 12 to 24 months -- lions, which as they grow up are now most likely to prey on domestic animals because they didn't have mothers to teach them what to hunt. Recreational hunting isn't the only way South Dakota's mountain lions die. Based on SDGF&P's 2008, 2009 mountain lion mortality data, approximately 36-37 mountain lions die from non-hunting related causes each year. Based on SDGF&P's sex assumptions that means that 25 more female lions will perish in 2010 and there will be twenty additional kitten mortalities, and of

course, twenty additional teenage lions running around getting into trouble. That brings South Dakota's estimated lion population down to 61 adults, and 75 kittens (38 of who are orphaned and on their own). Note: Florida has close to 100 adult mountain lions and that population size is considered so vulnerable to extinction and inbreeding that the animals are protected by the Federal Endangered Species Act. In South Dakota's proposed 2010-2015 Mountain Lion Management Plan, SDGF&P proudly states that "With the use of science-based knowledge to make management decisions, this plan will ensure a healthy, self-sustaining population of mountain lions in the Black Hills of South Dakota." If SDGF&P's biologists truly believe that statement, then they have a really twisted idea of what a healthy, self-sustaining population of mountain lions truly is. Back in 1889, the first time South Dakota had a mountain lion "management" plan they managed to eradicate the species from the entire state in 17 years. I wonder how long it will take to achieve the same results if this new management plan is approved unchanged. There is only one right option, my friend. STOP KILLING THE COUGARS. They have as much of a right to live and to walk this Earth as you and I..... our ignorant, arrogant, egotistic human animal egos notwithstanding.

23. I read, with much consternation, the current proposal for a new mountain lion management plan in South Dakota. Since I live in Florida and am involved in big cat rescue, I am keenly aware of the problems presented by population control of this species. That recreational hunting is being considered as the cornerstone of your management program is shocking. Consider the following: In 2009, your department claimed that there were 251 mountain lions in South Dakota's Black Hills with a population breakdown of 138 adults and 113 kittens. These kittens are being counted as if they are adults; i.e. using the same resources and taking up the same territorial space as full grown adults. Yet, statistically, half of these would still be breast feeding. Is this error made in order to justify the need to increase annual hunting quotas? If you take into account that, during the first 41 days of this year, 40 adult mountain lions (24 female, 16 males) were killed, then the adult lion population has now been reduced to 98. The death of these 24 females would cause the deaths of at least 6 litters of kittens, too. Thus, an additional 18 lion mortalities. Besides hunting deaths, 36-37 lions die each year. In 2010, this means that 25 more female lions will die (based on your sex assumptions) and 20 more kittens will die. Now, we are down to a TRUE mountain lion population of 61 adults and 75 kittens (38 of whom are orphaned and on their own. In my state, with close to 100 panthers, our population is so vulnerable to extinction and inbreeding that the animals are protected by the Endangered Species Act. South Dakota does not have the option of steadily increasing annual harvest quotas, despite the intense pressure you receive from hunting enthusiasts and lobby groups. The population will not be health, will not be self-sustaining. Please reconsider your stand on increasing quotas and, instead, protect America's native big cats.

- 24.** Please stop the slaughter of these beautiful animals. If the hunting of mountain lions is not stopped they will very shortly become extinct. Every time an species goes extinct it puts us (humans) one step closer to extinction. All creatures on this planet are here for a reason. It is the circle of life. We all need each other.
- 25.** I will avoid even travelling through SD until your state values mountain lions enough to manage--not eliminate--them. Words cannot describe my disgust!
- 26.** I am strongly opposed to an increase in the mountain lion kill quotas. In fact I am even opposed to the maintaining of the current quotoa. There are plenty of gaps in the logic and projected numbers of your department's game biologists. You are leaving little lee way for unforeseen mortalities due to disease, kitten deaths, auto fatalities which can vary substantially, etc... I feel your department already has its mind made up and the "comment period" is just an exercise in making people feel like they had a say before the forgone conclusion is initiated. For example, polls have shown most people want the number of mountain lions managed at their current numbers. You are ignoring that directive of the people and doing as you damn well please by advocating a huge increase. All I can say is if you can't manage elk numbers any better than you have, I have little hope in your managing as few as 200 or so mountain lions with out wiping them out!! Don't try to blame the lions for the elk herd reduction because you should have calculated some elk mortalities from lions and adjusted hunting permits accordingly. If you can't keep elk from declining by about 40 %, why should we believe you can kill 1/3 of the adult lion population (and an unaccounted kitten mortality plus 1-2 year old cats that will be killed because they haven't learned to hunt efficiently) and still have a viable population of lions? Perhaps you should ask your "expert" game biologists what happened to the elk numbers before you kill so many lions!!!
- 27.** It was with horror that I read the statistics regarding the SD mountain lion plight. As the figures denoting the true number of mountain lions is delineated it seems that your population is down to 61 adults and 75 kittens (38 orphaned and on their own). With this being the case how can you not have a sound management program, for example protection through the Endangered Species Act? Being a Floridian and passionately concerned about the plight of the Florida Panther I find it incomprehensible that you allow your panther management program to be driven by hunting enthusiasts and lobby groups - this is a wonderful way to eradicate the species from your state - to what purpose. The consequences of this eradication program are that your natural areas will be degraded by the losses even down to the birds and flowers. You will have also lost one of our majestic American symbols - the American Lion. One great advantage to preserving this species is that by preserving the tracts of land needed for this species we are able to better plan and preserve areas of our country that both the mountain lion and human can live in and enjoy. Urban and suburban sprawl would necessarily need to be addressed - hopefully in SD you are already doing this. There are many ways to cohabit with the mountain lion. California, for example has a stellar plan for building simple structures to protect small

- animals. Florida tries to make the panther habitat more accessible for the cats so that they can access larger areas. The death of even one of these magnificent animals saddens us all. Please consider a more progressive approach to your environmental problems and urge those making decisions to consider the value of mountain lions and their presence in our remaining landscape.
- 28.** Please, please help stop the needless suffering. When are we going to evolve?
 - 29.** Please do not increase the Cougar harvest quota.
 - 30.** After looking over the Cougar plan, I think it is too harsh and gives more to the sports/trophy hunter. I really think we need a more scientific plan that allows humans and cougars to co-exist. Please reduce the number of cougars that are allowed to be hunted in this plan. Cougars are often killed illegally and accidentally by vehicles etc. and I believe this fact has not been incorporated into this plan. Thank you.
 - 31.** Are we as a society going to keep killing these beautiful, shy creatures until one day we all say, "Oh, guess we should protect these animals because there are only five left, and we have done it to them." Isn't that what we always say when we kill off a species because of human inconveniences or because it has broken into someone's bank account.
 - 32.** Don't believe there should be a cougar hunt to reduce populations. Based on what? It's always the same BS with these hunts. In some states ranchers cry the blues over lost livestock, which is rare. It is a part of doing business. Not unlike any other business. Do store owners shoot shoplifters? Of course not. Shoplifting and theft unfortunately is a part of being in the retail business. Being a rancher is no different. Are you doing it to make money for the state by issuing licenses and tags? Another stupid reason to kill a beautiful animal. It is very tiresome to see people manage wildlife. Most of the time we do nothing cause more damage than good. We kill bison when they wander out of Yellowstone because ranchers fear they will spread brucellosis to cattle. There has never been one confirmed case of this happening. We had to reintroduce the wolf to Yellowstone after wiping them all out. The bear on the California State Flag is just a footnote in history, we wiped out the California Grizzly long ago. It goes on and on and on. All in the name of MONEY, that's all. You should not continue with your proposed hunt of cougars they are a beautiful animal and needed in a healthy ecosystem.
 - 33.** I am writing to express my dissatisfaction with the Mountain Lion Hunting season. It was stated in the Rapid City Journal that the majority of hunters want to up the quota of lions killed in the Black Hills. Again, I am writing and others are writing who are against this season and who oppose any increase of mountain lion hunting, and would like GF& P to be solely responsible to determine the course of action if a lion/human conflict takes place. But I feel that no matter

how many meetings I go to, how many letters I write, in the end the people who buy hunting licenses will get the final say.

34. I would like to see a license issued by the GF&P for non-hunting purposes such as trail maintenance, education programs and non-lethal methods of solving human/wildlife conflicts. If these licenses were offered for \$10.00, or the fee of a typical hunting license, I feel that not only would I get more say in wildlife issues, but you would be able to fairly represent people who do not want to see lions killed. Please seriously consider this proposal so that we may get our say in this matter.
35. I have just read an e-mail from the cougar fund. The issue the note raises about older kittens is legit. Dr. Maurice Hornocker found that cougar kittens becoming independent of the female before 18-20 months of age were far more aggressive towards humans and other cougars. Such animals are more likely to attack humans as well as be forced to do more experimentation in selecting prey.
36. To ensure the continued natural-habitat existence of cougars in South Dakota and North America, EVERYONE involved with cougars, be they government employees or anyone having anything to do with the management of cougars, must make a deep commitment to ALWAYS consult cougar experts and cougar research scientists before any decisions are made regarding anything that has to do with these beautiful, magnificent animals.
37. Please stop increasing cougar harvesting! Please do not adopt the plan as it is written! Reports show that residents of Black Hills would like the "desired levels of wildlife to remain the same" Why would the state propose the opposite? Hunters aren't the only way to increase fees.....increase tourism! Save the mountain lions, a keystone species, for all of us!
38. I have visited your state many times on my motorcycle. I have spent literally thousands of dollars in your state, which directly benefits all the state's population and your tax base. If you go through with your plan to kill so many Cougars, and leave so many young to fend for themselves, you are asking for a disaster. In addition I will personally make it my goal to have my Harley Davidson Club ban South Dakota. I realize I will not be successful with all the members, but if I just influence 50 through my meetings with them, that is 50 more people. And who knows what they will share with their friends.
39. I will personally place the same information on my Face book page and I am certain even more will refrain from trips to South Dakota. You have no idea of how many animal lovers there are in the US. So be certain to take this into account for any future budgetary purposes. Things like your plan can backfire so quickly, you would be surprised! **People in America are a very powerful force in any plan like yours. Consequences can be very unfortunate for South Dakota.** HOPE YOU LISTEN TO MY REQUEST TO STOP YOUR PLAN!!!

- 40.** This is a plea NOT to reduce the large cat population in SD. We cannot get these animals back after they have been eradicated and they have enough going against them without making it legal for more to be killed. I think a more long range approach should be taken so that our animal population is preserved.
- 41.** It is appalling to me that one as yourself and your staff could actually believe that a cougar population of 250 is in need of “thinning”. I pray for your awakening and evolution. Predators are a natural part of nature and deserve to not only remain intact but grow in numbers. We humans are the predator that goes unchecked, wrecking nature and upsetting the balance. I implore you to take the spiritual/moral/scientifically beneficial highroad, and create a plan to return nature to its natural balance inclusive of many more predators, instead of pushing cougars to the brink of extinction for selfish human concerns.
- 42.** My vote is to relocate the cougars to the eastern US instead of culling them.
- 43.** I live in the state of Florida and our current population of panthers is somewhere in the vicinity of 100. They are on the Endangered Species list. If you take your assumptions and correctly do the math, you are seriously close to this number. You are also working on numerous misconceptions. Mountain lion cubs require approximately 18-24 months with their mothers to be trained to survive in the wild. If they lose their mothers at 12 months, statistically only about 50% will survive depending on prey supply and other predators. Those that do have not been properly trained on what they should hunt and how to stalk their prey. They will more than likely become nuisance predators. These are the ones that are the most likely to hunt domestic animals and produce public outcries unless this happens to be your goal so you can justify wiping out all the mountain lions. You exterminated them once, please be wiser this time and don't exterminate them again. They play a significant role in the balance of nature as Pennsylvania, Virginia, New Jersey and West Virginia discovered. They should not be killed for someone's pleasure or ego!
- 44.** The Logo of Pennsylvania State University is the Nittany Lion - I lived in this state for 53 years _ I have never seen one. My state which is well known for hunting, the word conservation lags far behind. Learn from my state's wildlife mismanagement mistakes (wild deer roam freely in Philadelphia) towards predators and place that old macho mentality back to the 18th century where it belongs. Wise up and smell the coffee - let your trigger happy "conservationists" shoot something else!
- 45.** My wife and I have lived in the Black Hills for a number of years and have been members of the Black Hills Mountain Lion Foundation since its inception. Mountain lions are magnificent beasts and top predators in the ecosystem. They help to maintain a balance within the areas in which they live. In a healthy system trees grow, streams are healthy, there are bird and amphibian populations

and the prey (deer generally) are held in check. For a number of years we have been facing gross over-estimations of the populations of lions and deer based on numbers provided by the Game, Fish & Parks Department (G, F & P). For years their calculations have been shown to be out of line with their own data. I am sure you have received numerous e-mails citing these errors and the supporting (correct) calculations from many sources. I will not belabor the point about calculations but rather ask you to investigate the insufficiency of the G,F & P claims before the lions go completely extinct in the Black Hills.

- 46.** As a South Dakota resident who appreciates our wilderness heritage, I oppose the proposed quota increases in your 2010-2015 mountain lion management plan. I believe that these increases will have a destabilizing impact on the cougar population in the Black Hills and may threaten its viability. I don't believe that my fears are unfounded. The lion population statistics given in your plan have been reviewed and found questionable by some biologists who have done research on cougars. Your peers, including Amy Rodrigues and Dr. John Laundre, have used your own statistics and come up with a total cat population much less than you have estimated. I suspect that you are tweaking the figures because you are determined to reduce the number of lions at any cost even if it means that they will disappear from our landscape. Equally unconvincing is your argument that lions must be reduced to prevent them from overhunting deer and elk. Deer populations normally fluctuate. Overgrazing during the past few years of drought most likely has had a greater impact on these ungulates than mountain lion predation. If you feel that the deer and elk populations should increase, limit sport hunting until you feel they have recovered sufficiently. There is no need to reduce the number of mountain lions because of depredation of livestock. I have attended enough talks by Game, Fish and Parks biologists to have learned that we have very few such incidents. Despite complaints from ranchers, very few cattle are taken by mountain lions. Furthermore, the domestic animals that are commonly taken by the big cats, including sheep, llamas, poultry and pets, can be protected by being kept in predator-proof enclosures. I am sure that you are aware that top predators are important to maintaining a healthy eco-system. Please do not go through with your plans to increase lion quotas when your lion population estimates are questionable and the impact of the past few years of hunting still is unknown.
- 47.** I had the good fortune to visit South Dakota for the first time a few weeks ago on my way to Montana. I was surprised how terribly beautiful the state was. But your policies on cougars are rather ugly. Cougars roamed the plains of the Dakotas long before white people did. There is no good scientific evidence for increasing the number of cougars that can be killed each year. Please reconsider your plans to allow more hunting of the "Great American Cat".
- 48.** Please let nature take care of itself. These are beautiful animals that need to be here!!!

49. I write with personal sincerity and respect to urge you to please help the Cougars. As the state increases sport hunting opportunities, and does not utilize or interpret peer-reviewed science accurately, the management plan is ultimately eliminating the ability for cougars to self-regulate and ensure a balanced population. Increasing the quota manages for population, but does not manage for social interactions, which is one of the main issues in cougar management today. In addition to deaths through hunter harvest, around 35-40 additional mountain lions are likely to die from various non-hunting factors. That number again does not take into account the unknown number of kittens that will die, or the number of young lions which will not learn appropriate prey selection and behavior from their mothers. Through your Department's own data, residents of the Black Hills would like desired levels of wildlife to: "*remain the same*". The state is proposing quite the opposite, and has been steadily increasing the harvest since 2005 when the quota was 13. South Dakota residents deserve progressive and adaptive management policies that balance their interests with healthy cougar populations.
50. Please rethink this idea of culling the cougar population. We were so lucky to bring back the bald eagles, once they are gone, you can't bring them back. Has anyone thought of relocating some families as they did with wolves at Yellowstone?
51. Here are my comments and thoughts on the proposed cougar hunting seasons for South Dakota. I have not bothered to look up references, but if you are interested, I have extensive files of news items and other articles in my computer that I could share with you. (Unfortunately, I will be away from my office for up to three weeks, starting tomorrow, (July 24th). **GFP intends to reduce the cougar population in the Black Hills by one third. No valid reason is given.** Three possibilities are an unacceptable level of depredation, attacks on humans, or a significant depletion of the deer herd by cougars. There have been few instances of livestock depredation by cougars in the Black Hills, although I personally know of one that has never been publicized. Why doesn't the GFP provide statistics? There is one alleged attack on a human. The GFP could not find evidence that a cougar was involved, but believes that a cougar attack probably did occur. I believe that it was a hoax—the first of four or five in the western US that I know of. The next alleged incident took place in California. A man had some scratches that he claimed were evidence of a cougar attack. Authorities from the state Game & Fish Commission brought in trained dogs and did a thorough search but found no evidence of a cougar. Eventually the man admitted he had lied. The G&F Commission considered fining him \$10,000 (not sure of the amount) for the expense of the investigation, but decided not to. The most recent of these probable hoax attacks occurred this year in Arizona. Speaking of possible attacks on humans, I wish that the GFP would revise its "zero tolerance" policy toward cougars that wander into towns and villages. It's my impression that a cougar found in a tree in a developed area is an animal that would rather be elsewhere and rarely is an immediate threat to people. (No, cougars do not leap down from rocks and trees on their unsuspecting victims, no matter what

Hollywood has told us.) It should be possible in some instances to pull everyone back, tell them to stay indoors, and provide a clear escape pathway so that when the cougar feels safe, it can descend its tree and return to undeveloped territory. Wildlife officers should show some compassion for these wayward cats. Little is mentioned on the impact of cougars on the deer herd in the management plan, but I suspect this is the real reason for the decision to reduce the cougar population. I transcribed a PBS radio interview on July 7th that included Dr. Jonathan Jenks, an expert on wild ungulates in South Dakota. I noted he was careful to make no claim that reducing the cougar population of the Black Hills would increase the number of deer available to hunters. The mule deer population is declining in the region that encompasses the Black Hills. This decline is due to environmental factors, not to cougar predation. But cougars are a convenient scapegoat. They can't hire a lawyer to demonstrate that their innocence. I realize that state wildlife agencies are under pressure to do SOMETHING, even if they know that something will not increase the number of mule deer. The South Dakota Chapter of the Mule Deer Foundation has had an online petition for hunters to submit requesting a decrease in the cougar population of the Black Hills for at least two years. It is accompanied by an article showing bucks with nice racks that were killed by cougars and covered in typical cougar fashion. Obviously this is upsetting to some hunters. They feel that deer belong to them alone; that they are their free-ranging "cattle" to be "harvested" at will. They are not. They are part of a functioning ecosystem and "belong" to the cougars, which must kill them to survive, more than to human hunters, who hunt mainly for sport, not sustenance.

Skewed Analysis and Misrepresentation of Data: I have seen three independent analyses of the calculations of the alleged number of cougars in the Black Hills presented in the management proposal. All agree that the analysis is flawed and that the total cougar population is closer to 160 than the 250 claimed by the GFP. I sure you will get these analyses from others who are commenting on this proposal. If the Commission agrees to reduce the cougar population one third of 250 when there are only 160 individuals, it will be decimated. Either the people who did the analyses for the GFP were incompetent, or we have a deliberate attempt to mislead the public. It is also inferred that the people of South Dakota want the cougar population to be significantly reduced. The analysis of public opinion in the draft proposal says otherwise—that people want the population to say the same.

Cougars on the Prairies: I live in northern West Virginia, but I am a native of California and have spent a lot of time in western wilderness areas. Since moving East, I have focused my life on restoring what has been lost here—wilderness and extirpated wildlife, and more recently, protecting our biodiversity from invasive exotics and overabundant deer. The Black Hills are like an isthmus of excellent cougar habitat extending eastward from the Rockies. At least three, and probably more, subadult males have dispersed hundreds of miles from their birthplace. Some may have gone east as far as Minnesota, Iowa, Wisconsin and Illinois. They are potential recolonizers of the Midwest and East. The draft proposal states, "Due to land ownership on the prairie and limited available habitat preferred by mountain lions, GFP currently does not intend to manage for a sustainable population outside the Black Hills

ecosystem.” I interpret this to mean that the GFP will declare open season on cougars outside the Black Hills. In the past, the GFP has claimed that the prairies are unsuitable habitat for cougars, despite the fact that they are occasionally documented there, and some have crossed into the forested Midwest. In fact, there are numerous patches of good habitat for cougars in the prairies that could conceivably support a female and her kittens, some of which would disperse further east. (Subadult female cougars are much less likely to disperse long distances than subadult males.) These patches would serve as islands or stepping stones across the prairies to better forested habitat in the Midwest. The reason for the GFP’s policy toward cougars on the prairies is undoubtedly the attitude of ranchers, who fear that cougars will prey on their livestock. But in fact, a recent published article on the stomach contents of 8 cougars killed on the prairies of South and North Dakota determined that none of them contained livestock remains. The GFP should protect cougars outside the Black Hills unless they are documented to be preying on livestock or present a clear threat to human safety.

Proposed study on the impacts of cougars on the ecosystems of the Black Hills: Recent work by John Laundré, W.J. Ripple and R.L Beschta have demonstrated that the presence of wolves and cougars can significantly benefit ecosystems, not directly by killing deer and elk, but through the “ecology of fear.” Ripple & Beschta found significant benefits from the presence of cougars in Zion and Yosemite National Parks. If any baseline surveys of the flora of the Black Hills were done before a cougar population was established, it would be interesting to determine if their presence has made a difference. **The GFP should be a leader in providing accurate information on cougars.** They should avoid skewed data analyses and inaccurate representations of public opinion. Instead, they should explain why they want this drastic reduction in the cougar population. If scientific evidence does not support their management decision, they should say so. During the July 7th interview on SD PBS, a listener emailed a question for Dr. Jenks, “It’s about money, isn’t it?” Jenks did not provide an articulate response, because it undoubtedly *is* about money, which is the same as politics. The GFP works for the deer hunters, which support the agency with their license fees and taxes on guns and ammunition. The ranchers are worried about their livelihoods and thus have great financial = political clout. A system needs to be worked out so that the entire public pays for wildlife management and receives the benefits, not just hunters and ranchers.

52. Why do you want to mess with the wildlife all the time?
53. Thank you for considering my comments and concerns regarding the noted South Dakota Mountain Lion Management Plan. It is my understanding that this plan was not forced to pass peer review. Without that, the numbers, mathematical equations, biological and behavioral quality of the specie are in question. Without peer review, the basic premise that there are too many cougars for the Black Hills region to support and hunting is needed to "thin out the heard" is also in question. This premise is based on a "belief" that 70% of South Dakota's lions are female and they are breeding like rabbits. The Department's population

calculations have almost all of the kittens surviving despite being orphaned at an early age. I understand that: 1. In 2009, SDGF&P researchers combined adult and nursing kitten numbers to justify the need to increase the annual hunting quota (even though nursing kittens and adults have different territorial and resource use). 2. During the first 41 days of 2010, 40 adult cougars (24 females, 16 males) were killed during this hunting season-reducing the estimated adult lion population to 98. 3. In South Dakota, as in other states, cougars are also killed by other means than recreational hunting. Per SDGF&P's 2008, 2009 cougar mortality data, approximately 36-37 cougars die from non-hunting related causes each year. That brings South Dakota's estimated cougar population down to 61 adults and 75 kittens. Compare those numbers to Florida's estimated 100 adult cougar population, which is considered vulnerable to extinction and inbreeding that the animals are protected by the Federal Endangered Species Act. 4. During South Dakota's 5 mountain lion hunting seasons, the annual harvest quota and mortality totals has steadily increased (2005-13, 2006-16, 2007-19, 2009-30, 2010-40) and the new management plan proposes even greater recreational hunting quotas. 5. In 1889, South Dakota (in its first mountain lion "management" plan) managed to eradicate the species from the entire state in 17 years. I wonder how long it will take to achieve the same results if the new management plan is approved unchanged. In South Dakota's proposed 2010-2015 Mountain Lion Management Plan, SDGF&P states that science-based knowledge will ensure a healthy, self-sustaining population of mountain lions. How do Department biologists truly define a "healthy, self-sustaining population of mountain lions"? This is especially of concern since there is no forced peer review of the "management" plan. I hope that South Dakota's Department of Game, Fish and Parks will present a plan defining mountain lion health and population numbers that is scientifically verifiable and peer-reviewed. Wildlife carnivores, such as the mountain lion, are critical to the sustainable health of our ecosystems.

54. I am writing to express my opposition to the current draft of the cougar management plan in South Dakota. the plan threatens cougar populations rather than protecting and restoring them. South Dakota needs a stronger plan that actually recognizes the unique value and importance of the few remaining cougars! South Dakota's management plan is calling for a reduction in the cougar population. Population estimates are currently 250 +/- 25, with a goal to reduce the population to 175 +/-25. This infers that the harvest is likely to double from 40 to possibly 80. Keep in mind that over 45% of these cats are believed to be juveniles under 18 months of age! The state outlines what they call "estimated benefits" of reducing the population. These "estimated benefits are pure speculation and based on a population number that was chosen arbitrarily. **Orphaned Kitten Issues** The plan states that only 5% of females harvested have kittens less than 3 months of age. The plan completely ignores the fact that numerous kittens up to 18 months, will be orphaned. These juveniles, if able to survive, are much more likely to be involved in inappropriate prey selection and behavior. **Depredation & Human Safety Issues** As the state

increases sport hunting opportunities, and does not utilize or interpret peer-reviewed science accurately, the management plan is ultimately eliminating the ability for cougars to self-regulate and ensure a balanced population. Increasing the quota manages for population, but does not manage for social interactions, which is one of the main issues in cougar management today. ***Mortality and Population Health*** In addition to deaths through hunter harvest, around 35-40 additional mountain lions are likely to die from various non-hunting factors. That number again does not take into account the unknown number of kittens that will die, or the number of young lions which will not learn appropriate prey selection and behavior from their mothers. ***Politics & Public Opinion*** Through the Department's own data, residents of the Black Hills would like desired levels of wildlife to: "*remain the same*". The state is proposing quite the opposite, and has been steadily increasing the harvest since 2005 when the quota was 13. South Dakota residents deserve progressive and adaptive management policies that balance their interests with healthy cougar populations. Please do NOT pass or implement the current draft plan, and instead work to redraft a plan that truly protects and restores the South Dakota cougar population!

55. I know you are very busy so I will keep this brief. I am a life long hunter/fisher outdoorswoman and grew up on in rural Pennsylvania. I now live outside Rapid City. I also spent my professional career as a professor in disease prevention and wellness and was simultaneously involved with many outdoor organizations which overlapped my field due to the study of environmental health. The land and our country's natural resources have always been my passion.
56. I am very disheartened by the approach to the mountain lion situation here in SD. I understand people's concerns but I also know that many people that live here are not from country settings and panic at the appearance of any form of wildlife. I am also aware that many hunters blame the mountain lion for diminishing deer population but from what I have read and studied that is not proven by data. It is easy to blame something that is defenseless and then kill it off – just as we have done with many other species. It is my belief that hunters here are greedy and spoiled and kill too many deer and that is also why there are less deer. I have not seen any data that would show that the number of lions could come close to diminishing deer like people/hunters and road deaths. The fact is, the hills are getting crowded and built up and all wildlife is under serious stress. I believe it is wrong to blame all problems on the lions. The lions actually help with biodiversity and keep the deer and elk from eating where they shouldn't akin to the wolves in other states. I do not oppose a season on lions but I am very concerned that the proposed kill number far super cedes what is necessary and what is appropriate. I have not seen any data that directly shows how one would use that number which is so much greater than last year. Why not make licenses REALLY precious (and make \$ for SD) and treat the lions with the respect they deserve just like others such as the Big Horn sheep and elk? I also would like to mention that in the east when we have a bear come to town we DON'T KILL IT (they are dangerous, too) but dart it and remove it to another wild area. Why

can't this be done with the lions? The adage that they "will come back" is also not supported in the literature that I have seen. Even if they do, so what? South Dakota is a wonderful place and recognized for its outdoor beauty and resources but if we think we can manage things by just killing off this and that – soon the ecosystem will be so broken our "gem" will be gone and history. The lions certainly aren't as prevalent and dangerous as my outings with bears in Montana!!! We humans as the controlling species must act wisely and with foresight and not shoot from the hip. I know your work is difficult and quite dicey with many people spewing things at you from all directions. I do believe, however, that it is important to have courage and do the right thing FOR THE LONG HAUL and not just to satisfy humans' needs to kill something out of fear or for fun. Thank you very much for considering my comments.

- 57.** It is a shame that humans can't leave other beings alone. Perhaps we need to decrease the current human population or steal the habitat of concrete and steel that we seem bent upon increasing. It seems with all our imagined knowledge and ability to grow in ways that harm the earth, we should be able to learn how to live with and in harmony with animals and nature. Killing them is not an option - if overpopulation is the issue - we should work on managing our own. Our race has already annihilated several species. One day we will all pay when we screw up the plan of God and nature and destroy those things that in all actuality help us live. We are all dependent on each other. I say no to this plan!!
- 58.** We have some of the same issues in Arizona. My twelve years of scientific and general wildlife experience tell me it is best for man to stay out of the way. Please consider my thoughts and do what you can to allow nature, not man, to guide the course. Thank you.
- 59.** First of all, I commend the time, thought and effort of this management plan for mountain lions that the GF&P put together. I appreciate their dedicated service and hard work. I attempted to be objective while reviewing the management plan and hope my suggestions are useful for my state of South Dakota. My comments overall document the potential pitfalls of the plan and please view my criticisms in the constructive manner in which they are intended. I don't believe in sugar coating facts and I am always straightforward with my answers. Locking down communication with the public is risky. If you don't tell the whole story, then someone else is going to start telling the story for you. The best source of information is the whole truth and being first to act - this makes the GF&P credible no matter how damaging the information can be. Many of the assumptions that are stated in this plan are lacking in several areas - mainly with the overall lion population. The GF&P has been telling the citizens of South Dakota that since 2004 there are only 200 lions in the Black Hills – with the exception of 2009 when we were told there were 245 lions. The data that the GF&P are using appears to be a "best guess". The data from SDSU & GF&P determined a population of 150 lions in the Black Hills and that 70% of that population was female in 2003. One female usually has six kittens in her 8-10

years of life that live to adulthood in the wild. $105 \text{ females} \times 6 \text{ kittens} = 630 \text{ lions}$ for 8 years of just females since 2003. This is a rough estimate, I know but how can you continue to tell the public that there are only 200 lions with no growth in population? Regarding mountain lion observation reports - Do you really believe everyone reports all lion sightings? I would bet you get only 10% of the public to report a sighting. I tried to call in a sighting one time only to be belittled by the GF&P person so I hung up. I have seen 4 lions myself - one in the Black Hills, one in Haakon Co., and two in Minnehaha Co. within 5 miles of Sioux Falls. I know 8 others that have seen and not reported lions. The general public doesn't trust the GF&P apparently or perhaps they are being treated as poorly as I was so they don't report the sighting. What is a fair balance between conservation needs and the needs of the public? The first conservationist was and is the sportsman who pushes the government into preserving the wildlife for all to enjoy. Now we have a plan to manage the largest predator in the state right now - the lion. I don't know what the GF&P is thinking - the elk numbers are shrinking, as well as deer, the mountain goats are gone, and the big horn sheep are also disappearing. The state has invested thousands of dollars on mountain goats and big horn sheep only to be eaten by lions. I agree there was some disease in the big horns years ago, but after that was cleared up the lions wiped out the balance. South Dakota doesn't have enough rough backcountry to give our sheep and goats - making them easy prey for the lions. What became of the data of blood samples from the rifle elk hunters in Custer State Park in 2009? A study on wolves has caused elk in the Greater Yellowstone Ecosystem to change their behavior and foraging habits so much so that herds are having fewer calves - mainly due to changes in their nutrition, according to Montana State University researchers. The study found that wolves cause elk to switch from grazing in open meadows to browsing woody plants in heavily forested areas where they retreat for safety. According to the study, that means elk living near wolves eat 27 percent less food than elk living far from wolves, which results in weight loss, starvation and ultimately lower calving rates. "Elk hunted regularly by wolves are essentially starving faster than those not hunted by wolves," said Scott Creel, ecology professor at Montana State University and lead author of the study. In the three years prior to wolf reintroduction in Greater Yellowstone (the site of the study) in 1995, elk numbered between 17,000 and 19,000. But from 2004-2007, elk counts declined to between 6,738 and 6,279. I believe the same thing is happening to our elk here in South Dakota only with pressure from the lion. But if there is a new disease for elk & deer - I would like information on that. I think if you would survey the hunting public on what they would like to hunt - lions OR deer, elk, turkey, mountain goat & big horn sheep? I believe that most if not all would pick the 5 big game animals to hunt & not the lion. One is a predator & the other is big game & you can't have both. Most of the hunting public spends about a week total hunting, applying for licenses, shopping & processing their game. "Overall South Dakota residents have a positive attitude towards lions" as stated in the report. That's because the GF&P posts the information & is their view that lions are good for the state. This is misleading the public. I don't know if the authors of this plan looked at the Black Hills deer hunters or the elk hunter surveys, several hundreds

of times the surveyors stated concerns about the declining numbers of elk and deer and the expanding lion population. The impact on big game population is huge; it is stated that only 1,650 big game species will be reduced with 200 lions. All the facts I have seen on mountain lions is that they will consume one of the following; deer, elk, sheep, goat, antelope every 6 to 8 days. This would be approximately one of these animals per week x 52 weeks per year x 200 lions = 10,400 of big game species by my calculations almost 90% difference. Are the livestock growers and pet owners going to supplement the lion diet? I hope not. It is noted several times in the 5-year plan about the consumption of domestic prey when the correct wording should be people's pets and livestock. I would like to know what the state budget on mountain lions has been since 1978 - year by year and what the budget has been for each big game species. Are sportsmen fees funding the budget for mountain lions? What funding is given by the animal rights groups who I believe were the other party stated in the plan that are pro lion? What is the benefit of having a diversity of wildlife here when visitors in state and out of state can not see mountain goats & big horn sheep? How many of the visitors to our National Forest and Custer State Park have seen a mountain lion? Not many. The fact is people like to see animals, lions are rarely seen. They are stalkers and killers of the night. Lions have a negative impact on people's recreation and economic values in the Black Hills region. I have two proposal plans for managing mountain lions for the state of South Dakota. Plan A: The hard approach—View the lion as a predator such as the coyote, fox & skunk with no limit; Season would be open year round same as the state of Iowa. Plan B: The soft approach—The hunter can purchase a special predator license for \$5 with each big game season - with an allotted number of slots for lions either male or female (unlimited tags); 5 lions allotted for archery elk; 30 lions allotted for rifle elk; 30 lions allotted for Black Hills deer; 40 lions allotted for a lion season after the first of the year when big game seasons are done; Outside of the Black Hills region the lion would be viewed as a predator such as the coyote with no fee for landowners. The lions threaten our way of life, our livestock and our big game animals in the Black Hills. Lions reduce economic values - big game fees, lost livestock income as well as the small business catering to this source of income. With the alarming growth of the lion population in the Black Hills – I would bet that there will be an attack on a human within the next two years. I have heard of some encounters that were threatening but didn't result in an attack. I would not let a young child out of the house after dark unsupervised in the Black Hills. With the reduction of 1,500 Black Hills deer tags and 300 elk tags from the previous hunting season the direct impact has been astronomical on the people of this state as far as recreation & economics. Since 2005, elk tags have been reduced by over 1,000 tags per year. Why does the GF&P want a large number of lions? Is it to eliminate hunting, to reduce the GF&P staff size, to please the federal government, a new project, or to reduce domestic pet numbers? Tell me why this is an economic benefit for the state - then show me the numbers. Compare this to the lost economic value or the lost opportunity for big game fees, hunter revenue and other outdoor activities. What I believe would be manageable number of lions for the Black Hills is no more than 50. In closing, I am highly

disappointed by this proposal & the GF&P leadership in allowing this science project to happen. I don't feel the GF&P has been credible with information and has mismanaged South Dakota wildlife in the Black Hills Region. Allowing the out-of-control explosion of the lion population has been devastating to wildlife as well to livestock. Lions are a predator and should be managed like the coyote. Someone needs to be held accountable within the GF&P and the commission members need to make corrections so that wildlife can be returned to conditions that existed prior to 2000. That should be the 5-year goal!

60. SDGF&P claims that the Black Hills region can only support a population of somewhere between 150 to 200 lions. (Nonsense). In 2009, Department researchers claimed that there were 251 mountain lions in South Dakota's Black Hills with a population breakdown of 138 adults and an unbelievable 113 kittens. Of course, SDGF&P counts those 113 kittens (statistically half of which would still be breast feeding) as if they are all adults, using the same resources and taking up the same territorial space as full grown mountain lions, to justify the need to increase the annual hunting quota. During the first 41 days of this year, 40 adult mountain lions (24 female, 16 males) were killed during the 2010 mountain lion hunting season. Thereby reducing the estimated adult lion population to 98. Despite the Department's misinterpretation of the Logan and Sweanor's research on the subject, the death of 24 female mountain lions would also cause the unnoticed deaths of at least six litters of kittens, for an additional 18 lion mortalities. Not to mention, this would also orphan 18 "teenage" lions ranging in age from 12 to 24 months -- lions, which as they grow up are now most likely to prey on domestic animals because they didn't have mothers to teach them what to hunt. Recreational hunting isn't the only way South Dakota's mountain lions die. Based on SDGF&P's 2008, 2009 mountain lion mortality data, approximately 36-37 mountain lions die from non-hunting related causes each year. Based on SDGF&P's sex assumptions that means that 25 more female lions will perish in 2010 and there will be twenty additional kitten mortalities, and of course, twenty additional teenage lions running around getting into trouble. That brings South Dakota's estimated lion population down to 61 adults, and 75 kittens (38 of who are orphaned and on their own). Note: Florida has close to 100 adult mountain lions and that population size is considered so vulnerable to extinction and inbreeding that the animals are protected by the Federal Endangered Species Act. In South Dakota's proposed 2010-2015 Mountain Lion Management Plan, SDGF&P proudly states that "With the use of science-based knowledge to make management decisions, this plan will ensure a healthy, self-sustaining population of mountain lions in the Black Hills of South Dakota." If SDGF&P's biologists truly believe that statement, then they have a really twisted idea of what a healthy, self-sustaining population of mountain lions truly is. Back in 1889, the first time South Dakota had a mountain lion "management" plan they managed to eradicate the species from the entire state in 17 years. I wonder how long it will take to achieve the same results if this new management plan is approved unchanged. There is only one right option, my friend. STOP KILLING THE COUGARS.

They have as much of a right to live and to walk this Earth as you and I..... our ignorant, arrogant, egotistic human animal egos notwithstanding.

- 61.** It is beyond my comprehension why the most rural states are the first to fear and kill a very shy and harmless species. I live in an urban area of 7 million people. We are intertwined by a chain of parks with small lake and creek waterways, with deer and small prey animals. And we live with mountain lions among us, and we love and cherish them. Of course, if truth be told, we live on their land, and as such, respect is the rule. The last cougar attack in our area on a human was over 100 years ago. Why would we kill a species that poses no direct threat? We are careful when hiking, but have no problems. And when they wander into human populations, the authorities deal with the issue, but no one stalks them. So why in a rural state, would the human population try to kill a harmless mountain lion population? If they kill cattle, perhaps the cattle ranchers should change to a non-foreign species better adapted to the environment, like bison. Or the government could reimburse for the cattle loss, rather than slaughter the cougar. And, what about the starving kittens that will be left when the mothers are killed? Maybe your wild west males should find another form of entertainment besides slaughtering innocent creatures. Animals are not entertainment, they are part of the environment. If you really respect your environment, why try to destroy it? Love and respect thy environment. Say no to the the slaughter and starvation of innocent, native born wildlife.
- 62.** I think further, peer-reviewed research should be done on the SD mountain lion population before a new quota permissible for hunting is established.
- 63.** I must ask you in all earnest not to increase the number of mountain lions that are allowed to be killed every year in South Dakota. This new quota will indeed in danger the survival of the Lion and leave many kittens orphaned. Please, do not endanger lives of America's Greatest Cats. South Dakota may very well become another Florida. These beautiful animals need habitat conservation as well. Help them to survive do not decrease their numbers.
- 64.** I am quite concerned that your state is considering a wildlife management plan which will result in the death of more beautiful cougars. I realize some people are afraid they will invade human neighborhoods and kill livestock as well as threaten the safety of humans. However, the cougars only pose a threat when they are forced into human territory to seek food. If instead of killing cougars you would assure that they had enough food in cougar territory, I think the unwanted human/cougar encounters would become less frequent.
- 65.** I wish instead of killing cougars a plan to trap them humanely and send them to zoos or areas in other states where there are too many deer. Hunters obviously want to kill the magnificent cougars, as well as their prey. I am sorry that anyone feels a need or desire to hunt if not for food. Humans in this country can live without ever having to hunt. I do not consider hunting a sport, either, because the

animals are not willing participants, do not have the rulebook, and are not awarded anything but life if they survive, Hunters are outdated, and killing for fun is dangerous as well as sick. Kill an innocent person intentionally, it's called murder-kill an unsuspecting animal and it's called hunting. Wildlife management should not be a euphemism for officially approved killing of undesired wildlife. I know you probably don't care what an anti-hunting animal lover thinks' but I thank you if you actually read this.. Cougars are some of the most beautiful wild animals on earth. I'd pay to see them in the wild, to shoot with my camera. I'd love to watch cougar cubs romping, learning to hunt for their survival, and not be hunted themselves. One reason I'd want to visit your state would be for wildlife and the chance to see a cougar, bear, wolf, lynx, or some other non-native to Missouri animals. I would not go to see their hides and heads on display, or a taxidermist's version of the once alive creatures. I hope you will consider that destroying animals is not the best way to "manage" them. Thank you for your time.

- 66.** First off, I am totally against the huge increase in the lion quota next season. Whoever came up with this plan is, I suspect, catering to ranchers and sport hunters and, I further suspect, the reasons are political. It is hard to think that GF&P is not aware of the fraudulent way they put together statistics showing there are 250 lions in the Black Hills. Again, I would guess that this is a way to make an uninformed public accept the removal of 30% of the lions and hide the fact that when this is accomplished, lions in the Black Hills will be reduced to negligible numbers. There is reality and myths and the latter are firmly entrenched in the minds of some people. One such myth is that there are "lions everywhere" and that they are increasing in ever larger numbers. Any wildlife biologist or educated person knows that lions are intensely territorial and are obligate dispersers. Unless you fence in the Black Hills, we will never be stumbling over lions in the dark. Another is the fear of predation by ranchers-GF&P own research and investigation into lion predation of livestock shows this to be a vastly inflated problem. Still the idea persists and selfish ranchers would have all the lions destroyed in an effort to "save the life of one cow." The ecosystem be damned. The danger of lions towards humans is also so overrated to even suggest lions be exterminated because of human safety concerns is beyond silly. Statistics (facts) show incontrovertibly that the average South Dakotan is far more likely to be killed by a hunter, a horse, dogs, or even a congressman. I remind you that in state-wide surveys about attitudes towards a lion population, the majority of responders would like to see the numbers remain as they are. Removing 30% hardly satisfies this desire. I would also remind you that the lions "belong" to all the people of South Dakota and not to a small handful of selfish, narrow-minded individuals. How sad that this state clings to the worst elements of the frontier mentality and refuses to treat the environment with the respect it deserves. To reiterate, I am totally against the proposed quota; in matters where there is a large element of uncertainty (as in total lion population) then one should error on the conservative side. Thank you for the opportunity of sharing my concerns.

67. The state outlines what they call "estimated benefits" of reducing the population. These "estimated benefits are pure speculation and based on a population number that was chosen arbitrarily. ***Orphaned Kitten Issues***—The plan states that only 5% of females harvested have kittens less than 3 months of age. The plan completely ignores the fact that numerous kittens up to 18 months, will be orphaned. These juveniles, if able to survive, are much more likely to be involved in inappropriate prey selection and behavior. ***Depredation & Human Safety Issues***—As the state increases sport hunting opportunities, and does not utilize or interpret peer-reviewed science accurately, the management plan is ultimately eliminating the ability for cougars to self-regulate and ensure a balanced population. Increasing the quota manages for population, but does not manage for social interactions, which is one of the main issues in cougar management today. ***Mortality and Population Health***—In addition to deaths through hunter harvest, around 35-40 additional mountain lions are likely to die from various non-hunting factors. That number again does not take into account the unknown number of kittens that will die, or the number of young lions which will not learn appropriate prey selection and behavior from their mothers.
68. As usual, South Dakota's mountain lion management plan reflects a desire to maximize hunter "harvest" and ignores the science of cougar management. Killing more mountain lions without recognizing their biology, even ignoring your own facts about mountain lions as stated on your website, "The cubs are weaned at about two months. As the cubs mature, their spots fade. At six months, the cubs weigh more than thirty pounds and are becoming capable hunters. Cubs remain with their mother for another year, improving their hunting skills." is reprehensible. Not only is the plan cruel and inhumane because it calls for orphaning an increasing number of cubs but it also leaves the South Dakota Game and Fish Department responsible and liable for those juveniles not yet capable of killing the appropriate prey and increasing the risk to humans, their livestock and pets. The South Dakota Game and Fish Department rather than looking for irrational and non science based management of mountain lions and appeasing hunters and outfitters, should be considering the facts and the will of all stakeholders in your management plan. The Department's Plan should be proposing a decrease in the number of lions killed not increasing the number. I look forward to your reply.
69. Please accept my comments on your new mountain lion management plan. This plan is NOT scientifically sound and kowtows to special interest hunting groups. Recreational hunting should not be the cornerstone of an entire management plan.
70. What your organization is forgetting is that by killing females, you are also giving a death sentence to their orphaned kittens (who are counted as adults to justify the "need" to increase the annual hunting quota). Also, orphaned "teenage" mountain lions end up preying on domestic animals because they do not have mothers to teach them what to hunt. It also seems to be forgotten that recreational hunting is not the only way they die. It is apparent that, mathematically AND scientifically,

Thank you for your time and kind attention.

71. The members of the Black Hills Group of the Sierra Club (BHG) has been interested in the management of mountain lions in this state since prior to South Dakota moved to classify the mountain lion as a big game animal. The leadership of the BHG supported your Department in that action, agreeing that as matters then stood, such reclassification of the animal would afford it more protection. Since then the BHG has strongly advocated that the mountain lion population of this state be managed scientifically on sound biological information. We are not an “anti-hunting” organization opposing a mountain lion season in South Dakota. Many of our members hunt and fish, and the Sierra Club has always accepted hunting and fishing to be an appropriate tool in wildlife management “when based on sufficiently valid biological data and when consistent with all other management purposes.” The BHG has been critical of the state’s mountain lion season in the past primarily because: The seasons and bag quotas have been established without reference to, or reliance upon, sound biological data and wildlife management science. We are aware of the ongoing mountain lion research in the Black Hills, but we have not seen data from those studies released so we can determine whether wildlife biologists possessing expertise in mountain lion biology and management and not associated with SDGF&P would draw the same conclusion about lion populations and management. We object to the Department and the Commission treating the mountain lion as vermin. Mountain lions are spectacular big game animals. Hunters should and, we believe, expect to pay a significant license fee. There are criticisms growing now about whether the fair-chase aspect of South Dakota’s hunt and the cheap lion license only adds to the perception that the state in fact regards the animal as vermin to be extirpated from its range in the Black Hills. Finally, and related to the first point, last year the South Dakota Game Commission disregarded the recommendations of the Department’s biologist and proceeded to raise the mountain lion harvest quota for female lions. That action, based on anecdotal evidence and Commission biases, is not scientific game management by any stretch of the imagination. It gives us pause. If this can happen with the mountain lion, it can happen to deer, elk, antelope, and other game animals. The Black Hills Group of the Sierra Club has reviewed the draft management plan and discussed the situation and the draft with biologists outside GF&P and we are not satisfied that the draft South Dakota 2010-2015 Mountain Lion Management Plan should be adopted for the management of the species in South Dakota. We have also reviewed the comments and suggestions of Dr. John W. Laundre in his response to the draft South Dakota 2010-2015 Mountain Lion Management Plan and the Black Hills Group of the Sierra Club has adopted and joins in Dr. Laundre’s response, which is hereby incorporated and included herein in full:

Response to the Draft South Dakota Mountain Management Plan 2010-2015:

First, I would like to complement the South Dakota Game, Fish, and Parks for their holistic guiding philosophy (Page 15) regarding the return of mountain lions to the state of South Dakota, specifically, the Black Hills region. As an ecologist and specifically a predator ecologist, I find the views expressed there to be refreshing and enlightened regarding the role of mountain lions (and all predators) in ecosystems. I, like you, have come to see that predators such as mountain lions are needed elements in maintaining the biodiversity of an ecosystem. I applaud your goal of trying to manage mountain lions in accordance with sound biological information. What you have expressed here indeed should be the guiding principles for your Department and the State. However, upon reading the accompanying document and based on my experience of working with mountain lions for over 20 years, I do find that there may be some concern regarding management goals established. I would like to address these concerns in the spirit of your guiding philosophy to manage mountain lions with the best possible biological principles. Before I get into specifics, I would like to state that I am not opposed to a hunting season on mountain lions but am opposed to the possible overuse of this resource, which would then endanger the population, and your guiding philosophy. Mountain lions, as a hunting resource should be treated as a trophy species, one who's taking should rank up with that of bighorn sheep, African lions, and other noted wildlife species. They should not be hunted as vermin nor the privilege to hunt them sold cheaply. Having said that, here are my concerns. The biggest concern I have is in regards to the accuracy of your estimates of the number of mountain lions there are in the Black Hills. This concerns me because, as you know, if one overestimates the population size, the projected number of animals to be removed can have a very destabilizing impact on the population and could lead to a loss of ecological functionality of the mountain lions in the Black Hills. With regards to the estimates that have been made of the current population level (251 animals), first I think it needs to be made clear and maintained throughout the document what you really mean is 160 adult animals, being reduced to 138 per year, plus the 113 kittens of various ages. To use the 251 number obviously inflates the perception of the population size and the total density of the area, e.g. Black Hills is 8,400 km sq and at 251 lions, it is a density of 3 lions/100 km sq but at 160 lions it is only a density of 1.9 ADULT lions/100 km sq and is normally how the density is expressed. If, as you point out, you feel the population is currently stable, that means that excess animals, mostly young dispersers, will be leaving the Black Hills and the stable resident population is the lower number. To use the higher number makes it seem to the general public that there are more lions there then biologically there really are. IF you want to maintain this stable number around 160, then you can talk about what will happen to these excess animals produced each year, many will disperse, as they should be allowed to, many will die from other causes (we still do not have an idea of what mortality rates of dispersing animals are), some will fill the slots vacated by resident animals, some can be removed by the hunt. How many depends on the mortality and dispersal levels. Based on your estimate of 160 adult lions, I am not sure what that would all equate to as a final number of

animals that could be removed by hunters. I would need to sit down and go through the calculations. I am just saying that it is a more biologically correct way of presenting the data on the number of lions there actually are. Regarding that number, however, I do have some concerns as to how the 160 (and the 113 kittens) was derived. The first concern I have is that it does not provide any possible range of error. You do use a standard deviation on page 5 but I am not sure where that came from. What I do see is that only one set of values (e.g. one MAXIMUM growth rate, one percent of females with kittens, etc., most from just one area, the desert of New Mexico, hardly like the Black Hills) when we know biologically these values can change yearly in one area and do change geographically. What this does is present just one scenario and thus one estimate of the number of lions. And more specifically, without any knowledge of whether or not these values apply to your population in the Black Hills. As examples, why would we use only the maximum growth rate from a desert population of mountain lions for a population in a totally different habitat? It could be lower than that and if it is, the resulting population estimate would not have any bearing in reality. Even if it did, the repeated use of single values likely makes any final estimate to be far from reality. For example, you used 50% as the number of females with kittens at any one time. Other studies have shown that it could be as low as 20%. If that is the case for the Black Hills, the number of kittens produced and surviving each year drops from 113 to 45, quite a difference. As for the estimate of the number of adult females based on the "capture/recapture" estimate of females killed by hunters, this also relies on just one estimate and unfortunately because of the small sample size (5/35) and possible bias of hunters to not shoot collared animals, could lead to an overestimate of the number of females. If a hunter passed up just one collared female, the total number of collared females that would have been killed would be 6/35 and would result in an estimate of only 93 females in the population rather than 112. Running this number of females through all the numbers, we get only 93 kittens, etc. etc. And if 2 collared females were passed over, it goes even lower. So because of all these unknowns, we really don't know if the ADULT lion population in the Black Hills is 160, 100, ????. I know it is difficult to get these numbers and that should not stop us from attempting to come up with an estimate but to use just single values, especially those which seem to exaggerate the population size, which seems to be the case here, is not biologically honest. What needs to be done, and has been done in a lot of instances, is to present a range of estimates (worse case/best case scenarios) so that the public has an idea as to in what range the lion population size likely falls. What I suggest is that all the population estimate figures need to be reworked using a wider range of data than just one study so that reasonably low and high estimates can be presented and then use these for the basis of your management decisions. This would be more biologically correct and more politically transparent. As the guiding philosophy states, you need to provide accurate information to the public regarding the mountain lions. Your current population estimates are by far not accurate nor justifiable. California lost its ability to hunt mountain lions because they could not justify their population estimates and I feel that, as presented, nor can South Dakota. Until we have a

reasonable RANGE of possible population estimates, it appears that the Department is attempting to justify higher killing of mountain lions by inflating the population numbers. I would hope that that is not the case. One last concern I have is regarding the orphaning of kittens (birth to independence). Though one can reduce the number of <3 month old kittens orphaned by changing the season dates and trying to find those that are, there still will be small spotted kittens left out in the woods to starve to death. The public needs to know this. Also, by the calculations presented, 40 % of the females killed will have kittens between 3 months and 1 year old. Though there is a 71% survival rate (again one value from one study), this still means that out of the 20 females with these age kittens, 17 died of starvation and over 40 survived uneducated! These become the trouble makers, the ones who will go to human inhabited areas and eat pets or domestic stock, or attack people. Are we not exacerbating the dilemma of problem cougars (which some then use as an excuse to kill more)? I think that there can be an acceptable level of orphaning but the current management plan does not achieve it. Lastly, I would like to observe that many of the management strategies proposed here, if applied to ungulates, would be considered biologically unacceptable. For example, would the Department propose that out of a bighorn sheep population of 160 adult (hunnable animals), hunters could kill 40 of them, including females?? Would the Department allow the killing of does with spotted fawns? For that matter, would current game laws permit hunters to shoot deer, take their head and hide and leave the meat in the forest? I think these issues need to be addressed and the public be made aware of them if the all the public is to make sound decisions on the management of mountain lions. I end by again applauding the Department's guiding philosophy but urge it to use this philosophy and a wider range of sound mountain lion science to produce a more scientifically sound management plan. In my professional opinion it seems that this document was develop based on selective use of existing science, mainly to produce inflated estimates of mountain lion numbers. Some could interpret this as a way to justify the higher kill levels that appear to be predetermined based mainly on political factors. For the sake of transparency, and producing a more legally sound management document, I hope that you consider my observations and concerns.

72. If the residents of the Black Hills want the lion population to stay the same - use scientific knowledge to achieve that goal. Also, lets remember that young lions need to stay with their mothers for 18 months in order that they can learn how to avoid people. Consider the orphan kitten issue in any decisions that you make. Hope to see a lion up there on my next visit. Thank you for your attention.
73. Many very intelligent and gifted people are weighing in this year regarding the proposed 'new' plan. It is high time our Commission responds to outside knowledge and stop kowtowing to the three groups that decide and dictate policy in SD...the rancher, the hunter and those who live their lives under the influence of unjustified and preconceived fears. Maurice Hornocker states clearly in the new book, "Cougar" [pg238, edited by him and Sharon Negri] that along with 'food or prey', mountain lions limit their own numbers. In every 'credible' study,

territorialism is [that limiting] factor. Thompson in his recently released 'thesis' claims SD has shrinking home ranges and the Hills are saturated and cats are 'stacked' on top of each other, his whole thought process was/is driven by the drum beat claims of 'density dependence'. Most if not all of this is debunked by real, published studies. For years now, SD has used these false claims to justify their killing, which are reflected in skewed and inflated numbers that try to demonstrate an ever increasing cougar population. Dr. Hornocker states without doubt that 'home ranges DO NOT shrink! Who will you believe? A recent graduate, mentored by an ungulate biologist, with his study funded by the very agency who benefits from his findings, or a man who pioneered the study of cougar ecology/biology and has studied over 50 years, giving his life to these precious cats? For years SD has used questionable data, has altered the numbers and insisted that they know best regarding cougars. They refuse to acknowledge the hard won and earned knowledge from experts who have studied for lifetimes. This time SD has literally shot themselves in the foot with their own data. Whether this was an oversight or just plain arrogance is the question. Their own numbers prove that all along they have been distorting the truth and misleading the good people of SD. The proposal, when reviewed by statisticians, shows without doubt that SD has about 'one half' as many cats as previously claimed. This is shown by their flawed cap recap data on pg 5 of the Plan. Comments about orphans are misleading and alarming considering the possibility of effect on the public of SD. Although as stated, perhaps 5 percent of the females killed will leave behind kittens of three months of age or less. This is not relevant when one considers those others destined to be alone. All experts agree any cat under the age of 6 months will 'die' most likely from starvation or cannibalism. Fecske herself, SD's original researcher [possibly the best because she was not influenced so much by politics and management but by the quest for basic truth and knowledge] says to be safe, 9 months is a more realist minimum where kittens can survive, albeit that they could very well become 'problem cats' at the mercy of humans who indeed caused them to take on this desperate role through the killing of their mothers. Any female kill level results in half of those killed, leaving dependent cubs of some age level. Anyone can easily predict the number of kittens left and any negative results can be directly linked to SDGFP, without doubt! From their own data, pg 49, if a lion was present but caused NO problem, 90 percent of those surveyed chose something 'other' than killing as a MO for the agency. Curious is the fact that in the 2002 survey only 6 percent of citizens chose 'deadly force' when dealing with pumas and in the most recent study that number, after all these years, rose only to 7 percent. There is much more public acceptance than the agency would like us to believe. Nearly 57 percent of citizens want lion numbers to stay the same or increase [pg 49], not suffer the drastic killing decrease proposed by the agency. These results mimic the past and this distortion of numbers, or an attempt to do so, is nothing new. In 2005, at the 'finalization' meeting in Pierre [Aug 4, 05] 78 percent of those citizens who wrote, emailed, called or testified...opposed the hunting season. You know who ruled the day and the horrendous cycle of lying and killing began, AGAINST the WILL of a clear majority of the people. Initial results from 2005 show a pattern of number

distortion and misrepresentation. In the 20 statewide meetings held to solicit public opinions, 747 people attended. Of those 354 or just 47 percent, answered the GFP questionnaire. Although the agency claims 'most' or 78 percent of the attendees supported a hunting season, this is a most egregious claim since only 277 were in support. Agency claims in the public opinion survey of 05 and later in the Concise Statement of 05 are nothing but untruths biased toward killing. This is true because 277 of 747 are 'only' 37 percent NOT, 78 percent. This play on numbers was intentional to support a hunt that had little support, except from the three groups I have previously mention: ranchers, hunters and those living in fear. The real number would be 37 percent 'support' the hunt, a far cry from the 78 proclaimed by GFP. This 'agency math' has been contentious now for over 6 years and it is worsening as evidenced by the outrageous comparison and calculations using collared females BUT comparing them to the TOTAL number of collared cats [not to the correct FEMALE collareds] thereby skewing the population estimate upwards instead of showing the true value, which is: 'about half' the reported number and a rapidly descending population of pumas in the Black Hills of SD. The real math shows that without consultation of expert and peer reviewed data and plans, the agency has increased quotas and kill levels annually for 5-6 years. The female kill has increased 500 percent in just those 5 seasons while at the same time the agency publicly states: BOTH population of cats and sightings ARE declining. What makes this whole population issue totally unpalatable is that most all their results are made using ONLY one year of study [2007] and their continued insult toward 'sound science' [which by all intelligent design SHOULD follow the plans laid out in the North American Conservation Model]. SD insists on picking, choosing and guessing based on data gleaned annually, rather than waiting for real results and trends to develop...which take time. Most scientists insist on 5-8 years as a time line to experience reliable results, the best studies use 10 years [some have gone 16 years] and 3 years is the bare bones minimum. As I have mentioned previously, 'steady state equilibrium' takes at least '3' years! SD never waits for good results to dictate future actions or changes but forges ahead blindly insisting they know better than the scientific community as a whole. Basing decisions with emphasis placed on 'special interest groups', is biased toward killing and population reduction. Although GFP claims random and fair sampling, all one has to do is go to one of 'their' meetings to see what really evolves. I have never seen such crying, whining and pitching a fit as at those scheduled meetings. In Spearfish, I was the only one to speak 'pro' lion, and there were less than 10 advocates present, all the rest being ranchers and hunters. Rapid City demonstrated similar results with hunters making up the 'lions' share of attendees. I was appalled by the level of hate based on nothing but a desire to kill, acquire a trophy or profess falsehoods, none of which were backed by truthful facts or science. Yet at these meetings, questionnaires are handed out, faithfully, and results which affect the very lives of this great species are made. One great problem with this system is: Group Polarization. Here regardless of subject matter, when an audience is made up of or in these cases, 'packed' with a majority of like thinking individuals the results are most likely positive toward their thoughts. Group Polarization "tends

to advocate more 'extreme' positions and calls for 'more riskier courses of action' than one might see from individual thought". For GFP to base any decisions in response to a form of 'mob violence,' rather than real science, is flawed. It is foolhardy to think vehicle related deaths will decrease dramatically with the ever increasing human presence. Road building and increasing numbers of people living in new developments throughout the Hills leads to decimation of former range habitat. Habitat loss is rising annually with no end in sight and regardless of population numbers, conflict with vehicles WILL continue. Claims have been made that the puma of the Dakotas are malnourished and emaciated. More than not, when reports are given involving dead cats, the descriptions are of 'a healthy cat', 'adequate kidney fat' or as in the case of the insolent slaughter of the Story Book Island cougar...'extremely healthy'. One has to wonder where in lays the truth? 'Problem Lions' is a state of mind here in SD. Until GFP rescinds their 'zero tolerance' policy against cats being found in cities or near humans, nothing will change regarding removals. A true problem lion is one guilty of 'proven' depredation of domestic animals, direct and documented encounter with injury to humans or cats showing 'true and real' intent to cause harm. Little to NONE of these things happen in SD. By their own data, almost all cats are sedentary, non aggressive, not guilty of killing or showing ingestion of domestics and NO human injury with one ounce of credibility can be shown! Cats found lying down, sleeping in trees, walking around or just sitting and observing are NOT problems regardless of location. Their guilt and death sentence is forged by a highly dubious decision by GFP to use deadly force before engaging conservative and compassionate actions. Just because hazing and or relocation have not been shown to be totally effective does not mean it should not be an acceptable reaction by GFP or authorities. To give a 'fighting chance' to a wayward individual would show basic levels of compassion and humanity and would speak well of GFP. As I have said all along, 'any dummy can kill' and such actions should be used as a very last resort...not a first line, knee jerk reaction to any encounter with this wonderful animal! Everyone knows that the deer [prey] population in the Hills is due to hunter 'overkill' and severe weather events. Even Wyoming has admitted publicly that their reduced deer levels are due to 'habitat [loss] and nutrition factors'. Years of drought, very bad and stressful winters with spring and fall storms, competition with livestock grazing of 'wildlife' food stuffs, disease spread to Bighorns by domestic sheep, lack of suitable habitat for introduced species [to develop hunter opportunities and generate money] and hunts designed to 'reduce' the ungulate populations in the past 4-5 years have all taken a horrendous toll on the white tail and mule deer here in SD. Without good reason, Wyoming has decided to throw under the bus, all the positive and conservative changes they had in place for the last three years. They will stop considering Total Annual Mortality [all deaths] when deciding quotas, they will stop the safety net of a 'female quota' which can close a unit to hunting, they are establishing three units where killing can take place year around without limit and they are essentially doubling the kill quotas in their two Black Hills units [Areas 1 and 30]. They have publicly said they will 'manage' the Hills as a 'sink' where more lions are killed than can be replaced or born to the area, thus reducing the overall population

therein. If our Commission mistakenly adopts this new radical plan, SD will also be a sink and few if ANY cats will be able to 'escape' the hunter's gun to disperse naturally toward mainly the east and north to establish historic ranges. No agency has a right to alter the natural progression of a species under the guise of 'good, sustainable management'. This insult along with [41:06:61:02] which gives 'licensed landowners' the right to kill cougars on owned/leased lands year around and the fact that GFP refuses to recognize the presence of or study/research for cougars 'outside' the Hills gives you a downward trifecta courting disaster. What once was a prosperous, fledgling and healthy mountain lion population that acted as a 'source' for areas desperately in need of large carnivore predators, now is struggling for its own very existence. Again, this is NOT good, adaptive management nor does it speak well of how humans view indicator species, mainly the apex predators. The most appropriate response for ND, SD and WY is to work together for the betterment, health and wellbeing of the mountain lion by treating this Hills population as 'one' magnificent population, which it is, rather than just another God given resource to be exploited for short term gains and the lustful pleasure of a few! One basic, lawful requirement [1-26B-6] states that an agency must first determine if 'sufficient Public need is present' to justify what they do or change. GFP has never proven a 'need to hunt or kill cougars in SD'. In fact in one of their Concise Statements, they said this law did not apply to the cougar issue. Furthermore, what could be a more relevant need than the well being of citizens of this state? If manipulation of a stable, healthy and aloof cougar population by killing is allowed, to supply 'hunter opportunity', the end result might be the production of uneducated young cats who could get into trouble. By their own actions then, GFP could be jeopardizing the true health and welfare of citizens. Does the public NEED more problems? Finally, the true moral compass of GFP is illuminated when they cannot find it within themselves to create even the smallest area of refuge or solace for the SD cougar. To even consider hunting within Custer State Park is indescribably unconscionable!

74. I'm concerned that the numbers proposed for future hunting season is way too high. I question the number of mountains in the Black Hills, and the excessive quotas proposed. I think there shouldn't be any hunting season at all, and the mountain lion population should be managed by dealing with problem lions, on an individual basis. Certainly if mountain lions are in urban areas, and an immediate public threat, they should be dealt with, but to seek them out and destroy them in their natural habitat is out of line. I think this makes for more problems by disrupting territories, and orphaning kittens. I don't think there should be hunting allowed in Custer State Park. As far as I know, there haven't been any incidents to justify this. I've lived in the Black Hills 52 of my 56 years. I love the Black Hills, and hike and explore them often. I think mountain lions are an amazing and important part of our ecosystem, and more objective research is needed to determine their numbers, territories, and behavior, and more education needed, before they are destroyed.

75. The members of the Black Hills Mountain Lion Foundation thank you for the opportunity to comment on the 2010-2015 South Dakota Management Plan. While we agree with the “Guiding Philosophies (page 15) of the Department of Game, Fish and Parks, we believe that the objectives and strategies outlined in the plan do little to embrace these philosophies. The proposed arbitrary reduction in the South Dakota mountain lion population is unjustifiable because it ignores the principles of sound science and the wishes of the public. If the plan is implemented, it will threaten the sustainability of the newly recovered population of mountain lions in the Black Hills. We have serious concerns regarding the accuracy of the estimates of the mountain lion population in the Black Hills. The derivation of the population estimate via the mark-recapture methodology is disturbing on many levels. It seems that the estimate was based on only one year’s data, that being the data of 2007. The justification for omitting 2009 was that it was “similar” to 2007 when actually the male harvests differed greatly. Even if we overlooked the fact that only one year’s data was utilized and a favorite year was selected to build on, we still find inconsistencies when calculating the female portion of the population. Instead of using the correct ratio of 5 harvested collared females out of 20 radio-collared females which would yield 64 female lions in the state, the ratio 5/35 was used where 5 radio-collared females were harvest out of a total 35 radio-collared mountain lions (both males and female). This means that the final number of 112 represents males and females instead of just females. Subsequently, this lowers the estimate of kittens as well. The assumption that 70% of the population is female may be in error. If this is true, then there are 64 female adult lions (and not 112) which represent 70% of the population which means that there may only be 91 adult mountain lions in the Black Hills (64 female and 27 males). After interviewing the Department of Game, Fish and Parks, the media has reported that quotas may be raised from 40 to 80. We sincerely hope this is not the case as your data indicates this would decimate the population of adult lions. After attending several presentations given by the Department’s biologists, we have learned that the lion population had stabilized for two years and at current harvest levels, is now in decline. After conducting surveys, the Department has shown that the majority of people want the mountain lion population to stay the same or decrease, but only slightly. This is actually consistent with the trends we are observing now. The management plan states that the Black Hills Citizen Survey data provides the most accurate scientific measure of Black Hills citizen’s general attitude towards the mountain lion season compared to the public meeting responses and unsolicited responses. On page 64, a chart depicts the Black Hills’s residents desired levels of wildlife population for the next five years with 7 possible responses regarding mountain lions, those being: “eliminate, “decrease greatly”, “decrease slightly”, “remain the same”, “increase slightly”, and “increase greatly”. The category with the most responses was, “remain the same”. Any further changes in the season quotas would be against the wishes of the majority of the public. We are truly disheartened by the Department’s dismissal of the orphaning issue. To only acknowledge orphaned kittens less than three months of age and to report ages of independence that are more the “exception to the rule”

rather than the norm is deceitful. The management plan fails to acknowledge that mountain lion kittens require their mother's to teach them how to select their prey and make successful kills and that many orphaned kittens between the ages of 6-12 months will die or become problem animals depredating on inappropriate and easy prey. Increasing quotas will only exacerbate orphaning and increase depredation and risk to the public. In addition, we believe that the draft management plan neglects to fully consider the impact of an increase in the harvest of mountain lions in the Black Hills of Wyoming. Immigration of mountain lions from the Black Hills of Wyoming will be significantly lower because the area will be managed as a "sink" for the next three years. It appears that there is little coordination between the two state agencies. Finally, the scientific research presented and the conclusions drawn within the management plan have never been peer reviewed by an independent panel of wildlife biologists. The Department's unwillingness to do this only draws further suspicion that the research is flawed and skewed to support a predetermined position held by certain special interest groups. Therefore, we believe that the management plan should be revised and that the Draft South Dakota Mountain Lion Management Plan 2010-2015 should not be adopted.

- 76.** Please do not increase the number for shooting mountain lions in SD. It appears we have invaded their territory, not the other way around. Until a more accurate count can be made we should not increase the current number of mountain lions that can be killed. We should make it to only allow killing if they do damage on the property of the hungers.
- 77.** The draft 5-year plan overestimates the number of adult and young lions and therefore overestimates the number of deer the lions harvest. It fails to provide an adequate report of potential lion habitat outside the Black Hills. The plan is biased, focusing on arguments for reducing the population, while failing to list benefits of maintaining the current level of population. The mountain lion is a keystone species. It is key to its ecosystem. It is likely that certain ecosystems outside the Black Hills can support breeding populations of mountain lions; those populations should be allowed to recover, not eradicated. With proper management and a more balanced philosophy regarding the role of the lion vis a vis human and deer populations the Black Hills can maintain a "source" population from which lions may disperse east, west, north and south. In fact, it seems that Wyoming is relying on SD to supply lions to emigrate west to occupy ecosystems in the third of the Hills lying in WY, while SD wants to increase SD's harvest and limit dispersals. The draft plan proposes to harvest 80-100 lions, double the current lion harvest. I am concerned about the orphaning of kittens, generating a host of young lions that do not know how to hunt their natural prey and become "problem lions" from the perspective of humans and their pets. I object to adding areas of Custer State Park to the hunted area. Custer Park should remain a refuge, where lions are not hunted, to insure continued supply of lions to our Hills. I believe that SDGFP should fix the problems in the analysis and math to reach more accurate estimates of the population, it should improve the

discussion about kittens, and address the positive impact of lions to ecosystem. It should add more information about the dynamics between Black Hills lions and populations in ND, Montana and Nebraska as well as lion management by SD Native American tribes. The plan should amplify discussion of other potential habitat in SD. It should discuss the increased quota proposed in Wyoming. It should re-issue the rewritten draft plan for public comment, prior to the GFP Commission hearing in early October. I am opposed to managing the Black Hills as a "sink"; this is a bad policy; a preferable policy is for the Black Hills to be a lion "source" - a population that contributes to the repatriation of lions in areas where they have been extirpated, including other parts of SD.

- 78.** Please do not up the kill limit. Nature takes care of a lot of the number of big cats.
- 79.** I am very strongly opposed to an increase in mountain lion quotas, I believe there is a lot of intrinsic values and tourism associated with these cats. Our cougars are going to become more and more valuable as the human population continues to increase.
- 80.** Please review your plan before putting it into action. There are several points that need your consideration. 1. The plan doesn't give the survival of kittens enough of a chance. By committing only to address relocating orphaned kittens under 3 months of age, the plan leaves those that have not yet fully matured (up to 18 months!) without proper training from their mothers. Where are they expected to learn proper prey/predator roles if their primary teacher is killed? 2. The plan doesn't consider the numbers of cats that die from causes other than hunting, including orphaned kittens as a result of fatalities of mothers. 3. The plan disregards the preference of the residents of The Black Hills who clearly are in agreement with current population numbers. 4. Quotas for hunting keep rising, despite an overall declining cougar population. Who are you serving? 5. The 'estimated benefits' sound sketchy and contrived. What population numbers and problems are they based on? It seems as if 'wildlife management' is really nothing other than 'hunter satisfaction.' I hope you will reconsider this short-sighted plan and the assumptions it is based on in order to serve the desires of hunters over the well-documented needs of this species.
- 81.** I am submitting these comments on your Draft 2010-2015 Mountain Lion Management Plan. Up front, I will concede that I do not envy the Department the job of deciding how to "manage" this species. On the one hand, the American lion is a remarkable and beautiful creature. Very few people have been blessed with the experience of observing one of these graceful cats in the wild, even though many people long for this experience. This fact should compel the Department to maximize lion numbers throughout the State. On the other hand, some people have an irrational fear of lions, even though it is exceedingly rare for a mountain lion to cause problems related to livestock depredation or human attack. It is tempting to appease these individuals by tailoring hunts to keep the South Dakota lion population very small. This is what the Draft Plan appears to

do. It appears designed to manage the species based on fear, coupled perhaps with the greed. (Mountain lions are not hunted for food; they are generally hunted by a relative few individuals who want to turn lion skin into "trophy" - typically a rug or wall mount - thus reducing a vital living creature into a mere display ornament). In my assessment, having worked for more than twenty years on wildlife conservation and species viability issues in Wyoming, South Dakota and other states, the target of 150-175 +/-25 lions is biologically indefensible. This target does not appear to be based on any reliable assessment of viability, even though problems such as inbreeding, disease, and natural disturbance mortality invariably arise when a species' population is reduced to such low numbers. How did you determine this target population size would be able to withstand stochastic fluctuations over time? The Draft Plan (page 31) suggests lions in the Black Hills "have a relatively high level of genetic diversity" even though the subpopulation was limited to perhaps 25-35 individuals. Despite the reported genetic diversity, a large predator with subpopulation of 35 will not remain viable over many decades. Depending on dispersal, genetic exchange and stochastic events, this may also be true of a metapopulation of 175-200 individuals. Furthermore, given that the remaining areas where lions can find habitat with limited human persecution are small and scattered, how will the Department know the metapopulation, spread over a very large area, will be sufficient to ensure the long-term health of the subpopulations? How would the Department determine when the 175 +/- target is reached? Establishing a hunt quota may allow the agency to determine how many lions are being killed each year (apart from unreported poaching, etc.), but this does not ensure the remaining lions will be capable of sufficient gene exchange to avoid long-term problems. In particular, the South Dakota Draft Plan ignores what is happening in Wyoming, even though the Wyoming region of the Black Hills harbors perhaps a third of the total Black Hills lion population (and possibly more). It is my understanding that the State of Wyoming has increased its annual hunt quota for the Black Hills to 40. This is such a high level of mortality that it will have a significant influence on the overall Black Hills lion population. Nonetheless, the Draft SD Plan does not address this influence on the SD lion population. Lions do not know the difference between South Dakota and Wyoming. The Draft Plan (page 16) states that the proposed population target would yield the benefit of an estimated 40% reduction in the number of mountain lion mortalities caused by vehicle collisions. What is the basis for this? And is such a small population truly necessary to achieve this stated result? For instance, maintaining a higher lion population in areas away from highways, and reducing numbers in the local "problem" areas near highways, may yield the same result with a population of 250-500 animals. The Draft Plan also seems to ignore the issue of prey species. When the lion population is decreased, there will be concomitant increases in the populations of deer and other "game" animals. These increases will then increase vehicle collisions. Nevertheless, the Plan appears to contain no analysis to determine how many more collisions would result as lion numbers are decreased. My guess is reducing the lion population by 50-75 will result in more vehicle collisions than it would prevent. The Draft Plan (page 16) asserts this population target would also

provide a benefit of reducing the occurrence of problem lions by an estimated 50%. What is the basis for this claim? How many problem lions has the Department had to deal with over the years? Without this information, it is impossible for scientists or other members of the public to determine if the stated population target would be achieved (as opposed to dropping to, say, 100-125 individuals), or whether the same benefit would result if a larger lion population were allowed. Again, there may be other ways of realizing the same benefit without limiting the lion population to 175 animals. Increasing hunt pressure reduces the average age of the population. Older lions have survived partly by adopting behaviors that avoid human conflicts. Younger lions tend to be more problematic, for instance, by exhibiting higher rates of livestock depredation and human encounters. The Draft Plan does not address this key issue, even though the stated population target may end up increasing the number of lion problems. The Draft Plan (page v) asserts that 175 +/-25 lions is a "socially acceptable mountain lion population." How was this determined? The document (pages 11-12) acknowledges that having a healthy, viable population of mountain lions is important to a majority of South Dakota residents; only 21% disagreed. This, however, does not imply people believe a population of 175 lions is acceptable. Moreover, many of the remaining lions in South Dakota inhabit federal lands, and those lands are to be managed for the wishes of the national citizenry. If a national survey were conducted, it is likely that an even greater majority of citizens would want a large mountain lion population, much larger than 150-200. In summary, I am opposed to the proposed 175 +/-25 population target in the Draft Mountain Lion Management Plan for South Dakota. This target is not biologically defensible, I doubt it is socially acceptable, it appears based largely on a strategy designed to allay irrational fears, and, for the most part, it would do little more than turn some of the most charismatic and awe inspiring creatures in South Dakota into rugs. Please do the right thing for this species by allowing it subsist with a higher population. Thank you for considering my comments.

- 82.** I think the math on the number of lions in the hills seems to be off, and the suggested quota far too high, but I'll let others cover that in detail for now. I was one of the persons who asked that lions traveling together should not be fair game. The rule was NOT made to protect the cubs. It was made to protect the adult female. The presumption, which I believe to be true, is that orphaned cubs are much more likely to become problem animals than are adults. They are also more likely to die of starvation or other natural causes. We currently have a prohibition on shooting spotted cats. After a great deal of thought, I have come to these conclusions: 1) Spots can occur even on adult lions, faintly perhaps, but there are occasionally spotted adults. 2) Even on clearly-spotted cubs, the spots can be difficult to see in field circumstances. Dim light, shadows, and brief glimpses are all part of the hunt. 3) Relative size can be difficult to ascertain. Even seasoned hunters who have seen thousands of deer occasionally think a fawn is a full-sized deer, especially later in the fall. Many lion hunters have never seen a lion. A 30-pound cub might look like a huge adult to them. If there is any questions about this, please note how many times ordinary house cats have been

"identified" as a mountain lion. 4) If there is a spotted cat by itself, chances are it is an orphan. 5) Orphans have a lower chance of survival and a greater chance of becoming problem animals. 6) Many folks would consider a cat of any size a trophy. 7) The survival of the species is more dependent on the survival of adults than on cubs. 8) Honest sportsmen are placed in a terrible position if they shoot a spotted cub, as is the conservation officer who has to decide how to handle it. Dishonest shooters simply let it lie and find another lion to shoot. When you consider everything, it makes a great deal of sense to remove the prohibition on shooting spotting cats. We have no prohibition on shooting fawns. Heck, we encourage it with all the antlerless tags, and many of these fawns have spots. Most of the pheasants and waterfowl we shoot are young-of-the-year. It is not something new to shoot young animals. The worst I see happening is someone showing pictures of tiny cougar kittens and saying they are now fair game. Not really...if nothing else, they are rarely alone and are therefore protected. And those who might consider it sport to shoot a kitten when it is barely old enough to have its eyes open are not likely to find one; tiny kittens aren't along the roadside, and we don't allow the use of dogs that could potentially find a den site. Sometimes an orphaned, spotted cub wanders where it should not. The GF&P does not have the resources to handle all these cubs. Allow someone to harvest and tag it, and let an older lion live.

83. I am writing in regard to your proposed plan to increase the quota of mountain lions to be killed during the upcoming season. I believe this is an ill-conceived plan for the following reasons: Presently there is an estimated population of 250 +/- 25 cougars (based on speculation rather than sound scientific data), and your goal is to reduce the population to 175 +/-25. This means that your intended increase in quota will double the kill from 40 to 80 cougars. Nowhere have I seen sound scientific confirming these numbers, which appear to be based on pure speculation. Past records indicate that only 5% of females harvested have kittens less than 3 months of age, while ignoring the fact that numerous kittens up to 18 months will be orphaned. These juveniles, if able to survive, are much more likely to be involved in inappropriate prey selection and behavior. Increasing the kill quota to such a great extent will eventually destroy the cougars' ability to self-regulate and ensure a balanced population. In addition to deaths through hunter harvest, around 35-40 additional mountain lions are likely to die from various non-hunting factors. That number again does not take into account the unknown number of kittens that will die, or the number of young lions which will not learn appropriate prey selection and behavior from their mothers. Through the Department's own data, residents of the Black Hills would like desired levels of wildlife to "*remain the same*". The state is proposing quite the opposite, and has been steadily increasing the harvest since 2005 when the quota was 13. South Dakota residents deserve progressive and adaptive management policies based on sound scientific data that balance their interests with healthy cougar populations. Please re-think the current proposal for the upcoming mountain lion season.

84. Committed to restoring Puma concolor throughout its native range, the Cougar Rewilding Foundation (CRF) would like to complement the South Dakota Game, Fish, and Parks for their holistic guiding philosophy (Page 15) regarding the return of mountain lions to the state of South Dakota, specifically, the Black Hills region. As a foundation based in the principles of ecology, the CRF finds the views expressed in the management plan to be refreshing and enlightened regarding the role of mountain lions (and all predators) in ecosystems. We agree that predators such as mountain lions are essential to maintaining the biodiversity of an ecosystem – indeed, without them, ecosystems collapse. The CRF applauds your goal of trying to manage mountain lions in accordance with sound biological principles. What you have expressed in the management plan should be the guiding philosophy for your Department and the State. However, upon reading the document, and based on a number of our staff’s professional experience as predator biologists and wildlife veterinarians, we have profound concerns with your management goals. We wish to address these concerns in the spirit of your guiding philosophy, to manage mountain lions using the best possible biological principles. Before addressing the management plan specifically, the CRF wishes to state that we are not opposed to hunting. However, the proposal as written threatens to destabilize the population, endangering not only the cats, but the public at large, undermining your very guiding philosophy. Mountain lions as a hunting resource should be treated as a trophy species, one whose taking ought to rank with that of bighorn sheep, African lions, and other noted wildlife species. They should not be hunted as vermin, nor the privilege to hunt them be sold so cheaply. To do so demeans their ecological role and deprives them of the respect they deserve. Elevating them to trophy status would greatly enhance their wise management as a valuable ecosystem component (and potential revenue generator from out-of-state, even international outdoorsman), making them a valued addition to the suite of trophy species hunters have the privilege of pursuing. Unfortunately, the proposed management plan aspires to do just the opposite, to diminish the ecological stature of mountain lions, to cheapen their value as a trophy species. Our first concern in the plan is with the accuracy of your estimates of the number of mountain lions in the Black Hills. If one overestimates the population size, the projected number of animals to be removed can have a destabilizing impact on the population, leading to a loss of ecological function throughout the Black Hills ecosystem. With respect to estimates of the current population level (251 animals), it should be maintained throughout the document that 160 adult animals will be reduced to 138 per year, plus 113 kittens of various ages. 251 inflates the perception of the population size and the total density of the area, e.g. Black Hills is 8,400 km sq and at 251 lions, has a density of 3 lions/100 km sq. However, at 160 adult lions, the density should be expressed at 1.9 ADULT lions/100 km sq. If you feel that the current population is stable, excess animals, mostly young dispersers, will be leaving the Black Hills and the stable resident population should be expressed as the lower number. Adopting the higher number makes it appear to the general public that there are more lions than there really are. If the goal is to maintain this stable number around 160, then you must consider what will happen to these excess animals produced each year:

many will disperse, as they should be allowed to; many will die from other causes (we still do not have an idea of what mortality rates of dispersing animals are); some will fill the slots vacated by resident animals, some can be removed by the hunt. How many depends on the mortality and dispersal rates. Based on the estimate of 160 adult lions – adult lions that are actually in the Black Hills – this is the number from which to be regulating your hunt. Regarding this number, we have some concerns as to how the 160 (and the 113 kittens) was derived. The estimate provides no possible range of error. It is not apparent where the standard deviation on page 5 came from. Only one set of values (e.g. one **maximum** growth rate, one percent of females with kittens, etc., most from just one area, the desert of New Mexico, hardly like the Black Hills) is presented. We know biologically that these values can change yearly in one area and do change geographically. This presents just one scenario and thus one estimate of the number of lions, without any knowledge of whether or not these values apply to your population in the Black Hills. As examples, why use only the maximum growth rate from a desert population of mountain lions for a population in a totally different habitat? It could be lower, and if it is, the resulting population estimate would not have any bearing in situ. Even if it did, the repeated use of single values likely makes any final estimate to be far from reality. For example, you used 50% as the number of females with kittens at any one time. Other studies have shown that it could be as low as 20%. If that is the case for the Black Hills, the number of kittens produced and surviving each year drops from 113 to 45 - quite a difference. As for the estimate of the number of adult females based on the “capture/recapture” estimate of females killed by hunters, this also relies on just one estimate. Unfortunately, because of the small sample size (5/35) and possible bias of hunters not to shoot collared animals, this could lead to an overestimate of the number of females. If a hunter passed up just one collared female, the total number of collared females that would have been killed would be 6/35, resulting in an estimate of only 93 females in the population rather than 112. Running this number of females through all the numbers, we get only 93 kittens. And if 2 collared females were passed over, the number goes even lower. Because of all these unknowns, how can you estimate the adult lion population in the Black Hills at 160? To estimate the population using just single values, especially those which seem to exaggerate the population size – which appears to be the case here – is not biologically honest. What needs to be done, and has been done in many instances, is to present a range of estimates (worse case/best case scenarios) so that the public has an idea as to the range in which the lion population size likely falls. We suggest that all the population estimate figures need to be reworked using a wider range of data, rather than just a single study, so that reasonably low and high estimates can be presented, using these for the basis of your management decisions. This would be more biologically correct and more politically transparent. As the guiding philosophy states, you need to provide accurate information to the public. Your current population estimates cannot be accurate, or justifiable. Until we have a reasonable **range** of possible population estimates, it appears that the Department is attempting to justify higher killing of mountain lions by inflating the population numbers. One final concern

is the orphaning of kittens (birth to independence). Though one can reduce the number of <3 month old kittens orphaned by changing the season dates and trying to find those that are orphaned, there still will be small spotted kittens left out in the woods to starve. The public needs to know this. Also, by the calculations presented, 40 % of the females killed will have kittens between 3 months and 1 year old. Though there is a 71% survival rate (again one value from one study), this still means that out of the 20 females with these age kittens, 17 died of starvation and over 40 survived uneducated! These become the trouble makers, the ones who will go to human inhabited areas and prey on pets or domestic stock, or predate people. Are we not exacerbating the dilemma of problem cougars (which some then use as an excuse to kill more of them)? Lastly, we would like to observe that many of the management strategies proposed in the plan, if applied to ungulates, would be considered biologically unacceptable. For example, would the Department propose that out of a bighorn sheep population of 160 adult (hunnable animals), hunters could kill 40 of them, including females? Would the Department allow the killing of does with spotted fawns? For that matter, would current game laws permit hunters to shoot deer, take their head and hide and leave the meat in the forest? The CRF feels these issues need to be addressed and publicized, so the public can make sound decisions on the management of mountain lions. In conclusion, the CRF applauds the Department's guiding philosophy, but urges it to use this philosophy and a wider range of sound mountain lion science to produce a more scientifically rigorous management plan. In our opinion, the South Dakota document was developed with selective use of existing science, primarily to produce inflated estimates of mountain lion numbers. Some could interpret this as a way to justify the higher kill levels that appear to be predetermined based mainly on political factors. Indeed, no reputable scientific journal, nor self-respecting predator researcher, would attempt to publish these population estimates – let alone develop a comprehensive predator management plan – from such biased data. For the sake of transparency and for producing a more legally sound management document, the CRF recommends that ours and other advocacy groups challenging your methodology and calculations be submitted both for an audit by the South Dakota Game, Fish and Parks Commission, and for peer-review by an expert panel of mountain lion researchers. South Dakota has the opportunity not only to become a model for the management of mountain lions as trophy game, but to ensure that these regal predators are permitted to reclaim their native range eastward, bringing with them their remarkable ability to recover ecosystems collapsing in their absence. As such, the current draft, while governed by an enlightened philosophy, will decimate the Black Hills mountain lion population, increase the likelihood of conflicts in residential areas with orphaned kittens and subadults, and severely limit or curtail altogether their recolonization eastward, should it be executed.

- 85.** On behalf of the Cougar Fund and our members, we present comments on the Draft South Dakota Mountain Lion Management Plan 2010-2015. The Cougar Fund, a national nonprofit dedicated to the conservation of the cougar throughout its present and historic range, works on behalf of its members to ensure that

cougar management, as well as management of their prey, are always held to the highest standards of peer-reviewed science. In addition to educating the public about the many issues that surround cougars, we look to balance human interests with healthy cougar populations. One of the Cougar Fund's main objectives is to balance human interests with healthy cougar and prey populations, and with this particular focus in mind we find the state's Draft Management Plan 2010-2015 seriously lacking in sound peer-reviewed science and direction, as well as support from the general public. As the state increases sport hunting opportunities, and does not utilize or interpret peer-reviewed science accurately, we conclude that cougar populations will be seriously threatened under this management plan. First, we find it egregious that the state would even consider increasing the quota based on a management strategy, or lack thereof, that only takes into account one year of data to predict population trends. Also, it is clear the state does not have the data or understanding to manage for not only basic population numbers, but for social interactions – one of the main issues in cougar management today. The flaws and uncertainty in the state's system of analysis lead to what we consider fraudulent science. We also fail to understand the definition and supporting data behind what the state calls "estimated benefits." Cougars are a self-regulating species, determined by food, habitat and social order. The consensus of peer-reviewed research states that heavily hunted cougar populations tend to be younger, have fewer males and take longer to recover from declines than once thought. To ensure healthy populations in the state, we would like to see all statistical analysis and comprehensive peer reviewed data the state has assessed on habitat suitability, disease, diet and prey selection, population dynamics, density, social interaction trends and public opinion. The Cougar Fund would also like to reiterate that killing mountain lions to increase or maintain human and livestock safety is neither productive, nor scientifically proven and regarded by many other western states as an unrealistic and archaic form of game management. Peer-reviewed published research tells game managers that the indiscriminate killing of cougars does not increase human safety or reduce depredation incidents; in fact it may lead to a disproportionate number of juveniles in a population, which are often more involved in depredation incidents. Indiscriminate killing decreases the ability for older experienced males to eliminate or kill off younger cats that the environment and habitat cannot support. The plan states that only 5% of females harvested have kittens less than 3 months of age. With the goal of an increased quota, and the state choosing to ignore the fact that kittens are raised by their mother's for up to 18 months, there is no doubt that a significant portion of the population will be orphaned at a young age. The juveniles that will be fortunate enough not die from starvation or exposure, are much more likely to be involved in inappropriate prey selection and behavior – an important issue for all interested stakeholders. Not managing for orphaned kitten death and orphaned juvenile's and their behavior is incredibly irresponsible, not to mention cruel. In addition to deaths through hunter harvest counted towards the quota, we can conclude that between 30 and 40 additional mountain lions are likely to die from various non-hunting factors. That number again does not take into account the unknown number of kittens that will die, or the number of young

lions that will not learn appropriate prey selection and behavior from their mothers. Counting all types of deaths towards the quota is essential because non-hunting related mortalities do contribute to cougar declines and actual population trends. Including all mortality is part of an adaptive and progressive management trend that is happening throughout the country. Factoring in all deaths appropriately implies a higher degree of accountability on the part of the public as well as the Department. Looking at the history of cougar management throughout the West, we have seen what happens when a population is over-hunted, which is why we must insist on seeing more scientific evidence and appropriate and applicable research to support a quota increase. South Dakota should be managing cougars on a larger scale throughout the entire state and not simply focus on the Black Hills area. Hunting a species that is still struggling to maintain viable populations and complete colonization throughout the state at anything but a very conservative level can only be seen as politically based. We hope that the state of South Dakota will adopt the most “adaptive management techniques” wherever possible. “Adaptive management” has been characterized by the continual monitoring of indicators that measure progress toward the achievement of management goals and objectives, changing of management practices when new information indicates that better alternatives are available, monitoring relevant stakeholder values and interests, and the monitoring of natural environmental changes that may affect cougar management results. We also ask the state to increase hunter education, increase public awareness and education about living in cougar country, encourage appropriate land-use planning, promote improved animal husbandry techniques and hold farmers and ranchers accountable for ignoring ways to reduce or prevent predation. Thank you for considering these comments. The Cougar Fund is always available to answer questions or provide data.

- 86.** I think you did an excellent job of capturing all the relevant issues associated with managing mountain lions in South Dakota. Good incorporation of evaluation of public education efforts as well as further assessment of effects of harvest on a newly reestablished mountain lion population. I have several specific comments/suggestions relative to the draft management plan: Page v, third paragraph: Suggest **BOLDING** this text as it is the mission of mountain lion management by the state. Page 5, first paragraph: Inclusion of statistical techniques (Lincoln/Peterson) to strengthen the population estimation technique used. Some of the text has the appearance of using unknown or speculative data (50% females, proportional data) when you have the relevant data needed specifically for this population. Perhaps Dr. Jenks could strengthen the rigor of this paragraph? You could use data for several years (2007-2009) to strengthen the estimation method—just a suggestion; more data would allow you to address the other population segments as well. Page 7, bulleted text: “Any mountain lion accompanying another mountain lion may not be harvested” – I realize why this was incorporated by SDGFP, but this effectively removes subadult cougars from the animals available for harvest during the 1-3 month commingling period before separation and dispersal. Page 7, bulleted text: Use of hounds – again I realize

this is a political decision, but use of hounds would allow for some selectivity and provide recreational opportunity for hunters who use hounds to harvest mountain lions. Page 7, paragraph after bulleted text: Definition of breeding age female. Suggest relying on lactation status of females rather than applying an age (2.5 yrs) as the cementum annuli, tooth wear aging technique has more room for error rather than lactation status. **Page 16, Box number 1: Quantifying the amount of decline in depredation based on harvest is a dangerous direction to move toward. Suggest your objective would be to evaluate the effects of maintaining harvest as it relates to prevalence of “problem” cougars and subsequent removal. Harvest may not have the hoped results related to depredation/safety events and outlining a level of reduction would imply a failed management strategy if in fact depredation did not decrease by the 50% outlined. The same applies to number 4., assessing the amount of vehicle kills related to harvest strategies and compensation of mortality is more valid than quantifying an amount of reduction due to a type of mortality the agency has little to no control over.** Page 23, first paragraph: It is important that this type of strategy and its lack of utility in your region are documented. There are instances from South Dakota that could be included to strengthen the argument specifically. Having this stated in the plan will hopefully assist in quelling some of the discussions relative to movement. Page 23 – Incident, number 3: Relative to the decision on removal of lions. The regional trapper/houndsman that identifies/evaluates the majority of incidents and performs the subsequent removal if deemed appropriate should have the ability to assess the situation and determine whether the animal should be removed.

- 87.** To invite public comment on the proposed mountain lion management plan and then withhold the data necessary to make a completely informed decision seems to me inherently wrong. I am reminded of television commercials currently running where a little kid is offered a bike ride, then an adult confines him to a little circle. Yes, a child would know that's wrong.
- 88.** I am very disappointed to hear about the proposed large increase in mountain lion kills for this year. I don't believe any decrease in deer, elk, etc is caused by the lions as I see more deer here in one evening than I used to see while hunting a whole season in Pennsylvania. PA doesn't have the mountain lions to blame for their lower numbers. I do believe that many of today's hunters don't really "hunt" (profuse use of vehicles and high powered rifles) thus the animals really don't have a chance to survive unless their populations are carefully managed. With all due respect I do not think the proposed number fits the criteria of carefully managing, rather, it is extermination. I also believe our state should make a serious effort to relocate wayward lions that merely end up a tree or come to close to human living areas. That's what they do with black bear that come into town in PA and other states. Going out and right away killing an animal without exploring options is going to result in loss of species. One problem is too many people rapidly moving into wildlife habitat. Is that the animal's fault? NO and it is our responsibility to make it work and to learn to co-exist and to educate

people on how to do that. Research shows that the ecosystem must have balance and predators are necessary for a healthy ecosystem. Hunters must realize that there is not unlimited resources for killing animals and ranchers also need to be compensated for an animal that is killed. This is no different then the huge farm subsidies that are already in place for crops. I do not oppose a season, but I am deeply concerned the proposed number of lions to be killed far exceeds that which is needed to properly manage their numbers. Hunters should not be the only driving force here. Tourism is huge and once the animals are all gone, tourism will diminish.

- 89.** In all surrounding states Mountain Lions can be Sexed in a tree. How you ask? South Dakota is one of the only states where you can not use the aid of dogs in the taking of wild cats. Ever since South Dakota has had a cat season we have run into the same problem year after year. We reach our limit of female cats before the problem (Young Males Looking For New Territory) is really delt with. Many states and countries dogs can be used to track these amazing cats, and once the cat is in a tree, with a little bit of studing you can sex a lion in the tree. I understand that a lot of people do not have dogs and maybe it would make it unfair to them if dogs were used right away durring the season, but if the female limit is reached what would be wrong with holding a separate season for canine hunters and have it limited to only male lions.
- 90.** I am writing you to oppose any reduction of the size of your cougar population now or at any time in the future. Cougars are a national treasure, a gift from the Creator and we should honor and protect them. We need to save a legacy of beauty and strength to leave for future generations. Let us not become the people who let all of the cougars die.
- 91.** The number of mountain lions in SD ,especially in the Black Hills, is becoming a concern to more and more people as the numbers increase. At one time the lions served a useful purpose as population control of prey species. Today hunters and the SD GFP are doing quite well in that role. Hunters put a lot of dollars into the management budget in hopes of having game to hunt. I, for one am not willing to share 50:50 with the lions on the deer herd. The lion permits do put some money in the pot, but at a very heavy toll on the big game herds. The other factor is the huge sums of time and money spent on studying the lion, dealing with the problem lions and trying to educate the public about lions. I think it is time the commission and the department to do what they know is necessary and get a handle on the population growth of the lion. This most likely means an increase in permits and hopefully harvest. There are those out there that want them left alone but where are their dollars for management and conservation? With these thoughts in mind I urge you all to consider a marked increase in the number of permits and no female quota. After all the key to population control is a reduction in the female population. Thank You for your consideration in this matter.

- 92.** Mountain Lions aren't encroaching on people, people are moving into their habitat, therefore more sightings are reported. The powerful and elusive mountain lion once kept the deer populations within reasonable bounds. Some people object to the lions predatory habits, apparently unaware that due to overpopulation, many deer starve each year. If the prejudice against it could be overcome, permitting it to increase its own numbers it could once again act as a natural check on deer and other too numerous wild animal. My husband and I hunted the Black Hills up by Dakota Point for several years. The first & second year my husband got his deer, then it went downhill and he didn't get anything. While tracking around we always looked out for lions but never saw anything physical, much less and prints. We don't think you need to make your plan any higher.
- 93.** One of the great treasures of our country is the our wildlife, both fauna and flora. Please reconsider increasing the number of cougars that can be killed. Instead, figure out ways to protect their habitat so they can live their lives in a safe environment. We have already decimated the whales and sea creatures, the polar bears, the rhinos, the leopards and tigers -- I could go on and on. Allow the cougars to live. They do not belong to us.
- 94.** I am very concerned that a large increase in mountain lion harvest combined with similar action by Wyoming Game and Fish would endanger the entire Black Hills population. I urge you to delay adoption of your plan and consult immediately with your Wyoming colleagues to develop an integrated plan.
- 95.** As people who are interested in visiting your State and in conservation, my wife and I are appalled to hear that South Dakota may increase the number of cougars who can be killed, including females which leaves both kittens and juveniles to die. We strongly urge that South Dakota protect cougars and refuse the pressure to increase the number who can be killed.
- 96.** Just wanted to let you know that the Oglala Sioux Parks and Recreation is putting together a resolution to oppose the sd mt lion management plan. We may take it to the full tribal council, not sure. The plan seems very aggressive in terms of cutting down the mt lion populations in SD. However, I have not seen the raw data that documents the current population. With just a glance at the plan, it seems that the amount of animals that will be harvested would really decrease the numbers of animals in the Hills and also affect the dispersing animals into surrounding areas. I guess that might be the bottom line in this, trying to decrease animals from dispersing? anyway, I don't believe the State has consulted with the tribe(s) on this plan and we wish they would have.
- 97.** The Draft 2010-2015 Plan has many errors in it. These include but are not limited to an over estimate of the number of lions (both adult and kittens) and an over estimation of the lions impacts on deer. It provides inadequate disclosure of potential lion habitat elsewhere in SD. While it provides arguments for reducing

the population, it does not balance with discussion of the reasons for keeping the population at current levels. The mountain lion is a keystone species and important to the ecosystems in which it lives. I believe there are other areas in SD besides the Black Hills that can support breeding populations of mountain lions and would like to see those area's lions recover. The Black Hills can be managed to be a seed or "source" population that sends dispersing lions east, west, north and south. I want our Hills to continue to send dispersing lions eastward and northward into SD, south to Nebraska and north to North Dakota and points beyond. GFP wants to reduce their estimated lion population to 150-170 lions. The potential increased "harvest" of 80-100 lions, will at least double SD's current lion quota. Wyoming's proposed increase from 24 to 40 lion quota for the Hills, but as this is combined with a new definition of "human caused mortality" that will result in another 8 Wyoming lions taken -- thus Wyoming is also doubling their "harvest". Wyoming has no female quota. Wyoming's Black Hills area is about one third the size of SD's Black Hills, although Wyoming's biologist claim their habitat is better. Ironically Wyoming is relying on SD to be a "source" to supply lions to immigrate west to fill their lion "sink", while SD wants to increase SD's harvest and limit dispersals. Harvests are based on what are merely estimates of population. Experts fear these bi-state excessive harvests may decimate the Black Hills lions and thus impact the Black Hills ecosystem. This may also slow down potential recovery of lions in areas to the east. I am concerned of the orphaning of kittens by the hunting season and the shift to younger aged lion populations as the older lions are killed off via "harvest". I am concerned that lions orphaned too young may not be adequately trained by their mothers and may be more likely to become "problem" lions, and thus ironically lion "harvest" may fail to provide relief from "problem" lions -- one of the justifications for increased quotas. I am concerned about the addition of parts of Custer State Park to the hunted area. As long as lions are hunted in the Black Hills, there should be a "refugia", an area where lions are not hunted, to insure continued supply of lions to our Hills, which are more isolated as we have prairie between us and other lion sources. I believe that SDGFP should withdraw this Draft 2010-2015 SD Mountain Lion Management Plan. It should fix the problems in the analysis and math to find more accurate estimates of the population, it should improve the discussion about kittens, and improve discussion of positive impact of lions to ecosystem It should add more material about nearby populations in ND, Montana and Nebraska and lion management by SD Native American tribes, improve it's discussion of other potential habitat in SD, It should discuss the increase quota proposed in Wyoming. It should reissue the improved document for public comment, prior to the GFP Commission hearing in early October. I am opposed to managing the Black Hills as a "sink" and want Black Hills to be a lion "source" - a population that contributes to the repatriation of lions in areas where they have been extirpated, including other parts of SD. While I support the removal of specific individual lions, which are in conflict with humans, however I think the lion hunting season should be STOPPED!!!

- 98.** I strongly endorse the position which is contained in the letter posted to you by Nancy Hilding of the Black Hills Audubon Society. My personal feeling is that mountain lion populations reflect the abundance of their prey species, which, if we show adequate respect for the natural environment where our lives impinge, won't include us. Reducing lion numbers to the point where sightings are no longer reported and threats to humans are completely obviated (which would appear to be the objective of some advocates) would seem to be an example of the hubris which has resulted in the human-caused mass extinction of species currently underway. Thank you for your consideration.
- 99.** I have tried to review and understand the new policy suggested for South Dakota's management plan for mountain lions as I am a third grade teacher who spends time teaching a unit on mountain lions which fits into my science standards. It is becoming more difficult for me to understand management practices, much less try to explain and teach to my students why there seems to be a need by some to want to eliminate so many of these creatures that seem to balance our wonderful world here in South Dakota. I urge you to educate, not eradicate. Sound science and more time studying and learning from many experts who have spent their lives studying this animals is what seems to make sense. Please consider carefully the consequences of this plan. Thank you.

100.

I have been a frequent visitor to the fine state of South Dakota, and have visited Spearfish Canyon nearly every summer since the early 1960's. I love South Dakota. That is why I am very concerned about the proposed "South Dakota Mountain Lion Management Plan, 2010-2015."

In 2003, the Department of Game, Fish and Parks removed mountain lions from their protected status based on an unpublished doctoral dissertation by Dorothy Fecske. In this paper, Fecske estimates the population to be between 127-149 individuals, "Total number of cougars in the Black Hills was estimated as 127-149." Assuming that your current report estimating the 2009 population of cougars to be between 225 - 275 individuals to be correct and using a litter size that provides agreement with your 2009 population estimate, and also assuming the initial 2003 Fecske population estimate average of 138 individuals to be correct, as well as her data regarding survival rates (Fecske, 96), which is also used in the "South Dakota Mountain Lion Management Plan, 2010-2015," I developed the following table:

Year	Estimated Initial Population	Reported Deaths-Hunting Female	Reported Deaths-Hunting Male	Estimated Adult Females	Estimated Adult Males	Reproductive Rate	Estimated Births	Hunted Mother Kitten Mortalities	Kitten Mortalities	Kitten Population	Mortalities Female Yearling	Female Yearling Population	Male Yearling Mortalities	Male Yearling Population	Mortalities Female Adult	Female Adult Population	Mortalities Male Adult	Male Adult Population	Estimated Final Lion Population
2003	138	0	0	61	26	1.90	58	0	20	38	0	36	0	15	9	52	2	24	165
2004	165	0	0	88	39	1.90	79	0	27	52	2	17	4	15	12	76	3	35	195
2005	195	7	6	86	44	1.90	92	13	31	48	3	23	6	20	12	74	4	40	204
2006	204	7	8	90	52	1.90	97	13	33	51	3	21	7	17	13	77	5	47	213
2007	213	3	16	95	48	1.90	101	6	34	61	3	22	7	18	13	82	4	44	227
2008	227	0	0	104	62	1.90	108	0	37	71	4	27	8	23	15	90	6	57	267
2009	267	11	15	106	65	1.90	127	21	43	63	4	31	8	28	15	91	6	59	271
2010	271	20	20	102	66	1.90	129	38	44	47	4	28	9	22	14	88	6	60	245

Projected																			
2011	245	20	20	95	62	1.90	116	38	40	39	3	21	10	14	13	82	6	57	2:
2012	212	20	20	83	51	1.90	101	38	34	29	2	17	9	11	12	71	5	46	1:
2013	173	20	20	68	37	1.90	82	38	28	16	2	13	8	7	10	59	3	33	1:
2014	128	20	20	51	20	1.90	61	38	21	2	1	7	6	2	7	44	2	18	:
2015	74	20	20	31	0	1.90	35	38	12	-15	0	1	5	-4	4	27	0	0	:
2016	10	20	20	8	-23	1.90	5	38	2	-35	-1	-7	3	-10	0	0	-2	-21	:-

As you can see from these calculations, continuing the current hunting policy even without increasing quotas, South Dakota's mountain lion population will be eradicated within six years.

I seriously question the validity of the mortality and reproductive rates as suggested by the "South Dakota Mountain Lion Management Plan, 2010-2015." Using a litter size of n=3, and the mortality rates present in the "South Dakota Mountain Lion Management Plan, 2010-2015," beginning with the Fecske 2003 population averaged estimate of 138 lions, the model predicts a completely absurd 2010 population of 1,383 mountain lions:

Year	Estimated Initial Population	Reported Deaths-Hunting Female	Reported Deaths-Hunting Male	Estimated Adult Females	Estimated Adult Males	Reproductive Rate	Estimated Births	Kitten Mortalities	Kitten Population	Mortalities Female Yearling	Female Yearling Population	Male Yearling Mortalities	Male Yearling Population	Mortalities Female Adult	Female Adult Population	Mortalities Male Adult	Male Adult Population	Estimated Final Lion Population
2003	138	0	0	61	26	3	92	31	61	0	36	0	15	9	52	2	24	188
2004	188	0	0	88	39	3	141	48	93	4	27	7	24	12	76	4	35	255
2005	255	7	6	96	53	3	191	65	126	6	41	11	36	13	83	5	48	334
2006	334	7	8	117	76	3	251	85	166	8	55	14	49	16	101	7	69	440
2007	440	3	16	153	102	3	330	112	218	10	73	19	64	21	132	9	93	580
2008	580	0	0	205	157	3	435	148	287	13	96	25	84	29	176	14	143	786
2009	786	11	15	261	212	3	590	201	389	17	127	33	111	37	224	19	193	1044
2010	1044	20	20	331	284	3	783	266	517	23	172	44	151	46	285	26	258	1383

Clearly, the 1,383 figure is ridiculous, and estimations of South Dakota's mountain lions to reproduce and to survive are wildly exaggerated. Mortality rates and reproductive rates are not constants, but should produce a reasonably reliable decadal model. It appears that this report uses inflated reproductive and minimized mortality rates in order to support the hunting quota increase it is promoting. This bias indicates a profound lack of ethics and professionalism on the part of the drafters of this plan.

The truth is that the methods for predicting mountain lion populations used by the framers of the "South Dakota Mountain Lion Management Plan, 2010-2015," are deeply flawed and amount to little more than wild guesses. It is essential that any management plan provide, at the barest minimum, accurate information regarding the current status of what is to be managed. Hunting limits set according to incorrect mortality and reproductive rates that, when tested, result in an estimated 2010 population at *least* an order of magnitude higher than the actual population creates a policy that will likely lead to complete eradication of these top predators.

Even worse than the poor workmanship surrounding the mountain lion population estimates, no one has addressed the impact that such eradication would have.

The specious argument that the report makes about the negative impact of mountain lions on bighorn sheep is stunningly ridiculous. The report claims that mountain lion predation is diminishing the bighorn sheep populations. This is absolutely wrong. It has been documented that of all activities, human hunting has the most deleterious effect on bighorn sheep populations: hunting culls the most robust males of the herd, leaving the less viable males to mate and produce less resilient offspring. Only a healthy male can produce the big horns that reveal his genetic endowment. These are the bighorns that are most prized and most often hunted out of the herd. This results in poorer male specimens producing weak offspring that succumb to numerous diseases. This problem is compounded by the normal reproductive pattern exhibited by these animals, where the dominant male bighorn produces most of the next generation's offspring, weakening the herd exponentially with each loss of a robust, dominant male. Conversely, natural predators select the weaker members of the herd, and strengthen the herd's genetic vigour.

Perhaps if mountain lions had been doing their job balancing the herbivore populations between 1930 and 1978, there would have been more vegetation fodder for woodpeckers (they eat fruits, berries, and nuts as well as insects and grubs) and a larger population of the only effective predator of the mountain pine beetle might have been able to prevent the beetle epidemic from being so devastating in South Dakota. "Taking out predators has a cascade of effects on other populations, down to the plant life," said John Terborgh, a professor of environmental science at Duke University in Durham, North Carolina. Loss of top predators results in increases in pest species and in reductions in productive vegetation. A study in Zion National Park found that abundance measurements for a number of species—including water plants, wildflowers, amphibians, lizards, and butterflies—were lower in areas where mountain lions were scarce and more abundant in areas where mountain lions still roamed frequently.

Before hunting South Dakota's mountain lion population into extinction and compromising the beautiful hills and prairies of South Dakota, make sure you know what you are doing.

101.

On behalf of the Mountain Lion Foundation (MLF) and our members and supporters in South Dakota and throughout the United States, I present these comments on the South Dakota Department of Game, Fish and Parks' (SDGF&P) Draft 2010 - 2015 Mountain Lion Management Plan. The Mountain Lion foundation is dedicated to protecting and conserving mountain lions throughout the United States and in promoting peaceful coexistence between mountain lions and humans.

The Mountain Lion Foundation's review of South Dakota's Draft 2010 - 2015 Mountain Lion Management Plan found the document full of conflicting numbers, flawed mathematical equations, bad scientific practices, faulty assumptions, and a complete disregard of the basic biological and behavioral qualities of the species. The following are our most vehement objections to this Plan.

First, the South Dakota Department of Game, Fish and Parks have turned the issue of managing the State's mountain lion population into a much narrower focus of managing mountain lions in the Black Hills.

The state of South Dakota encompasses 75,896 square miles of land. Of this, the Black Hills region is less than seven percent of the state's land area. SDGF&P's mountain lion management plan presents the Black Hills as the "only" viable mountain lion habitat in South Dakota because this is where resident territories and breeding populations are currently found.

What is not presented to the public is the fact that, until the species was extirpated from the state sometime around 1906, mountain lions could be found throughout the entire state. Because of this human induced extinction, South Dakota's mountain lion population is undergoing the slow process of

recolonization. A process which has slowed even further in consequence of the disproportionate number of trophy-hunting related lion mortalities throughout the region (South Dakota, Wyoming, and Montana) which have vacated previously held resident territories.

Studies show that mountain lions are a highly adaptable species which can live in almost all types of environments ranging from high mountain forests to harsh desert canyons. A key determining factor for suitable lion habitat is the availability of their primary prey species--deer. The National GAP Analysis Program's listing of suitable habitat, and prey species probability virtually guarantees that mountain lions could exist almost anywhere within South Dakota. Mountain lions as a species are biologically designed to disperse. Maturing juveniles have been known to travel hundreds of miles to establish home range territories. By not allowing the species to roam, inbreeding will inevitably occur (as is seen with the approximately 100 panthers left in Florida) and the genetic health of the population will decline.

The bottom line is that mountain lions should be managed on a larger, regional scale and not confined within the Black Hills. Until the recolonization process is complete, with a mountain lion population appropriately scattered throughout the state, any discussion about overpopulation and habitat limits is premature.

Second, the relatively small size of South Dakota's mountain lion population, makes the accurate estimate of population numbers critical in making any reasonable management decisions, and dramatically increases the margin of error risks. An analysis of SDGF&P's mountain lion population estimate raises several questions as to the validity of their population growth model, and identifies major errors in their mathematical calculations.

For example, SDGF&P's rate-of-growth calculation is based on the **maximum** growth rate, found in **one** study (Logan and Sweanor 2000), which took place in an environment totally dissimilar to that found in South Dakota. In actuality, mountain lion growth rate values can and do change annually in any one area, and are highly dependent on unique geographic factors. By not looking beyond a single aspect of a single study, SDGF&P researchers are violating sound analytical practices and have risked developing a population estimation formula which is likely to be misleading and far from reality.

After creating this potentially faulty population growth model, SDGF&P attempted to justify their conclusions by using their 2007-2009 mountain lion harvest data. But according to them, *"No harvest occurred in 2008 due to movement of the harvest season to January 2009. Harvest data for 2009 provided a similar estimate of population size to that of 2007."* The three years of harvest data supposedly used for the population estimate is actually just 2007's mortality numbers, which means they are **relying on only one year's data to assume population trends**. SDGF&P rationalize this choice by saying 2009 was *"similar"* to 2007 and thus they only needed to use results from one of the years. Their harvest data is noted below.

	2007	2008	2009
Females	16	No harvest	15
Males	3	No harvest	11
Total	19	0	26

Yes, female mortality data was *similar* (16 to 15) but the male lion harvest (3 to 11) increased drastically! That's up 267 percent . . . how convenient to ignore the higher male harvest year.

Even if you overlook the fact that they are only using one year's data to support a trend analysis, and selecting their favorite year to build upon, they still screwed up their calculations.

SDGF&P noted that *"In 2007, estimates of population size were generated for the female segment of the population . . ."* This decision was made *" . . . due to total harvest of one radio collared male."* At the time, South Dakota's collection of radio-collared lions totaled 35 (15 males, 20 females- page 29). When calculating the female segment of the population by harvest data from 2007, the harvest rate should therefore be calculated as 5/20 collared females, NOT 5/35 total (male + female) collared lions. This error in their mathematical calculations for population estimates on page 5 leads to a drastically different estimate of South Dakota's mountain lion population.

A total of 16 total female lions were killed that year. Five of those killed were radio collared, thus 5 out of 20 radio-collared female mountain lions were killed ($5/20 = 0.25 = 25$ percent). So if those 16 lions represent 25 percent of the female population, then SDGF&P's data shows there could only be **64 female lions in the state** (16 is 25 percent of 64). By dividing instead by 35 lions, the 112 lion result SDGF&P is presenting as females only, is actually a combination of males and females.

SDGF&P further compounds their error by assuming that their estimated female population number represents 70 percent of the total lion population in South Dakota.

This 70 percent female estimate appears to be based on data from SDGF&P's own lion harvest data for 2007 and 2009. During these two years, 31 females and 14 males were killed (45 total). The 31 females represent about 70 percent of the total harvest, so SDGF&P made a giant leap in assuming 70 percent of the entire population must also be female, and thereby able to create a lot of kittens. As justification for this assumption, SDGF&P researchers incorrectly cited Logan & Sweanor's research from a 2000 lion population study in New Mexico.

Yes, Logan & Sweanor did find that their study population sometimes had slightly more females than males because males have a higher mortality rate (via killing each other for home ranges and through competition for breeding females), and a female bias was noted in first-time litters, but in the end, Logan and Sweanor concluded *"none of the annual comparisons of adult sex ratios in either area were significantly different from 1:1."* This is clearly a case where SDGF&P researchers once again only rely on a single source, and then "cherry-picked," data which would appear to validate their conclusions.

Third, SDGF&P claims that the Black Hills can only support a population of somewhere between 150 to 200 lions and that recreational hunting quotas must increase to *“ensure a healthy, self-sustaining population of mountain lions in the Black Hills of South Dakota.”* They base this conclusion of their assertion that there are currently 251 mountain lions (138 adults, 113 kittens) residing in the region.

MLF has clearly demonstrated the inaccuracy of SDGF&P’s mountain lion population estimate. But even using the Departments own population estimate numbers it is disingenuous to include “kittens,” as if they were adults, just to create a false sense of overcrowding in order to justify the need for an increase in the annual hunting quota.

In conclusion, the Mountain Lion Foundation finds that the South Dakota’s Draft 2010 - 2015 Mountain Lion Management Plan is poorly written, contains conflicting numbers (such as the total number of mortality events), has critical errors in their mathematical equations which profoundly affect their estimated population figures, and makes assumptions far beyond anything that can be proven with current research.

The Mountain Lion Foundation formally requests that the South Dakota Game, Fish and Parks Commission reject this flawed document and authorize a complete audit of the process as well as a peer review and second opinion on the proposed 2010 - 2015 Mountain Lion Management Plan from credible outside experts.

102.

I apologize I don't have a lot more time to dig deeper in the report, but here are my two big concerns from a brief read on their estimates for the population on page 5.

1. First and foremost they are comparing apples to oranges in calculating their populations based on ratios with the known collared population. On the one hand they count only collared female cougars that were killed by the hunt but then they compare that to the total population of collared cougars (35) and not the 20 that were female which they should have. In short, their estimation of 112 should have been for total population and not merely females. Here are the correct calculations.

Assuming the ratios of hunted cougars in the collared population is similar to that of the total population, they should have

$$\frac{6 \text{ total population collared hunted}}{35 \text{ total population collared}} = \frac{18 \text{ total population hunted}}{X \text{ total population}}$$

.17 = 18/x

X = 18/.17 = 106 total cougar population.

If you want to do it again for the female population only you would assume the ratios of hunted collared female cougars to total collared female cougars is the same as that of the females in the total population.

$$\frac{5 \text{ female collared hunted}}{20 \text{ total females collared}} = \frac{16 \text{ total population females hunted}}{X \text{ total population females}}$$

.25 = 16/X

X = 16/.25 = 64 total female cougars.

Therefore, from their very own data, they should have concluded there were 106 total cougars or 64 female cougars in the population. This is quite different from their estimate of 112 female cougars. Their error is pointed out below where they compare their apples to oranges

$$\frac{5 \text{ female collared hunted}}{35 \text{ total population collared}} = \frac{16 \text{ females totally hunted}}{X \text{ total females}}$$

They should have X total population to be consistent in which they would have concluded there was a total population of 112 cougars and not 112 females only. Note this is close to the 106 total population we obtained the other way. I would like to point out that this last calculation assumes that the number of collared females/males ratio is the same as that of the population at large. I actually like this check in that 106 and 112 are very close but it is total population and not females only.

2. My second critique of the analysis on page 5 is where they come up with the 112 female cougars and multiply this by .5 since their assumption was that 50% of the females were with kittens. That may or may not be true but they still need to first subtract the 16 females that were harvested that year. Those 16 harvested females did not contribute young to the pool. The calculation should have been more like (64 female cougars – 16 harvested females) = 48 females

½ of these had kittens so we have 24 females having kittens

Each litter size of 3 gives 72 kittens

Survival rate of .67 gives a total of 48 kittens

Given the 86% survival rate of the adult cougars used in their calculation, the 106-112 would be reduced to 91-96. Therefore we end up with 96 total adult cats and 48 kittens giving roughly 144 cougars in the Black hills. This is quite a different picture than the 251 number they report.

103.

Many very intelligent and gifted people are weighing in this year regarding the proposed 'new' plan. It is high time our Commission responds to outside knowledge and stop kowtowing to the three groups that decide and dictate policy in SD...the rancher, the hunter and those who live their lives under the influence of unjustified and preconceived fears. Maurice Hornocker states clearly in the new book, "Cougar" [pg238, edited by him and Sharon Negri] that along with 'food or prey', mountain lions limit their own numbers. In every 'credible' study, territorialism is [that limiting] factor. Thompson in his recently released 'thesis' claims SD has shrinking home ranges and the Hills are saturated and cats are 'stacked' on top of each other, his whole thought process was/is driven by the drum beat claims of 'density dependence'. Most if not all of this is debunked by real, published studies. For years now, SD has used these false claims to justify their killing, which are reflected in skewed and inflated numbers that try to demonstrate an ever increasing cougar population. Dr. Hornocker states without doubt that 'home ranges DO NOT shrink! Who will you believe? A recent graduate, mentored by an ungulate biologist, with his study funded by the very agency who benefits from his findings, or a man who pioneered the study of cougar ecology/biology and has studied over 50 years, giving his life to these precious cats? For years SD has used questionable data, has altered the numbers and insisted that they know best regarding cougars. They refuse to acknowledge the hard won and earned knowledge from experts who have studied for lifetimes. This time SD has literally shot themselves in the foot with their own data. Whether this was an oversight or just plain arrogance is the question. Their own numbers prove that all along they have been distorting the truth and misleading the good people of SD. The proposal, when reviewed by statisticians, shows without doubt that SD has about 'one half' as many cats as previously claimed. This is shown by their flawed cap recap data on pg 5 of the Plan. Comments about orphans are misleading and alarming considering the possibility of effect on the public of SD. Although as stated, perhaps 5 percent of the females killed will leave behind kittens of three months of age or less. This is not relevant when one considers those others destined to be alone. All experts agree any

cat under the age of 6 months will 'die' most likely from starvation or cannibalism. Fecske herself, SD's original researcher [possibly the best because she was not influenced so much by politics and management but by the quest for basic truth and knowledge] says to be safe, 9 months is a more realist minimum where kittens can survive, albeit that they could very well become 'problem cats' at the mercy of humans who indeed caused them to take on this desperate role through the killing of their mothers. Any female kill level results in half of those killed, leaving dependent cubs of some age level. Anyone can easily predict the number of kittens left and any negative results can be directly linked to SDGFP, without doubt! From their own data, pg 49, if a lion was present but caused NO problem, 90 percent of those surveyed chose something 'other' than killing as a MO for the agency. Curious is the fact that in the 2002 survey only 6 percent of citizens chose 'deadly force' when dealing with pumas and in the most recent study that number, after all these years, rose only to 7 percent. There is much more public acceptance than the agency would like us to believe. Nearly 57 percent of citizens want lion numbers to stay the same or increase [pg 49], not suffer the drastic killing decrease proposed by the agency. These results mimic the past and this distortion of numbers, or an attempt to do so, is nothing new. In 2005, at the 'finalization' meeting in Pierre [Aug 4, 05] 78 percent of those citizens who wrote, emailed, called or testified...opposed the hunting season. You know who ruled the day and the horrendous cycle of lying and killing began, AGAINST the WILL of a clear majority of the people. Initial results from 2005 show a pattern of number distortion and misrepresentation. In the 20 statewide meetings held to solicit public opinions, 747 people attended. Of those 354 or just 47 percent, answered the GFP questionnaire. Although the agency claims 'most' or 78 percent of the attendees supported a hunting season, this is a most egregious claim since only 277 were in support. Agency claims in the public opinion survey of 05 and later in the Concise Statement of 05 are nothing but untruths biased toward killing. This is true because 277 of 747 are 'only' 37 percent NOT, 78 percent. This play on numbers was intentional to support a hunt that had little support, except from the three groups I have previously mention: ranchers, hunters and those living in fear. The real number would be 37 percent 'support' the hunt, a far cry from the 78 proclaimed by GFP. This 'agency math' has been contentious now for over 6 years and it is worsening as evidenced by the outrageous comparison and calculations using collared females BUT comparing them to the TOTAL number of collared cats [not to the correct FEMALE collareds] thereby skewing the population estimate upwards instead of showing the true value, which is: 'about half' the reported number and a rapidly descending population of pumas in the Black Hills of SD. The real math shows that without consultation of expert and peer reviewed data and plans, the agency has increased quotas and kill levels annually for 5-6 years. The female kill has increased 500 percent in just those 5 seasons while at the same time the agency publicly states: BOTH population of cats and sightings ARE declining. What makes this whole population issue totally unpalatable is that most all their results are made using ONLY one year of study [2007] and their continued insult toward 'sound science' [which by all intelligent design SHOULD follow the plans laid out in the North American Conservation Model]. SD insists on picking, choosing and guessing based on data gleaned annually, rather than waiting for real results and trends to develop...which take time. Most scientists insist on 5-8 years as a time line to experience reliable results, the best studies use 10 years [some have gone 16 years] and 3 years is the

bare bones minimum. As I have mentioned previously, 'steady state equilibrium' takes at least '3' years! SD never waits for good results to dictate future actions or changes but forges ahead blindly insisting they know better than the scientific community as a whole. Basing decisions with emphasis placed on 'special interest groups', is biased toward killing and population reduction. Although GFP claims random and fair sampling, all one has to do is go to one of 'their' meetings to see what really evolves. I have never seen such crying, whining and pitching a fit as at those scheduled meetings. In Spearfish, I was the only one to speak 'pro' lion, and there were less than 10 advocates present, all the rest being ranchers and hunters. Rapid City demonstrated similar results with hunters making up the 'lions' share of attendees. I was appalled by the level of hate based on nothing but a desire to kill, acquire a trophy or profess falsehoods, none of which were backed by truthful facts or science. Yet at these meetings, questionnaires are handed out, faithfully, and results which affect the very lives of this great species are made. One great problem with this system is: Group Polarization. Here regardless of subject matter, when an audience is made up of or in these cases, 'packed' with a majority of like thinking individuals the results are most likely positive toward their thoughts. Group Polarization "tends to advocate more 'extreme' positions and calls for 'more riskier courses of action' than one might see from individual thought". For GFP to base any decisions in response to a form of 'mob violence,' rather than real science, is flawed. It is foolhardy to think vehicle related deaths will decrease dramatically with the ever increasing human presence. Road building and increasing numbers of people living in new developments throughout the Hills leads to decimation of former range habitat. Habitat loss is rising annually with no end in sight and regardless of population numbers, conflict with vehicles WILL continue. Claims have been made that the puma of the Dakotas are malnourished and emaciated. More than not, when reports are given involving dead cats, the descriptions are of 'a healthy cat', 'adequate kidney fat' or as in the case of the insolent slaughter of the Story Book Island cougar...'extremely healthy'. One has to wonder where in lays the truth? 'Problem Lions' is a state of mind here in SD. Until GFP rescinds their 'zero tolerance' policy against cats being found in cities or near humans, nothing will change regarding removals. A true problem lion is one guilty of 'proven' depredation of domestic animals, direct and documented encounter with injury to humans or cats showing 'true and real' intent to cause harm. Little to NONE of these things happen in SD. By their own data, almost all cats are sedentary, non aggressive, not guilty of killing or showing ingestion of domestics and NO human injury with one ounce of credibility can be shown! Cats found lying down, sleeping in trees, walking around or just sitting and observing are NOT problems regardless of location. Their guilt and death sentence is forged by a highly dubious decision by GFP to use deadly force before engaging conservative and compassionate actions. Just because hazing and or relocation have not been shown to be totally effective does not mean it should not be an acceptable reaction by GFP or authorities. To give a 'fighting chance' to a wayward individual would show basic levels of compassion and humanity and would speak well of GFP. As I have said all along, 'any dummy can kill' and such actions should be used as a very last resort...not a first line, knee jerk reaction to any encounter with this wonderful animal! Everyone knows that the deer [prey] population in the Hills is due to hunter 'overkill' and severe weather events. Even Wyoming has admitted publicly that their reduced deer levels are due to 'habitat [loss] and nutrition factors'. Years of drought, very bad and

stressful winters with spring and fall storms, competition with livestock grazing of 'wildlife' food stuffs, disease spread to Bighorns by domestic sheep, lack of suitable habitat for introduced species [to develop hunter opportunities and generate money] and hunts designed to 'reduce' the ungulate populations in the past 4-5 years have all taken a horrendous toll on the white tail and mule deer here in SD. Without good reason, Wyoming has decided to throw under the bus, all the positive and conservative changes they had in place for the last three years. They will stop considering Total Annual Mortality [all deaths] when deciding quotas, they will stop the safety net of a 'female quota' which can close a unit to hunting, they are establishing three units where killing can take place year around without limit and they are essentially doubling the kill quotas in their two Black Hills units [Areas 1 and 30]. They have publicly said they will 'manage' the Hills as a 'sink' where more lions are killed than can be replaced or born to the area, thus reducing the overall population therein. If our Commission mistakenly adopts this new radical plan, SD will also be a sink and few if ANY cats will be able to 'escape' the hunter's gun to disperse naturally toward mainly the east and north to establish historic ranges. No agency has a right to alter the natural progression of a species under the guise of 'good, sustainable management'. This insult along with [41:06:61:02] which gives 'licensed landowners' the right to kill cougars on owned/leased lands year around and the fact that GFP refuses to recognize the presence of or study/research for cougars 'outside' the Hills gives you a downward trifecta courting disaster. What once was a prosperous, fledgling and healthy mountain lion population that acted as a 'source' for areas desperately in need of large carnivore predators, now is struggling for its own very existence. Again, this is NOT good, adaptive management nor does it speak well of how humans view indicator species, mainly the apex predators. The most appropriate response for ND, SD and WY is to work together for the betterment, health and wellbeing of the mountain lion by treating this Hills population as 'one' magnificent population, which it is, rather than just another God given resource to be exploited for short term gains and the lustful pleasure of a few! One basic, lawful requirement [1-26B-6] states that an agency must first determine if 'sufficient Public need is present' to justify what they do or change. GFP has never proven a 'need to hunt or kill cougars in SD'. In fact in one of their Concise Statements, they said this law did not apply to the cougar issue. Furthermore, what could be a more relevant need than the well being of citizens of this state? If manipulation of a stable, healthy and aloof cougar population by killing is allowed, to supply 'hunter opportunity', the end result might be the production of uneducated young cats who could get into trouble. By their own actions then, GFP could be jeopardizing the true health and welfare of citizens. Does the public NEED more problems? Finally, the true moral compass of GFP is illuminated when they cannot find it within themselves to create even the smallest area of refuge or solace for the SD cougar. To even consider hunting within Custer State Park is indescribably unconscionable!

104:

First of all, I must express my view that some hunting of mountain lions is probably justifiable. I myself would never kill one but have hunted wildlife in my life and understand that it is part of the American fabric. What I will not accept is the

uncontrolled or excess killing (I refuse to use the word “harvest”, animals are not corn!) of a wildlife species, especially for unjustified reasons. So, the view I am taking is that, yes, a season is justified but the number of lions to be killed is not. Having said that, here is what I would officially say (and can be submitted by you with my name if you think it is appropriate or you can use the info to formulate your input) Response to the Draft South Dakota Mountain Management Plan 2010-2015: First, I would like to complement the South Dakota Game, Fish, and Parks for their holistic guiding philosophy (Page 15) regarding the return of mountain lions to the state of South Dakota, specifically, the Black Hills region. As an ecologist and specifically a predator ecologist, I find the views expressed there to be refreshing and enlightened regarding the role of mountain lions (and all predators)in ecosystems. I, like you, have come to see that predators such as mountain lions are needed elements in maintaining the biodiversity of an ecosystem. I applaud your goal of trying to manage mountain lions in accordance with sound biological information. What you have expressed here indeed should be the guiding principles for your Department and the State. However, upon reading the accompanying document and based on my experience of working with mountain lions for over 20 years, I do find that there may be some concern regarding management goals established. I would like to address these concerns in the spirit of your guiding philosophy to manage mountain lions with the best possible biological principles. Before I get into specifics, I would like to state that I am not opposed to a hunting season on mountain lions but am opposed to the possible overuse of this resource, which would then endanger the population, and your guiding philosophy. Mountain lions, as a hunting resource should be treated as a trophy species, one who’s taking should rank up with that of bighorn sheep, African lions, and other noted wildlife species. They should not be hunted as vermin nor the privilege to hunt them sold cheaply. Having said that, here are my concerns. The biggest concern I have is in regards to the accuracy of your estimates of the number of mountain lions there are in the Black Hills. This concerns me because, as you know, if one overestimates the population size, the projected number of animals to be removed can have a very destabilizing impact on the population and could lead to a loss of ecological functionality of the mountain lions in the Black Hills. With regards to the estimates that have been made of the current population level (251 animals), first I think it needs to be made clear and maintained throughout the document what you really mean is 160 adult animals, being reduced to 138 per year, plus the 113 kittens of various ages. To use the 251 number obviously inflates the perception of the population size and the total density of the area, e.g. Black Hills is 8,400 km sq and at 251 lions, it is a density of 3 lions/100 km sq but at 160 lions it is only a density of 1.9 ADULT lions/100 km sq and is normally how the density is expressed. If, as you point out, you feel the population is currently stable, that means that excess animals, mostly young dispersers, will be leaving the Black Hills and the stable resident population is the lower number. To use the higher number makes it seem to the general public that there are more lions there then biologically there really are. IF you want to maintain this stable number around 160, then you can talk about what will happen to these excess animals produced each year, many will disperse, as they should be allowed to, many will die from other causes (we still do not have an idea of what mortality rates of dispersing animals are), some will fill the slots vacated by resident animals, some can be removed by the hunt. How many depends on the mortality and dispersal levels. Based on your estimate of 160 adult lions, I am not

sure what that would all equate to as a final number of animals that could be removed by hunters. I would need to sit down and go through the calculations. I am just saying that it is a more biologically correct way of presenting the data on the number of lions there actually are. Regarding that number, however, I do have some concerns as to how the 160 (and the 113 kittens) was derived. The first concern I have is that it does not provide any possible range of error. You do use a standard deviation on page 5 but I am not sure where that came from. What I do see is that only one set of values (e.g. one MAXIMUM growth rate, one percent of females with kittens, etc., most from just one area, the desert of New Mexico, hardly like the Black Hills) when we know biologically these values can change yearly in one area and do change geographically. What this does is present just one scenario and thus one estimate of the number of lions. And more specifically, without any knowledge of whether or not these values apply to your population in the Black Hills. As examples, why would we use only the maximum growth rate from a desert population of mountain lions for a population in a totally different habitat? It could be lower than that and if it is, the resulting population estimate would not have any bearing in reality. Even if it did, the repeated use of single values likely makes any final estimate to be far from reality. For example, you used 50% as the number of females with kittens at any one time. Other studies have shown that it could be as low as 20%. If that is the case for the Black Hills, the number of kittens produced and surviving each year drops from 113 to 45, quite a difference. As for the estimate of the number of adult females based on the "capture/recapture" estimate of females killed by hunters, this also relies on just one estimate and unfortunately because of the small sample size (5/35) and possible bias of hunters to not shoot collared animals, could lead to an overestimate of the number of females. If a hunter passed up just one collared female, the total number of collared females that would have been killed would be 6/35 and would result in an estimate of only 93 females in the population rather than 112. Running this number of females through all the numbers, we get only 93 kittens, etc. etc. And if 2 collared females were passed over, it goes even lower. So because of all these unknowns, we really don't know if the ADULT lion population in the Black Hills is 160, 100, ????. I know it is difficult to get these numbers and that should not stop us from attempting to come up with an estimate but to use just single values, especially those which seem to exaggerate the population size, which seems to be the case here, is not biologically honest. What needs to be done, and has been done in a lot of instances, is to present a range of estimates (worse case/best case scenarios) so that the public has an idea as to in what range the lion population size likely falls. What I suggest is that all the population estimate figures need to be reworked using a wider range of data than just one study so that reasonably low and high estimates can be presented and then use these for the basis of your management decisions. This would be more biologically correct and more politically transparent. As the guiding philosophy states, you need to provide accurate information to the public regarding the mountain lions. Your current population estimates are by far not accurate nor justifiable. California lost its ability to hunt mountain lions because they could not justify their population estimates and I feel that, as presented, nor can South Dakota. Until we have a reasonable RANGE of possible population estimates, it appears that the Department is attempting to justify higher killing of mountain lions by inflating the population numbers. I would hope that that is not the case. One last concern I have is regarding the orphaning of kittens (birth to independence). Though one can reduce the

number of <3 month old kittens orphaned by changing the season dates and trying to find those that are, there still will be small spotted kittens left out in the woods to starve to death. The public needs to know this. Also, by the calculations presented, 40 % of the females killed will have kittens between 3 months and 1 year old. Though there is a 71% survival rate (again one value from one study), this still means that out of the 20 females with these age kittens, 17 died of starvation and over 40 survived uneducated! These become the trouble makers, the ones who will go to human inhabited areas and eat pets or domestic stock, or attack people. Are we not exacerbating the dilemma of problem cougars (which some then use as an excuse to kill more)? I think that there can be an acceptable level of orphaning but the current management plan does not achieve it. Lastly, I would like to observe that many of the management strategies proposed here, if applied to ungulates, would be considered biologically unacceptable. For example, would the Department propose that out of a bighorn sheep population of 160 adult (hunnable animals), hunters could kill 40 of them, including females?? Would the Department allow the killing of does with spotted fawns? For that matter, would current game laws permit hunters to shoot deer, take their head and hide and leave the meat in the forest? I think these issues need to be addressed and the public be made aware of them if the all the public is to make sound decisions on the management of mountain lions. I end by again applauding the Department's guiding philosophy but urge it to use this philosophy and a wider range of sound mountain lion science to produce a more scientifically sound management plan. In my professional opinion it seems that this document was develop based on selective use of existing science, mainly to produce inflated estimates of mountain lion numbers. Some could interpret this as a way to justify the higher kill levels that appear to be predetermined based mainly on political factors. For the sake of transparency, and producing a more legally sound management document, I hope that you consider my observations and concerns.

105:

The math doesn't add up. In 1995 it was estimate that there were 150 mountain lions. Vive years later, after killing at least 150 we now have 250—how can this be! I do not believe there has been enough scientific research indicating the correct number of mountain lions in our state. Hunters are in the minority, yet they seem to have a lot of say in this matter. They complain about mountain lions infringing on the deer and elk population—its known as balance of nature, which has been happening for centuries until humans intervene and this creates havoc. I support a sport season with a quota of 25 mountain lions with 10 females allowed to be killed. Remember, it is easier to destroy than it is to rebuild. Let's leave fear tactics out of the equation, rely on facts and common sense, before something is done that cant' be undone.

106:

Notes on the Appendix. Appendix table 1 on page 43. This appendix does not make sense or needs explanation. The percentages don't add up to 100%. It adds up to 178 .3 %, Maybe N means a number of lions and the percent modifies the specific number of lions listed in column under N. But I must guess at that; it needs clarification. The Table

Appendix Table 2, also needs clarification, so people can understand what it means. Appendix Table 10 on page 48 needs a date. Appendix Table 19 needs further clarification to make sense. Appendix Figure 1 needs to be enlarged to be readable. Appendix Figure 2 needs clarification of which of the 3 above values (POPSIZE, POPSIZELOW POPSIZESEM) is the one that POPWHARV and POPWHARVDISP modify. Appendix Figure 13. You should provide the neutral value not merge with slight opposition.

107:

Additional Goal for this Plan, As long as you are going to have hunt for lions, we request that GFP set some goal that results in increasing the cost of the license fee. I suggest you at least charge enough for license to offset the costs GFP expends with respect to the lion research, lion hunt, lion depredations, public relations, public education etc -- all your lion costs. I agree with others who suggest this is a special animal and if you are going to hunt it, it should be seen as special and trophy class - not vermin eradication and the license fees should be high. We want you to do a study of lion habitat on the prairie -- at least like Dorothy Fecske did in ND. We want something like that to be paid for and it would need to be done cooperatively with the tribes and maybe some neighboring states. The tribes might also need grants to figure out about their lions. This Plan needs more data about Wyoming's treatment of lions and their plans to increase their quotas and manage Black Hills as a sink aggressively and depend on SD as a source. It should look at where Wyoming is creating sinks (in other places in Wyoming) and areas with unlimited seasons -- where are we getting replacement animals if we have a sink too?. It should look at allegations that Montana has been overhunting - where are their sinks and sources?. I sent a link to an article about Montana overhunting in the PHAS alert.

108:

I sent you a courtesy copy of our alert on this Plan in an earlier e-mail.

I will engage in page by page review of the document.

Goals --- Insufficient and inadequate goals

See page v. - we disagree with this "goal" statement -

"1. To reach a sustainable and socially acceptable mountain lion population that is in balance with available habitat and other game animal populations in the Black Hills of South Dakota at 175 +/- 25 individuals."

(Draft SDMLM Plan 2010-2015 at page v)

We question if this number is a sustainable population. We don't think that the Plan proves that the current population is 250 lions (plus or minus 25), but we think the value is too low for a population goal. We wish for the Black Hills to be a "source" population that supplies females and males as outgoing migrants to areas to the north, east and south that to recover extirpated or low level of mountain lions. We wish for the Black Hills to have sufficient lion population for contributing significant amount of males and females to that goal.

We also want SD to have a goal of identifying all areas in SD (outside of the Hills) that can support breeding populations of mountain lions and to manage for lions in at some of those areas. We believe that - Custer

National Forest, the Pine Ridge Reservation, Cheyenne River Reservation, Rosebud Reservation and possibly along the Missouri River can possibly support breeding lions, especially if connected to and re-supplied via a source population in the Black Hills.

To our knowledge Oglala, Cheyenne River, Lower Brule and Rosebud Sioux Tribe, all have no hunting seasons for lions and consider their lions as protected species. We believe that protection of lions was also Standing Rock's position in the past, but have not recently talked to Standing Rock. To our knowledge Cheyenne River has proof of breeding via photos of footprints of mother and kitten. Oglala Sioux Tribe believes it has mothers and kittens due to repeated reports, but these are unconfirmed. RSTGFP may have a confirmed sighting by staff member of a lion mother and kitten(s), but this report needs to be verified by RSTGFP. We believe SD may have breeding lion populations at 3 reservations where lions are protected by the host tribes. We believe due to the large territories of lions, the few individual lions that are currently on the reservations and the overlap of checker boarded jurisdictions between state and tribes -- that consultation and coordination with our tribes about mountain lions is needed.

A goal for Mountain Lion management in SD should be joint coordination with tribes, whenever possible, over lion management. Native American's are citizens of SD and vote in our state elections and their wishes should be considered by GFP. Given the dearth of discussion of tribal lions in this document we question if consultation is ongoing with Tribes. If GFP chooses to not have a goal, of at least consultation, they need to explain in this document, why they are choosing to ignore SDCL 1-4-26. SDCL 1-4-26 states that:

Consultation with tribal government regarding state programs. It is the policy of the state to consult with a tribal government regarding the conduct of state government programs which have the potential of affecting tribal members on the reservation. This section may not be construed to confer any substantive rights on any party in any litigation or otherwise. (SDCL 1-4-26)

We believe that Custer National Forest, when considered as a two state National Forest (both in SD and Montana), has the potential to support breeding populations of Mountain Lions. We believe that the Forest Service's planning rules require them to manage for sustainable populations of wildlife. We suspect it is illegal for CNF to sign memorandums of understanding with you, that allow hunting lions on CNF at this time. The CNF should be following goals for the sustainability and/or viability of the lions on their forest in Montana and SD.

We believe that SD needs to look at the Little Missouri and CNF properties in NW SD as a subset/continuation of the Montana mountain lion population in District 7 of Montana. It needs to see CNF and the Little Missouri in NW SD, as a continuation of the areas of mixed forest, break, river bottom and grasslands that creates viable lion populations in SE Montana.

We believe that coordination with Nebraska, for the recovery of their lion populations should be a goal, as they may be dependent on SD and Wyoming for a supply of lions. Also the habitat in Nebraska may connect with Pine Ridge Rosebud Reservation habitat. Thus Nebraska needs to consult with the SD tribes, as does SD.

Goal 2 says

"Manage mountain lions in Custer State Park with a holistic approach as part of the Black Hills population while considering the unique management needs of Park. (Draft SDMLM Plan 2010-2015 at page v)

We are not sure what this goal means, but we believe there needs to be a refuge in the Black Hills of SD and Wyoming, where lions are not hunted to insure continuous supply of lions. Where this should be located, may not matter, but Custer State Park, next to Wind Cave NP (which does not allow hunting) are logical choices. Another choice might be on the border of Wyoming and SD, asking each state to contribute some land to the "refuge".

Introduction

The Plan says on page 2 that:

"It is this ability to adapt to a variety of habitats that provide cover and prey combined with the act of

dispersal in response to “crowded situations” and density dependence (Howard 1960) that likely led to the re-establishment of mountain lions within the Black Hills. (Draft SDMLM Plan 2010-2015 at page 2)

We are not experts on mountain lion biology, but we believe Cougar Management Guidelines quotes Sweanor et al. 2000 and says that male lions disperse regardless of population density and that 50-80% of the females remain in natal populations, which implies that 50-20% do not (See Cougar Management Guidelines page 40). The belief that lion dispersal proves that the Hills are overcrowded permeates this document, but that belief is thus at least subject to academic debate and GFP should disclose such conflicting scientific opinions, whenever it raises this argument.

Inventory and Status.

On page 2 you say:

The closest breeding population of mountain lions occurs in the Bighorn Mountains (200 km to the west), Laramie Range (120 km to the southwest, Anderson et al. 2004) and the Badlands of North Dakota (120 km to the north).

We believe this statement is incorrect. Montana believes it has a breeding population in District 7, which abuts the SD border, to the north. Nebraska believes it has a breeding population at Pine Ridge, which abuts the SD border to the south. The Cheyenne River has proof (via photo of footprints) of breeding lion at Cheyenne River Reservation.

Wyoming also has a breeding population in the Black Hills across the border. There may be breeding lions at Oglala and Rosebud Sioux Tribe lands, which are not yet confirmed. There may be breeding lions in CNF in SD.

On page 2 of the Plan, you quote Fecske on the area (size) of the Black Hills. Is this figure for the area of the Black Hills in SD or the area in SD and Wyoming? Please always clarify when you refer to Black Hills in SD vs Black Hills in both states

One page 4 of the Plan, you discuss the Prairie, you say:

Historically mountain lions were noted in riparian regions of the Dakotas and Badlands (Roosevelt 1926, Young and Goldman 1946). The western prairie of South Dakota consists of grasslands with less than 25% in agricultural use (Johnson and Nichols 1982) dissected by broken rough drainages with cedar breaks. Most of the land is in private ownership with some USDA Forest Service, Bureau of Land Management, National Park Service public lands and tribal lands interspersed among private lands. The middle of the state is split with the Missouri river and associated broken breaks. The eastern prairie consists of mostly private lands with more than 75% in agricultural use (Johnson and Nichols 1982).

We are not sure what you mean by “agriculture lands” do you mean cultivated agricultural lands?

One page 4 of the Plan, you further discuss the Prairie, you say:

Dispersal of mountain lions onto the prairies of South Dakota is well documented with both male and female lions leaving the Black Hills (Thompson 2009). However, to date there has been no documentation of any lions establishing home ranges on the prairie. Marked and unmarked subadult, mountain lions have generally traversed these prairies traveling to the north (North Dakota to Saskatchewan and Minnesota), south (to Nebraska and Oklahoma), west (to Wyoming and Montana), and east (to Yankton, Miner, and Deuel counties in eastern South Dakota). These movements indicate that the prairies of eastern South Dakota have a limited capacity to support mountain lions.

What is the “prairie”? We believe this discussion is inadequate. Montana believes it has breeding population in District 7, which is a mix of habitats that includes prairie. You have failed to consult with the tribes to get their population data. We believe Cheyenne River has proof of a home range for several animals, we are not sure if their habitat is mixed prairie, bottoms and breaks.

You have failed to consult with your own mortality data. We will include an attachment with your mortality data analyzed. We believe there are several references to older males and females that may have established home ranges on the habitat which may be mixed prairie, bottoms and breaks and these lions occur in clusters. We believe these should be disclosed. We believe there are unconfirmed sightings of females with kittens at CNF, Pine Ridge and Rosebud. Unconfirmed but credible sighting should not be dismissed as “no documentation”, but rather credible sightings that are not confirmed should be disclosed.

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The referenced table 1 does not make sense and needs further clarification. See a note in our section on tables and figures.

Population Information

We believe this section to be entirely inaccurate. We incorporate by reference the discussion by the Mountain Lion Foundation (MLF) of this section in their formal comment letter to GFP. We also refer GFP to their web site articles for further discussion on the issue by MLF.

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We hope GFP will review this information and respond to MLF concerns.

We would like to add this concern to the MLF various texts, we believe you have data for lions killed in 2007, 2009, and 2010. Why don't you combine all those year, get averages and apply the formulas you use in ways where you math/statistics is properly done?

Also, for many years SD has presented mountain lion data, broken up into adult, sub-adult and kittens subsets.

This section just has adults and kittens. We are assuming that sub-adults is added to “adult” for the sake of this discussion as it is illegal to hunt kittens, but you should clarify, whether sub-adults are considered kittens or adults in this section.

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You assume 50% of females have kittens and kittens have 67% survival. We also don't believe your kitten

numbers, we think you need to allow for more kittens die off due to loss of mothers due to hunting and other fatalities of moms while they cubs are dependent. We want to know if the 67% survival value is contingent on living mothers or not? We question your conclusions about kitten survival, but some of those details are in another section (orphaned kittens).

We also question whether the collared lions are representative of the lions as a whole – we wonder if there any bias created by your ability to find and collar animals or ability of hunters to see/find collared animals. If nothing else your protocols for monitoring for problem lions may cause collared lions to be more likely to be removed by SDGFP for conflict with humans, than not collared animals.

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In recent years travel conditions on the Black Hills have been changing, as has real estate development. OHV use has perhaps increased., Conversely the FS has closed more roads via projects, while building more roads, via project, that it then closes after timber sale is over. With Travel Management enacted, more vehicles will be concentrated on fewer roads Timber sales happen constantly changing cover values and beetles and fire can change that too. . Habitat security, due to disturbance via vehicles will be in flux We are not sure what all this means – but your road and disturbance values may be in lots of flux..

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“Due to land ownership on the prairie and limited available habitat preferred by mountain lions, SDGFP currently does not intend to manage for a sustainable population outside of the Black Hills ecosystem”

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We entirely object to this section, wanting you to manage for sustainable populations in other locations in SD.

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Since young may become independent as early as 10 months old (Thompson 2009) and average dispersal age is 14-15 months (Anderson et al. 1992, Sweanor et al. 2000), yearling survival should not be influenced by the death of their mother.

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(Lindzey et al. 1988, Logan and Sweanor 2001, Anderson and Lindzey 2003).

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We are not sure what GFP thinks happens to the kittens that are 3-6 months old. We are under the impression that kittens younger than 6 months have very poor survival rates. Please discuss the fate of 3-6 month old orphaned kittens.. Would not the percentage of females with kittens younger than 6 months be 25% of all females of breeding age? Please indicate whether the 67% survival rate included kittens with dead mothers. When Thompson is saying that 67% of the kittens survive, does that 67% include orphaned kittens and kittens with living mothers?

Please discuss how many kittens were in the SD kitten (Thompson) and other studies – how many kittens are in these study groups?

Compensatory Mortality.

The Plan at page 9 says:

For example, vehicle mortalities comprised 33% of mountain lion mortalities documented prior to initiation of harvest (2005) in the Black Hills (Thompson 2009). During the three years following the harvest, documented vehicle mortality declined from 22.5% in 2005, to 16.1% in 2006, to 8.9% in 2007 while harvest rate on this population increased to 14% (based on harvest of radio-collared mountain lions) and total documented mortality was relatively stable at 56 + 6 mountain lions (Appendix Figure 3)

As we have pointed out elsewhere, we think vehicle travel in the BHs is in flux, thus we are not sure what are the factors involved in accident rates.

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Mountain lion population size during this time was estimated to be stable (approximately 250 + 25 animals) to slightly increasing based on population reconstruction and mark-recapture analyses (J. A. Jenks, South Dakota State University, unpublished data).

I am not sure this is accurate, I think the estimate given to public/Commission in 2007 was 200- 225 animals. I still have a copy of the print out , as handed out at a GFP Commission meeting in 2007 – saying 200-225 Lions, with 15-25 adult males, 75-80 breeding females, 110-120 dependent young. I am not sure when you started saying 250 animals, but it was not before 2008.

109:

LATE LETTER # 1

Page by page summary

Incident/Observation Summary

The Incident Observation report should have some break out of sighting & death as a function of location in or out of the Black Hills Fire Protection District – i.e it should show what is happening in prairie unit..

It should include a summary of incidental trapping/snaring takes.

Human Dimensions

The Plan at page 10 says

“Support for the mountain lion season was not the result of negatively held attitudes towards mountain lions in South Dakota, but rather a belief that a healthy mountain lion population could support a regulated hunting season and would help maintain a healthy, stable population of mountain lions in the Black Hills”

I think that above statement is wishful thinking or PR “spin”.

I think that SDGFP has a special relationship with hunters and fishers, as GFP regulates their sport and the wildlife department gets most of its funds directly or indirectly from hunting/fishing activities. I suspect, but don't know ,that when you have meetings, the hunter/fisher folk, who are more organized towards following your activities will be more aware of your activities/processes than the non-hunters. Randomly sampled respondents may be more accurate meter of generic public opinion.

Issues

Legal and jurisdictional issues

You need to add a subset here, about relationships with the Tribes in SD – there are jurisdictional issues as to who has authority over wildlife as you cross the boundaries between Indian country and state jurisdiction

You also need a subset about federal jurisdiction. I think the NPS does not allow hunting and has pro-wildlife goals. NWR will have their own rules. I think the FS is required to provide for either viable or sustainable wildlife populations (depending on which year- 1982 or 2000- of the planning rule is being applied). I believe these federal rules, could take precedence over your state law– ie. whether you like it or not, if there are mountain lions on FS lands, they may have to manage for sustained populations due to their own laws, thus you may not have any option except to manage for viable/sustainable populations on federal lands.

Mountain Lion Management Goal

Objective

I do not believe you will get the expected result of 50% reduction in problem lions, as there will be a shift from older towards younger lions. The older lions may be more experienced and smart and less likely to conflict with humans. The younger lions may be still learning and more likely to conflict with humans. Lions who were orphaned early before voluntary separation from mom, may be more likely to become problem lions.

I do not believe you will get the expected reduction in mortality of 1,650 big game, because you have overestimated the size of the lion population and because you assign to kittens the same rate of consumption of herbivores as adults. This is disingenuous.

You should add an objective of consulting with tribes.

Objective 3

You should add a tribal wildlife person to the SD Mt Lion Management/Research Team.

You should add a goal about improved research on population of lions, prey and habitat on the Reservations

Objective 4.

You should add a clause to not retaliate and discriminate against opponents to your mt lion seasons by restricting our access to information as George Vandell and Sec Vonk have done in the past.

Mountain lion Response Protocol

The attack at Sheridan lake should have not been classified as “probable but unverified”. Maybe “possible but not “probable”. Given the “possible” adjective, there is something wrong with your filter.

Receiving, Compiling and Classifying Mountain Lion Reports

You should have another category besides, Unfounded, Unverified and Verified – it should be “credible unverified, which is still not proven, but shows believability.

ACTIONS

We question the allegation that all suitable habitat is occupied. We don't believe you have done a habitat study for the prairie unit, so how do you know this. You don't appear to be consulting with Native Americans.

Protocol for Radio-Collared Mountain lions

This protocol will put lions with collars more at risk of being deemed a problem lion --- lions without collars may visit near people without being noticed. One with a collar may be betrayed by his collar.

110:

Request that SDGFP as part of this planning effort --- map all the deaths, and sightings that have occurred outside of the Black Hills Fire Protection District -- especially sighting of mothers with kittens. In the Mt Lion Plan (2010-2015) we are given maps of the arrows of collared lions dispersing away from mothers. I suggest that you also include maps of collared lions killed in Wyoming. Once you get confirmation from Tribes on their sightings, I suggest you add those too.

111:

I will engage in page by page review of the document.

Goals --- Insufficient and inadequate goals

See page v. - we disagree with this “goal” statement -

“1. To reach a sustainable and socially acceptable mountain lion population that is in balance with available habitat and other game animal populations in the Black Hills of South Dakota at 175 +/- 25 individuals.”

(Draft SDMLM Plan 2010-2015 at page v)

We question if this number is a sustainable population. We don't think that the Plan proves that the current population is 250 lions(plus or minus 25), but we think the value is too low for a population goal. We wish for the Black Hills to be a “source” population that supplies females and males as outgoing migrants to areas to the north, east and south that to recover extirpated or low level of mountain lions. We wish for the Black

Hills to have sufficient lion population for contributing significant amount of males and females to that goal.

We also want SD to have a goal of identifying all areas in SD (outside of the Hills) that can support breeding populations of mountain lions and to manage for lions in at some of those areas. We believe that – Custer National Forest, the Pine Ridge Reservation, Cheyenne River Reservation, Rosebud Reservation and possibly along the Missouri River can possibly support breeding lions, especially if connected to and re-supplied via a source population in the Black Hills.

To our knowledge Oglala, Cheyenne River, Lower Brule and Rosebud Sioux Tribe, all have no hunting seasons for lions and consider their lions as protected species. We believe that protection of lions was also Standing Rock's position in the past, but have not recently talked to Standing Rock. To our knowledge Cheyenne River has proof of breeding via photos of footprints of mother and kitten. Oglala Sioux Tribe believes it has mothers and kittens due to repeated reports, but these are unconfirmed. RSTGFP may have a confirmed sighting by staff member of a lion mother and kitten(s), but this report needs to be verified by RSTGFP. We believe SD may have breeding lion populations at 3 reservations where lions are protected by the host tribes. We believe due to the large territories of lions, the few individual lions that are currently on the reservations and the overlap of checker boarded jurisdictions between state and tribes -- that consultation and coordination with our tribes about mountain lions is needed.

A goal for Mountain Lion management in SD should be joint coordination with tribes, whenever possible, over lion management. Native American's are citizens of SD and vote in our state elections and their wishes should be considered by GFP. Given the dearth of discussion of tribal lions in this document we question if consultation is ongoing with Tribes. If GFP chooses to not have a goal, of at least consultation, they need to explain in this document, why they are choosing to ignore SDCL 1-4-26. SDCL 1-4-26 states that:

Consultation with tribal government regarding state programs. It is the policy of the state to consult with a tribal government regarding the conduct of state government programs which have the potential of affecting tribal members on the reservation. This section may not be construed to confer any substantive rights on any party in any litigation or otherwise. (SDCL 1-4-26)

We believe that Custer National Forest, when considered as a two state National Forest (both in SD and Montana), has the potential to support breeding populations of Mountain Lions. We believe that the Forest Service's planning rules require them to manage for sustainable populations of wildlife. We suspect it is illegal for CNF to sign memorandums of understanding with you, that allow hunting lions on CNF at this time. The CNF should be following goals for the sustainability and/or viability of the lions on their forest in Montana and SD.

We believe that SD needs to look at the Little Missouri and CNF properties in NW SD as a subset/continuation of the Montana mountain lion population in District 7 of Montana. It needs to see CNF and the Little Missouri in NW SD, as a continuation of the areas of mixed forest, break, river bottom and grasslands that creates viable lion populations in SE Montana.

We believe that coordination with Nebraska, for the recovery of their lion populations should be a goal, as they may be dependent on SD and Wyoming for a supply of lions. Also the habitat in Nebraska may connect with Pine Ridge Rosebud Reservation habitat. Thus Nebraska needs to consult with the SD tribes, as does SD.

Goal 2 says

"Manage mountain lions in Custer State Park with a holistic approach as part of the Black Hills population while considering the unique management needs of Park. (Draft SDMLM Plan 2010-2015 at page v)

We are not sure what this goal means, but we believe there needs to be a refuge in the Black Hills of SD and Wyoming, where lions are not hunted to insure continuous supply of lions. Where this should be located, may not matter, but Custer State Park, next to Wind Cave NP (which does not allow hunting) are logical choices. Another choice might be on the border of Wyoming and SD, asking each state to contribute some land to the "refuge".

Introduction

The Plan says on page 2 that:

“It is this ability to adapt to a variety of habitats that provide cover and prey combined with the act of dispersal in response to “crowded situations” and density dependence (Howard 1960) that likely led to the re-establishment of mountain lions within the Black Hills. (Draft SDMLM Plan 2010-2015 at page 2)

We are not experts on mountain lion biology, but we believe Cougar Management Guidelines quotes Sweanor et al. 2000 and says that male lions disperse regardless of population density and that 50-80% of the females remain in natal populations, which implies that 50-20% do not (See Cougar Management Guidelines page 40). The belief that lion dispersal proves that the Hills are overcrowded permeates this document, but that belief is thus at least subject to academic debate and GFP should disclose such conflicting scientific opinions, whenever it raises this argument.

Inventory and Status.

On page 2 you say:

The closest breeding population of mountain lions occurs in the Bighorn Mountains (200 km to the west), Laramie Range (120 km to the southwest, Anderson et al. 2004) and the Badlands of North Dakota (120 km to the north).

We believe this statement is incorrect. Montana believes it has a breeding population in District 7, which abuts the SD border, to the north. Nebraska believes it has a breeding population at Pine Ridge, which abuts the SD border to the south. The Cheyenne River has proof (via photo of footprints) of breeding lion at Cheyenne River Reservation.

Wyoming also has a breeding population in the Black Hills across the border. There may be breeding lions at Oglala and Rosebud Sioux Tribe lands, which are not yet confirmed. There may be breeding lions in CNF in SD.

On page 2 of the Plan, you quote Fecske on the area (size) of the Black Hills. Is this figure for the area of the Black Hills in SD or the area in SD and Wyoming? Please always clarify when you refer to Black Hills in SD vs Black Hills in both states

One page 4 of the Plan, you discuss the Prairie, you say:

Historically mountain lions were noted in riparian regions of the Dakotas and Badlands (Roosevelt 1926, Young and Goldman 1946). The western prairie of South Dakota consists of grasslands with less than 25% in agricultural use (Johnson and Nichols 1982) dissected by broken rough drainages with cedar breaks. Most of the land is in private ownership with some USDA Forest Service, Bureau of Land Management, National Park Service public lands and tribal lands interspersed among private lands. The middle of the state is split with the Missouri river and associated broken breaks. The eastern prairie consists of mostly private lands with more than 75% in agricultural use (Johnson and Nichols 1982).

We are not sure what you mean by “agriculture lands” do you mean cultivated agricultural lands?

One page 4 of the Plan, you further discuss the Prairie, you say:

Dispersal of mountain lions onto the prairies of South Dakota is well documented with both male and female lions leaving the Black Hills (Thompson 2009). However, to date there has been no documentation of any lions establishing home ranges on the prairie. Marked and unmarked subadult, mountain lions have generally traversed these prairies traveling to the north (North Dakota to Saskatchewan and Minnesota), south (to Nebraska and Oklahoma), west (to Wyoming and Montana), and east (to Yankton, Miner, and Deuel counties in eastern South Dakota). These movements indicate that the prairies of eastern South Dakota have a limited capacity to support mountain lions.

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Page 16 , 19, 11

Overall average desired population trend was for a small decrease in the next five years for mountain lions, deer, and coyote and a small increase for elk and black bear (the attitude towards black bear may be difficult to interpret because the black bear population in the Black Hills has been and currently is extremely low).

3. **Prairie mountain lions.** Mountain lions are no longer just a Black Hills issue, with their presence now documented on the prairie. Prairie lions increase the complexity of mountain lion issues and management in South Dakota.

Page 18

2. **Identifying habitats for mountain lions.** Management planning should include an evaluation of habitats likely to support mountain lions with the least likelihood of conflicts with people.

. In Gigliotti's recent public opinion survey (Gigliotti, et al. 2002), 25% of respondents were concerned about mountain lions killing too many game animals, and 52% of respondents were not concerned.

Research Results

Capture

I do not understand from the description on page 26, how the home ranges are decided on. You say:

"Home ranges were calculated (95% Adaptive Kernel) using the Home Range Extension in ArcGIS Bandwidth were selected that resulted in the lowest least squares crossed validation scores (LSCV) to create smoothed home range polygons (Kie et al. 2002)."

I don't understand this text.

On page 26 the plan says,

A total of 19 subadult male and 10 subadult female mountain lions were captured in the Black Hills from 2003-2006 (Thompson 2009). In addition, 18 kittens from seven separate litters captured and marked. Age of independence averaged 13.5 months (range 10-16 months) with dispersal occurring 1-3 months after independence from mothers. Upon reaching independence, subadult mountain lions of the same sex generally traveled together prior to separating and subsequently dispersing. No difference was documented in age of independence or age of dispersal between sexes; however, the sex ratio (5:1) of kittens was highly skewed to males (Thompson 2009).

The Cougar Management Guidelines (page 40) say young becomes independent and that dispersal happens at 10-18 Months.

Given the highly skewed male to female ratio of collared kittens, we question if the kitten sample size is large enough

Dispersal

On page 27, 10 female and 18 male sub-adult lions dispersals are reviewed. We question if the numbers of individual studied is enough animals to figure out average dispersals distances? How many animals are normally used for such calculations?

On page 28 you say

Mountain lions captured in the Black Hills made farther long-distance movements (both

males and females) than previously documented with many of these animals leaving the Black Hills and crossing regions characterized by prairie habitats. Dispersal movements of subadult mountain lions indicate prairie habitats and associated topographic characteristics do not act as barriers to movements. This finding contrasts with those of other populations (McRae et al. 2005). In contrast to other populations (Logan and Sweaner 2001, Pierce and Bleich 2003), female mountain lions were not philopatric. Movements of females indicated that density dependent factors, such as resource limitation and intraspecific competition (e.g., environmental dispersal; Howard 1960) were displacing individuals. These factors resulted in movement out of the Black Hills or to the edge of available forested habitat within the study area prior to establishing a home range. Although inbreeding avoidance has been suggested as a causal factor for male dispersal, in fully occupied habitats it also may facilitate female dispersal. Biek and others (2006) found that intrapopulation female movements were beneficial in maintaining population genetic viability.

When you say the long distance movements are longer than previously documented, are you comparing to other past Black Hills documented data or data from other regions? If you are not comparing to past Black Hills data how can you assume longer distances are related to density dependence factors? These values could just be natural for the Black Hills. Do you prove in a study this is a function of density dependence factors or is that conclusion a jump of logic or an assumption or theory? For example could the Black Hills just have more people and more vehicle traffic than other regions you compare to – thus habitat security/disturbance issues encountered by some lions but not others, causes some lions to migrate further?

On page 28-29 you conclude that males traverse the prairie looking for females, and thus the need to find a mate may be more important than habitat and prey availability. We have in a separate e-mail sent you a list of dead lions in areas outside the Black Hills. We see older dead males in the CNF area, at Rosebud Reservation, at Pine Ridge, north of Hills and south of the Hills. These older males might have established home ranges, and might not be just older migrants. Thus older males or clusters, perhaps that indicates there may be some females nearby?

GFP records a dead female at Slim Buttes at age 2-3 in 2006 and Brian Meyer (Harding County former Game Warden) heard of Forest Service employees seeing a lion and kitten in mid nineties. We see record of dead 3-4 year old male at West Short Pines in 2006 and in 2007 a 2 year old male at Camp Crook. This is without the Montana death data for lions just over the border; Montana usually sees dead lion(s) in this area (Carter County). We have Rosebud Sioux Tribe GFP administrator reporting a Rosebud Sioux Tribe staff person seeing kittens in 2010 and in 2006 GFP shows a dead male aged 2-3 and in 2008 a dead male aged at 3 plus on Rosebud. This is without considering the data from the Niobrara Breaks in Nebraska, which shows male sightings/dead male. We see report of a dead male at 3-4 years in Gregory County in 2008 and a dead female (age 1-2.5) in Gregory County in 2009. Pine Ridge thinks they have breeding females but it is unconfirmed. You show a dead 3-year-old male in 2007 and a dead 2-year-old male in 2008 in or near Pine Ridge Reservation and Trudy Ecoffey reports public sighting of kittens (unverified). You report a dead 2-2.5 year old female south of Edgemont in 2009 and a dead 3-year-old male in 2006, these are outside of the Black Hills, but you also show 2 dead females nearby but inside the BHS in 2006. You have a cluster of older males dead up by St. Onge but nearest dead females are inside the BH Fire Protection district. Cheyenne River Sioux Tribe has evidence with photo of kitten tracks and knowledge of what it thinks are toms. Thus by your own logic, the presence of dead older males may indicate a potential for females and sometimes the dead female is also found.

We believe the GFP should disclose to the public when dead females are found outside the Black Hills and when they are found near records of dead older males. These clusters may indicate lions finding home ranges outside the Black Hills.

Where did the three collared females that dispersed outside of the Black Hills go? Please map these. I can see one on a map going to Wyoming Bearlodge and one to Montana, but that leaves one not accounted for.

Survival

The paragraph at the bottom of page 29 and the Appendix table 19, do not make sense to me; it seems to need more information to be understood. Does a mean annual survival of .5, mean half the lions in subset, lived till the end of the year?

On page 30 you indicate that 84 kittens in 29 litters, show an average litter size of 2.9 and a 1:1 male to female ratio and a kitten survival of .52. Yet on page 5, when figuring out how many lions there are, you use a figure of kitten survival of .67 and an average litter size of 3 kittens. Why the difference? If you multiply 56 females by 2.9 you get 162.4 and if you multiply by 3 you get 168 kittens -- a difference of 6 kittens! If you multiply 162.4 by .5 you get 81.25 if you multiply 162.5 by .67 you get 108.87! On page 5, you conclude 113 kittens in population. By using slight differences in values you get 113 kittens vs. 81 kittens, a difference of 32 kittens. This could reduce the lion population from 250 to 228 lions. Why the use of these different values?

On page 30 you indicate that more females than males were harvested (49 females vs. 31 males). I think in Wyoming they watch sex and age and harvest density to calculate population status. However Wyoming hunts with dogs and in SD most lions are taken with calls. Given the size of home ranges of males and females, won't lions overlap between Wyoming and SD and can SD male vs. female hunting and removal practices impact effect accuracy of Wyoming's trend system – due to potential bi-state territories?

On page 31 you indicate that subadult females dispersed from the Black Hills and reference a map at Appendix Figure 16. This shows one female going to the Bearlodge Mountains and another to Montana. ? Did the Montana female end up in Carter County or at any the Custer National Forest units? How is it that a female moving to the Bearlodge Mountains or to Carter County is a proof of nutritional inadequacy at point of origin?

The graph on at Appendix Figure 8 and the discussion on page 32, needs more explanation, it does not make sense to me.

Ongoing and Upcoming Research,

Research should include mapping of habitats for mountain lions in other areas of SD that are outside of the Black Hills.

List of Appendix Tables

Appendix Table 4

This chart should provide more data, -- it should also give us the number of collared animals in each year and how many collared animals were killed by hunting. This is so that we, the public, can do a similar population calculation to that on page 5, using the hunting data from 2009 and 2010, which is more recent than 2007.

Appendix Figure 7
Time of Births

. Question about your chart (Appendix Figure 7) of Parturition Dates on page 59 (which does not have a source on the Chart). The chart on page 53 of Cougar Management Guidelines shows all months having litter births and shows more gradual curves. It is a result of inventory of 302 litters in Colorado, Idaho, Utah, Montana, New Mexico, Nevada Wyoming and Alberta. It looks like the SD Chart in Figure 7 is a result of 26 litters. We question if more SD litters had been studied the chart would resemble the one in Cougar Guidelines. Do you have too few litters to create an accurate chart? I think the information in this chart is used to justify some of your population estimates math.

Other Comment – MISSING - Source and Sink Populations for BHs

Cougar Management Guidelines, 2005, page 43

"When cougar management is based on units with non-biological boundaries, managers need to appreciate that management units (even those based on reliable cougar distribution data) will rarely contain independent populations. Failure to recognize metapopulation structure can lead to management errors. For instance, a particular mountain range managed as a hunting unit may be able to sustain

harvests of 30% (e.g., a minimum of 11 cougars were harvested in each of 7 consecutive years in Nevada's Ruby Mountain Range, which had an estimated 35 animals--Ashman et al. 1983, page 19). If managers ignore the likely role of immigration in sustaining the population, they would incorrectly conclude that all adjacent hunting units could be sustainably harvested at this level. In a cougar population depleted by over-harvest or natural causes, immigration of males and females from nearby unexploited populations is an important, and sometimes critical factor in population stability or recovery (Stoner 2004)

If we apply this paragraph to the Black Hills --which is to be managed at 30 % population reduction (which SDGFP is talking about), then it needs a "nearby unexploited populations" for recovery and stability. The Mountain Lion Foundation provides argument that SD's population estimate math is off, and SD will actually harvest more than 30% of the population, if true --- you would need a "source" to re-supply even more desperately.

It does not seem like Wyoming plans to put many source populations along its mountains just west of I-25, except perhaps way south near Cheyenne. The source populations in its 2006 plan, are on the west side of the front range, except for a "Source/Stable" population down near Cheyenne and in Black Hills. However it chose in 2007 to manage BHs partly as a sink and partly stable, In its 2010 season plan, it is planning to increase many areas harvests, give some areas extra licenses and redefining human caused mortality. I am not even sure if it is not creating more sinks along the Front Range. It proposed unlimited harvest in the Wyoming prairie between the Front Range and Black Hills. It is planning to manage the Wyoming Black Hills aggressively as a sink. It is relying on SD to be the source for the Wyoming Black Hills.

Thus how is Black Hills to be resupplied from Wyoming Black Hills and/or from migrants traveling across the Wyoming prairie. Montana - another potential source, is supposed to be over harvested. This document should clearly discuss the status/future of potential source and sink populations in nearby states (Wyoming, Montana, ND, and Nebraska) and our relationship to them -- who is the source and who is the sink..

112:

I am very disappointed and angry with your department's proposed mountain lion management program. I think it is short sighted and misguided.

I live in the Black Hills one mile back in the woods and I have never seen a mountain lion here. A neighbor is a logger and has logged all over the Black Hills for over 25 years and has never seen a mountain lion. This is prime lion country with deer, elk and turkey and yet we don't see any lions. I talk to people who have lived for their whole life in the Lead/Deadwood area and they have never seen a lion. I agree that lions are here because there are sightings. I just disagree with your idea that there are too many.

Custer State Park is proposing a lion hunt because of the dwindling elk and deer populations. Yet right next store to Custer Park, Wind Cave National park is saying they have a healthy lion population and have an increasing population of deer and elk. Maybe GFP should recheck their numbers and start looking at other problems such as poaching.

Lions have always been in the Black Hills, yet the last 4-5 years we have what sounds like lion hysteria. What changed? Are the lions being given Viagra? I think the GF&P is caving in to economic concerns and hunters who want to shoot everything.

Yellowstone has shown that a healthy predator population is a significant contributor to the health of an ecosystem. Nature has proven to be a better controller of the predator/prey relationship than the laws of man.

In closing, I feel the proposed plan should be changed or more preferably the lion season should be discontinued altogether.