

# Public Comments

## Aquatic Invasive Species

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**Paul Lepisto**

**Pierre SD**

**Position:** support

**Comment:**

On behalf of SD IWLA Division President Kelly Kistner I'm submitting the attached comments on the AIS proposal. We support the proposal but ask for it to be further amended to help protect the health of SD waters.

## Hoop Nets and Setlines

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**Brian Pauly**

**Woonsocket SD**

**Position:** support

**Comment:**

I support the standardization and incorporation of floatlines as part of the rules to anglers wishing to target catfish and rough fish on inland waters.

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**Travis Runia**

**Wolsey SD**

**Position:** support

**Comment:**

I support the proposal to expand fishing opportunity by allowing the use of floatlines for catfishing on select waters. I purchase a setline license each year and look forward to trying this new method if approved.

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**Kejaita Kejaitamj**

**Kazan UT**

**Position:**

**Comment:**

No comment text provided.

# Mountain Lion Hunting Season

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**James Tirey**

**Rapid City SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Peggy Jakopak**

**Scotland SD**

**Position:** oppose

**Comment:**

There is never a valid reason to trophy hunt. It's sick and unnecessary.

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**Birgit Munz**

**Brandon SD**

**Position:** oppose

**Comment:**

Why? Why do these beautiful & majestic cats have to be hunted? Absolutely disgusting!

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**Susi Blasius**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

Trophy hunting is cruel and unnecessary.

In South Dakota, dozens of mountain lions are killed every year for trophies and bragging rights. In fact, more mountain lions are killed by trophy hunting than any other cause. Fewer than 300 mature-age mountain lions are thought to reside in South Dakota. South Dakota's rare mountain lion population must be protected from cruel trophy hunting

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**Mary Cook**

**Rapid City SD**

**Position:** oppose

**Comment:**

Please protect mountain lions in the Black Hills. Because of rampant development and real estate sales of wildlife corridor lands, they are being pushed out of so many of their hunting areas and dens. They have a right to life.

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**Timothy Dalton**

**Eureka SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Kimberley Kringen**

**Rapid City SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Mary Robinson**

**Highmore SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Micky Bevers**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

South Dakota needs to play its part in protecting the state's mountain lion population by ending trophy hunting!

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**Roxanne Tchida**

**Sisseton, Sd SD**

**Position:** oppose

**Comment:**

This is completely unnecessary!!

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**Tammy Osheim**

**Brandon SD**

**Position:** oppose

**Comment:**

I oppose having expansion of mountain lion hunting season including the expanded use of hounds. This is barbaric and unsportsmanlike and in addition it causes mountain lions to interact more with livestock and humans as they are being pursued and pressured.

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**Kim Hall**

**Centerville SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Katie Gilmore**

**Harrisburg SD**

**Position:** oppose

**Comment:**

As a former hunter I am very opposed to a pointless mountain lion season. If left alone the lions would help manage the excessive deer population. Humans need to feed their egos some other way, maybe helping fellow humans or photographing wildlife, instead of shooting mountain lions. Shooting animals for food serves a purpose; trophy hunting does not. Please don't allow another pointless hunting season.

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**Jc Corcoran**

**Glorieta NM**

**Position:** oppose

**Comment:**

Please oppose the 2021-2022 mountain lion trophy hunting season and expansion of hound hunting on mountain lions in South Dakota. South Dakota needs to play its part in protecting the state's mountain lion population by ending trophy hunting!

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**Julia Natvig**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

I oppose the 2021-2022 mountain lion trophy hunting season and expansion of hound hunting on mountain lions in SD. SD needs to protect apex predator species such as cougars to maintain a balanced ecosystem. Trophy hunting disrupts this balance and endangers other species, including domestic pets and human children.



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**Terri Pepper**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Theresa Giannavola**

**Aberdeen SD**

**Position:** oppose

**Comment:**

I oppose this hunting season, all trapping that takes place in SD and Governor Noem's tail bounty program!

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**Louise McGannon**

**Mitchell SD**

**Position:** oppose

**Comment:**

I totally, totally oppose the mountain lion hunting season. Everything about it is wrong. They are part of the ecosystem, humans should not be regulating it when nature does a much better job than you'd ever hope to. Point in case, is the governor's predator bounty program, it has accomplished nothing and so will this mountain lion season, accomplish nothing good. Just bragging rights for the hunters.

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**Bronwyn Castillo**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

Stop killing!

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**Rhys Fulenwider**

**Rapid City SD**

**Position:** oppose

**Comment:**

Large predators have been proven to help keep our ecology in balance. With as few Mountain Lions as there are in South Dakota, how can we in good conscious hunt them? I am ashamed to be associated with a state with such backward ideals

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**Patricia Brosz**

**Aberdeen SD**

**Position:** oppose

**Comment:**

I strongly oppose the 2020-2021  
Trophy Mountain Lion hunting and as fervently, hunting Mountain Lions with the use of dog packs to pursue and injure the targeted Lion. Cruel and unfair practices, please stop!

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**Cynthia Brady**

**Lead SD**

**Position:** oppose

**Comment:**

I oppose trophy hunting of mountain lions in South Dakota. I especially oppose the use of hounds to hunt mountain lions.

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**Teresa Hicks**

**Rapid City SD**

**Position:** oppose

**Comment:**

The hunting of our Mountain Lions in the Black Hills needs to stop. Killing them for the sake of a trophy is so disgusting and hunting them with hounds needs to be outlawed. From what I have read from different sources we don't have that many of them. They need to be protected, not killed. The only reason to kill one is if they are a danger to the public or sick.

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**Kath Knox**

**Belle Fourche SD**

**Position:** oppose

**Comment:**

Stop trying to kill the mountain lions off

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**Cory Ferguson**

**Rapid City SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Kim Nordsiden**

**Winner SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Diana Boyle - Mountain Lion  
Foundation**

**Sacramento CA**

**Position:** oppose

**Comment:**

No comment text provided.

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**Theresa Shay**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

I oppose the trophy hunting of mountain lions, especially when involving the use of hounds.

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**Patrick Shay**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

As a South Dakota citizen I urge you to oppose the 2021-2022 mountain lion trophy hunting season and expansion of hound hunting on mountain lions in South Dakota.

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**Evan Crimson**

**Watertown SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Jeff Strub**

**Madison SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Julie Anderson**

**Rapid City SD**

**Position:** oppose

**Comment:**

I object to the mountain lion hunting season, especially trophy hunting by hound hunters. The proposed increase in the harvest numbers will certainly create more orphan cubs that will increase conflicts with humans. You are perpetuating this scenario by proposing the extended areas that hound hunters may now go. You are killing the animals that are not causing any problems. Please oppose any new areas for hound hunting.

---

**Ann Parsells**

**Hot Springs SD**

**Position:** oppose

**Comment:**

Why is the only answer to balancing the mountain lion life cycle with other animal nations typically solved with hunting and killing? Why can't a policy of removal and resettling for their lives and purpose be the first step? How can we claim as a nation to be humane when we support the killing thrill and joy for a trophy alone? If a mountain lion is hunted, then the hunter needs to pay much more for the animal's life and the body needs to be used for good, not a trophy. It is sickening that we promote killing as a sport of precious lives that God created. We didn't and yet we, as humans, just decide who lives and dies, what animal has intrinsic value at the auction as opposed to the beauty and value in the wild. We can live in balance if we trust wildlife science as we can if we trust fire suppression science. How much more do we need to kill to feel alive? Please stop allowing trophy hunting. It is cruel, pathetic and shows the emptiness of the 'hunter'. Thank you.

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**Caryn Lerman**

**Hot Springs SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Dean Parker**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

I'm writing in opposition of the 2021-2022 mountain lion trophy hunting season and the expansion of using dogs to hunt mountain lions in our state. Hound hunting is inhumane for the lion and dangerous for the dogs involved. It is cruel, unsporting and unnecessary.

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**Heather Philbrook**

**Rapid City SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Angela Antijunti**

**Rapid City SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Heidi Hanson**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

This is a cruel practice and I adamantly oppose it.

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**Shannon Steckelberg**

**Harrisburg SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Ali Horsted**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Cheryl Stone**

**Fort Pierre SD**

**Position:** oppose

**Comment:**

Oppose the use of dogs to hunt mountain lions.

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**Maria Chalaire**

**Brandon SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Sheena Thomas**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Jan Humphrey**

**Hill City SD**

**Position:** oppose

**Comment:**

This is a horrible practice. Even considering it as one of your sports in this state makes me believe you are the most evil entity to exist. Shame on you. You are supposed to be stewards of the forest. That includes its creatures.

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**Teresa Hicks**

**Rapid City SD**

**Position:** oppose

**Comment:**

It is bad enough we have a hunting season on Mountain Lions when there is no need for one but to allow the use of hounds is truly despicable. This isn't hunting, its cruel and unsportsmanlike.

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**Stacie Bechtold**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Shelby Jepperson**

**Sioux SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Emily Dunn**

**Mitchell SD**

**Position:** oppose

**Comment:**

Strongly oppose this cruel hunting of mountain lions

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**Karen Damman**

**Garretson SD**

**Position:** oppose

**Comment:**

This is cruel hunting let alone with dogs! Needs to stop!!!

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**Hailey Stuart**

**Brookings SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Tania Taylor**

**Mitchell SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Patricia Cressy**

**Pierre SD**

**Position:** oppose

**Comment:**

Hunting "Cats" with dogs is cruel & a danger to the dogs. It is cruel, unfair & gives no chance for the hunted to be able to escape or for the babies to easily be killed. It's just wrong.

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**Brenda Manning**

**Pierre SD**

**Position:** oppose

**Comment:**

This is a barbaric practice for not only the mountain lions but the dogs used in these hunts. I strongly oppose the use of dogs in hunting mountain lions.

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**Melody Dennis**

**Deadwood SD**

**Position:** oppose

**Comment:**

Using dogs to hunt lions is barbaric and cruel. To the lions and the dogs. Lets quit killing anything that moves.



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**Kathryn Hess**

**Summerset SD**

**Position:** oppose

**Comment:**

This is cruel and inhumane. These beautiful creatures don't have a chance when being hunted with dogs. These people who hunt with dogs are not hunters. There should be no Mountain Lion hunting with or without dogs.

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**Taylor Albright**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

Inhumane. Period.

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**Margaret Sohn**

**Gainesville FL**

**Position:** oppose

**Comment:**

No comment text provided.

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**Eric Dezell**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Dana Peugh**

**Mitchell SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Rebecca Cooper**

**Summerset SD**

**Position:** oppose

**Comment:**

Oppose using dogs for hunting of mountain lions.

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**Emily Norman**

**Sisseton SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Cathie Llamas**

**Pierre SD**

**Position:** oppose

**Comment:**

Inhumanly strongly opposed to thus

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**Kim Smith**

**Hartford SD**

**Position:** oppose

**Comment:**

Our state has killed enough wildlife with its predator hunting and mountain lion hunting. The populations on these animals have decreased to the point you dont even see them out in the country. Sad that our state is diminishing our wildlife.

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**Anita Mason**

**Smithwick SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Jeanie Gabert**

**Belle Fourche SD**

**Position:** oppose

**Comment:**

No comment text provided.

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**Lori Tetreault**

**Whitewood SD**

**Position:** oppose

**Comment:**

These beautiful animals should not be destroyed because hunter's seek them out inhumanely as trophies to satisfy their hunting egos. Please protect these God-given creatures!

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**John Fitzgerald**

**Hot Springs SD**

**Position:** oppose

**Comment:**

No comment text provided.

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## Mountain Lion Season Restrictions

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**Kenny Halbritter**

**Sioux Falls SD**

**Position:** support

**Comment:**

No trophy hunting of SD Mountain Lions

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**Tammy Osheim**

**Brandon SD**

**Position:** oppose

**Comment:**

I oppose adding expansion of hounds to hunt mountains lions or any use of hounds. It is needlessly cruel and terrorizes the lions and other wildlife that get in the way. Trophy hunting should not supersede humane practices nor be considered a right at any cost to the animal.

---

**Paula Roskens**

**Lead SD**

**Position:** oppose

**Comment:**

Trophy hunting is inhumane. It's been 150 years since a human has been killed or maimed by a mountain lion. To take an animal's life to decorate with or for enjoyment is so sad. These are beautiful animals, who wish only to be left alone and far away from humans. Showing reverence for life is humane, good sportsmanship. To kill so that you may eat is one thing, but it's sick to kill for the fun of it. It doesn't say much for humans who have all the advantages to destroy these animals. They are part of the wild, they belong there, it's us who don't.

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**Preston Olson**

**Sioux Falls SD**

**Position:** support

**Comment:**

No more trophy mountain lion hunting.

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**Sheryl Nieman**

**Parker SD**

**Position:** support

**Comment:**

Trophy hunting is a waste of beautiful animals that are assets to our state for no good reason other than bragging rights for the hunters. This is a sick practice.

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**Cynthia Brady**

**Lead SD**

**Position:** other

**Comment:**

Hello,  
I oppose trophy hunting of mountain lions, and in particular the use of hounds to hunt mountain lions.  
Thank you.

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**Sandy Dumke**

**Crooks SD**

**Position:** other

**Comment:**

No comment text provided.

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**Diana Boyle - Mountain Lion  
Foundation**

**Sacramento CA**

**Position:** oppose

**Comment:**

Please see the Mountain Lion Foundation's comments regarding this matter, attached.

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**Darci Willemsen Adams**

**Hartford SD**

**Position:** oppose

**Comment:**

See attached pdf comments submitted under the Mountain Lion Hunting Season topic.

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**Susan Dubovsky**

**East Tawas MI**

**Position:** oppose

**Comment:**

I am writing to oppose the petition to kill Mountain Lions in your state. It will lead to the endangered and extinct animals, and are an important species needed in the Eco-system.  
This is clearly a trophy hunt/kill and should be banned. Using dogs will only endanger the dogs life. Please reconsider this idea.  
Thank you.

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**Paula Von Weller**

**Spearfish SD**

**Position:** oppose

**Comment:**

I am strongly opposed to the South Dakota Houndsmen Association's petition that would expand hound hunting of mountain lions throughout the state.

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**Jennifer Jenkins**

**Tucson AZ**

**Position:** support

**Comment:**

Dear South Dakota Wildlife Management,

Please oppose the South Dakota Houndsmen Association's petition to expand hound hunting of mountain lions in South Dakota and to protect mountain lions from trophy hunting. This is a cruel practice and not only cruel, but will actually increase conflicts with humans over time. South Dakota has a small population of cougars left. This practice will continue to push this top predator to extinction. Doing this destroys our children's chance of enjoying the natural world and sends a message that short-term pleasure in blood sports is more important than anything else. In addition, this may bring short term profits to the state of South Dakota, in the long run, it will do the opposite. Killing off top line predators has proven to be detrimental to the environment which subsequently destroys the economy.

Sincerely,  
Jen

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**Gwendolyn Oberholtzer**

**Spearfish SD**

**Position:** oppose

**Comment:**

Please oppose the expansion of hound hunting of mountain lions in SD based on the estimated number of mature age lions remaining.

## Other

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**Michael Mattson**

**Britton SD**

**Position:** oppose

**Comment:**

Please stop the senseless trapping of River Otters and Beavers! If you're too lazy to get a count on them, then it should be stopped immediately! That's like letting blind people apply for and receive a drivers license when common sense tells us that's idiotic. Laziness and idiocy should never be allowed with our taxpayer receiving funded GFP employees. Since when did our state employees throw common sense out the window???

---

**Paul Dulitz**

**Webster SD**

**Position:** other

**Comment:**

Wheatland GPA

Canada Thistle spread, sorry I didn't get a better picture. The white area is spreading thistles, this isn't the only infestation on the GPA! It was sprayed too late and should have been mowed at the time! Good thing this area isn't popular as that is not the image I would want to show people from out of state!

---

**Simon Yoakum**

**Dixon MO**

**Position:** other

**Comment:**

If you want to increase out of state pheasant hunters, let them hunt opening day not week later. I hunted south Dakota for 17 years until you penalized me for not living in your state I pay much more than a resident, yet I am handicapped one week

---

**Mike Hoelsing**

**Aberdeen SD**

**Position:** oppose

**Comment:**

I find it very unfair that nonresident archery hunters are able to hunt Unit 35L (Custer National Forest in Harding County) and I, a South Dakota resident for over 35 years, can't. I am a landowner and pay over 10k in property taxes every year to SD and I am unable to hunt public land in my home State but Non-residents can.? Please explain the GFP's reasoning behind this regulation.

Respectfully Submitted,  
Mike Hoelsing

---

**Carter Anderson**

**Sioux Falls SD**

**Position:** oppose

**Comment:**

As a trained statistician, I am opposed to the dropping the pheasant survey data created in 1949

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**Jerald Hemeyer**

**Gregory SD**

**Position:** support

**Comment:**

Ate tag to a personal representative in case of an medical emergence. I have just contacted cancer and have a port to inject the treatment so I am not able to shoot a high power gun. I would like to transfer the right to my Son who has a good hunting record. By state law I am unable to do this. Law are written to help the farmer and the hunters. The place I hunt told me they were just going to start shooting deer and leave them lay. As a hunter I talked them let me do it for the meat. They agreed they have no faith in the Game Fish and Parks. The department will do anything to improve pheasant hunt especially for the out of state hunter but do not care about the instate hunter. The four Pheasant limit had them shut off all hunting on their land. Thats about how many pheasants they have on one sections but for the hunting lodges its okay. I have come to the farmer next to public hunting say they hardly ever hear a gun shot during pheasant season and do not see pheasant after the season. I guess I am speaking what I hear in the Public that the Game Fish and Parks governing only care about big money hunting not family hunting any more. the Group is made up of hunting and fishing guides not common people. Bill Janklow once said the When the common Man can not hunt hunting will be outlawed. I do not think the comission is closer than they know to this happening  
Please at least change one law so we can try to rid a rancher of deer and help a man get his son back in hunting again

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## Spearfishing

**Travis Runia**

**Wolsey SD**

**Position:** support

**Comment:**

I support the spearfishing petition as I enjoy spearing pike through the ice. I would appreciate the opportunity to harvest other game fish on more waters, although they are rarely observed as the petitioner described.

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## Spring Turkey

**Karasevasype Karasevasypemi**

**Debrecen DE**

**Position:**

**Comment:**

No comment text provided.









**THE HUMANE SOCIETY  
OF THE UNITED STATES**

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August 25, 2021

Russell Olson, Commission Chair  
South Dakota Game, Fish and Parks  
523 East Capitol Ave  
Pierre, SD 57501

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

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**RE: Proposed 2021-22 and 2022-23 Mountain Lion Hunting Seasons**

Susan Atherton  
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Co-Chair

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Nicole Paquette  
Chief Programs  
and Policy Officer

Johanie V. Parra  
Secretary

Dear Chairman Olson, Director Kirschenmann and Members of the Commission,

On behalf of the Humane Society of the United States and our supporters in South Dakota, I thank you for this opportunity to submit comments on South Dakota Game, Fish and Parks' (GFP) proposed 2021-22 and 2022-23 Mountain Lion Hunting Seasons ("Proposal"). We oppose the Proposal because it allows excessive levels of hunting on mountain lions (*Puma concolor*) harming their population in South Dakota.

The Humane Society of the United States is opposed to the use of recreational hunting to manage mountain lions in South Dakota, because the objective of such killing is merely for trophies and not subsistence.<sup>1</sup> This practice is not only cruel and unnecessary, but researchers have found that excessive hunting of mountain lions leads to increased conflicts with humans, pets and livestock.<sup>2</sup> Hunting of mountain lion also harms ungulates because these top carnivores target sick animals, including those with chronic wasting disease.<sup>3</sup> Finally, a national survey sponsored by the National Shooting Sports Foundation shows that the majority of Midwesterners, including South Dakotans, oppose trophy hunting.<sup>4</sup>

For these reasons, and those outlined in Appendix A of these comments, we request that the Commission reject the Proposal and protect South Dakota's mountain lions from trophy hunting now and in perpetuity. If GFP is to continue allowing the hunting of mountain lions, we request that the agency limit the practice to sustainable levels to protect South Dakota's iconic mountain lion population from excessive killing and to limit conflicts caused by indiscriminate hunting of these native cats. Specifically, we request the following changes:

1.) Lift the arbitrary population objective of 200-300 total mountain lions and limit the annual hunting quota to no more than 14% of South Dakota's adult/subadult mountain lion population. This amounts to no more than 38 mountain lions, based on GFP's most recent estimate of 277 adult/subadult lions in the state. GFP could also develop an annual quota based on an average population over the last five years, to account for the agency's widely fluctuating population estimates.

Hunting above 14% of the mountain lion population results in declines to the population.<sup>5</sup> Colorado Parks and Wildlife (CPW) has recently adopted a cap of 14% on mountain lion hunting quotas in certain regions as part of their new West Slope Mountain Lion Management Plan.<sup>6</sup> Additionally, CPW has adopted a cap of 16% on total human-caused mortality to account for other sources of lion deaths. While Colorado's lions still require

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additional protection from trophy hunting, these new caps demonstrate the growing acceptance by state wildlife agencies that heavy hunting on mountain lions, including what is currently allowed in South Dakota, is unsustainable and, indeed, harmful to the state's mountain lion population.

GFP's Proposal continues to authorize trophy hunting on mountain lions that exceeds this sustainable level, threatening the stability of South Dakota's mountain lion population as well as their range expansion to their historic range where they had been extirpated. We call on the agency to implement a 14% cap on hunting mortality and a 16% cap on total human-caused mortality based on adult/subadult population estimates while doing away with the agency's arbitrary population objective of 200-300 total mountain lions.

2.) Implement a 20% sublimit on female hunting mortality as a proportion of total hunting mortality. Multiple studies across the western U.S. demonstrate that limiting female mortality to approximately 20% of total hunting mortality is necessary to ensure a stable population.<sup>7</sup> Based on the current population estimate and an estimated sustainable quota of 38 total lions, GFP must limit the female subquota to no more than eight cats.

While still higher than what is sustainable, Colorado Parks and Wildlife has implemented a 22% adult female mortality sublimit on total hunting mortality<sup>8</sup> and the Arizona Game and Fish Department has implemented a 25% adult female mortality sublimit on total hunting mortality.<sup>9</sup> GFP must take additional steps to protect resident females and ensure hunting of females does not exceed sustainable levels. The current subquota of 40 female mountain lions out of a total quota of 60 lions is far too high.

3.) Prohibit the hunting of mountain lions with hounds throughout South Dakota, including outside of the Black Hills Fire Protection District. Currently, the Proposal would expand the allowance for hound hunting outside of the Black Hills Fire Protection District that originates on private land to cross over or culminate on private land or public land, as long as it's not expressly prohibited by the managing entity.

As detailed in Appendix A, using radio-collared hounds to chase mountain lions and bay them into trees or rock ledges so a trophy hunter can shoot at close range is unsporting, unethical and inhumane.<sup>10</sup> Hounds kill kittens, and mountain lions often injure or kill hounds.<sup>11</sup> The practice is exceedingly stressful and energetically taxing to mountain lions.<sup>12</sup> Furthermore, hound hunting is not considered "fair chase" hunting by most.<sup>13</sup> Hounds also chase and stress non-target wildlife, from porcupines to deer,<sup>14</sup> and trespass onto private lands.<sup>15</sup> If GFP is to continue allowing the hunting of mountain lions, the agency must prohibit the use of hounds.

In conclusion, South Dakota's mountain lions are a vital component of our natural wild heritage and deserve reasoned management for long-term conservation.<sup>16</sup> If GFP is to continue allowing hunting of mountain lions, the agency must limit the practice to no more than 14% of the adult/subadult population so that it does not exceed sustainable levels and implement a female sublimit of 20% of total hunting mortality. Additionally, total human-caused mortality must be limited to no more than 16% of the mountain lion population. Lastly, hound hunting of mountain lions must be prohibited throughout South Dakota, not expanded as GFP has proposed. Thank you for your consideration.

Sincerely,

Darci Willemsen Adams  
Program Manager, Law Enforcement Outreach & Engagement  
The Humane Society of the United States  
[dadams@humanesociety.org](mailto:dadams@humanesociety.org)

## Appendix A

### I. Trophy hunting of mountain lions is unsustainable, cruel and harmful to family groups

Trophy hunting is the greatest source of mortality for mountain lions throughout the majority of their range in the United States.<sup>17</sup> The practice is harmful to more than just the wild cats who are killed. Conservation biologists have derided this practice as unnecessary and wasteful. Batavia et al. (2018) write: Compelling evidence shows that the animals hunted as trophies have sophisticated levels of “intelligence, emotion and sociality” that are “profoundly disrupted” by trophy hunting.<sup>18</sup> For these reasons, GFP must not allow trophy hunting of mountain lions in our state:

1.) *Trophy hunting is unsustainable and cruel:* Large-bodied carnivores are sparsely populated across vast areas, invest in few offspring, provide extended parental care to their young, have a tendency towards infanticide, females limit reproduction and social stability promotes their resiliency.<sup>19</sup> Human persecution affects their social structure,<sup>20</sup> and harms their persistence.<sup>21</sup>

Research shows that trophy hunting results in *additive mortality*—trophy hunters increase the total mortality to levels that far exceed what would occur in nature.<sup>22</sup> In fact, the effect of human persecution is “super additive,” meaning that hunter kill rates on large carnivores has a multiplier effect on the ultimate increase in total mortality over what would occur in nature due to breeder loss, social disruption and its indirect effects including increased infanticide and decreased recruitment of their young.<sup>23</sup> When trophy hunters remove the stable adult mountain lions from a population, it encourages subadult males to immigrate, leading to greater aggression between cats and mortalities to adult females and subsequent infanticide.<sup>24</sup>

Biologists Wolfe et al. (2015) recommend that states manage mountain lions at a metapopulation level rather than at the single population level. They further add, “We recommend a conservative management approach be adopted to preclude potential over-harvest in future years.”<sup>25</sup> Instead, South Dakota’s mountain lions experience *additive* levels of mortality.<sup>26</sup> Extensive research shows that this additive mortality caused by high levels of hunting results in population sinks.<sup>27</sup> High hunting mortality does not result in decreased numbers and densities of mountain lions because of compensatory emigration and immigration responses, typically by dispersing subadult males.<sup>28</sup>

2.) *Trophy hunting is particularly harmful to kittens and their mothers:* In heavily hunted populations, female mountain lions experience higher levels of intraspecific aggression (fights with other cats) resulting in predation on themselves and their kittens.<sup>29</sup> Over-hunting harms a population’s ability to recruit new members if too many adult females are removed.<sup>30</sup> A Utah study shows that trophy hunting adult females orphans their kittens, leaving them to die by dehydration, malnutrition, and/or exposure.<sup>31</sup> Kittens are reliant upon their mothers beyond 12 months of age.<sup>32</sup>

3.) *Trophy hunting harms entire mountain lion communities:* A recent study on mountain lions shows that they are quite social and live in “communities,” with females sharing kills with other females, their kittens and even with the territorial males. In return for these meals, the adult males protect the females and their kittens from incoming males.<sup>33</sup> Disrupting these communities leads to deadly intraspecific strife, including infanticide and social chaos within the family groups.<sup>34</sup> Trophy hunting destabilizes mountain lion populations, which may cause increased conflicts with humans, pets and livestock.<sup>35</sup>



4.) *Trophy hunting is unnecessary, as mountain lions are a self-regulating:* Mountain lions occur at low densities relative to their primary prey, making them sensitive to bottom-up (prey declines) and top-down (human persecution) influences.<sup>36</sup> Their populations must stay at a much smaller size relative to their prey's biomass or risk starvation.<sup>37</sup> They do this by regulating their own numbers.<sup>38</sup> When prey populations decline, so do mountain lion populations.<sup>39</sup> Mountain lion populations also require expansive habitat, with individual cats maintaining large home ranges that overlap with one another.<sup>40</sup>

5.) *Killing large numbers of mountain lions halts their ability to create trophic cascades in their ecosystems, which benefits a wide range of flora, fauna and people:* Mountain lions serve important ecological roles, including providing a variety of ecosystem services.<sup>41</sup> As such, conserving these large cats on the landscape creates a socio-ecological benefit that far offsets any societal costs.<sup>42</sup> Their protection and conservation has ripple effects throughout their natural communities. Researchers have found that by modulating deer populations, mountain lions prevented overgrazing near fragile riparian systems, resulting in greater biodiversity.<sup>43</sup> Additionally, carrion left from mountain lion kills feeds scavengers, beetles, foxes, bears and other wildlife species, further enhancing biodiversity.<sup>44</sup>

6.) *Hound hunting is harmful to mountain lions, hounds and non-target wildlife:* Using radio-collared trailing hounds to chase mountain lions and bay them into trees or rock ledges so a trophy hunter can shoot at close range is unsporting, unethical and inhumane.<sup>45</sup> Hounds kill kittens, and mountain lions often injure or kill hounds.<sup>46</sup> The practice is exceedingly stressful and energetically taxing to mountain lions.<sup>47</sup>

To escape from the hounds, mountain lions use evasive maneuvers such as running in figure eights, scrambling up trees or steep hillsides and using quick turns to evade the pursuing pack of barking hounds. As a result, mountain lions could exceed their aerobic budgets causing their muscles to go anaerobic (while hounds are capable of running a steady pace with little ill effect).<sup>48</sup> A study by Bryce et al. (2017) found that for every one minute the hounds chased a mountain lion, it cost the cat approximately five times what would have been expended if the cat had been hunting. In other words, a 3.5-minute chase likely equaled 18 minutes of energy the mountain lion would have expended on hunting activities necessary to find prey.<sup>49</sup>

Hounding is not considered “fair chase” hunting by most.<sup>50</sup> Fair chase hunting is predicated upon giving the animal an equal opportunity to escape from the hunter.<sup>51</sup> The use of hounds provides an unfair advantage to trophy hunters who rely on hounds to do the bulk of the work in finding and baying a mountain lions. Hounds also chase and stress non-target wildlife, from porcupines to deer,<sup>52</sup> and trespass onto private lands.<sup>53</sup>

## **II. Hunting mountain lions does not boost prey populations**

Research shows that ungulates are ultimately limited more by their food resources and other habitat factors (“bottom-up” limitations), rather than by natural predation by carnivores (“top down” regulators).<sup>54</sup> However, when herds lose those carnivores, they suffer poorer health and body condition, as well as more degraded habitats.<sup>55</sup> With a healthy assemblage of native carnivores, ecosystems enjoy the benefits from top-down regulation, which increases the health of ungulate herds with which they are integrally coevolved.<sup>56</sup>

The best available science demonstrates that killing native carnivores to increase ungulate populations is unlikely to produce positive results. Numerous recent studies demonstrate that carnivore removal actions “generally had no effect” in the long term on ungulate populations.<sup>57</sup> Because ecological systems are complex, heavily persecuting mountain lions will fail to address the underlying malnutrition problems that deer face. Research also shows that disruption by oil and gas drilling does, in fact, greatly harm mule deer populations.<sup>58</sup>



If South Dakota wants to grow its ungulate populations, then GFP must foster survival of adult female mule deer and elk to stem declines, and it must increase nutritional conditions for ungulates as these factors are the most important for mule deer survival.<sup>59</sup>

Persecuting mountain lions will not help bighorn sheep recruitment, either. It is clear from the literature that bighorn sheep populations are in decline in the U.S. because of unregulated market hunting, trophy hunting, disease from domestic sheep,<sup>60</sup> resource competition by livestock, and loss of habitat.<sup>61</sup> Sawyer and Lindzey (2002) surveyed more than 60 peer-reviewed articles concerning predator-prey relationships involving bighorn sheep and mountain lions, concluding that while predator control is often politically expedient, it often does not address underlying environmental issues including habitat loss, loss of migration corridors, and inadequate nutrition.<sup>62</sup> The best available science suggests that persecuting mountain lion populations is not a solution for enhancing bighorn sheep numbers. That is because mountain lion predation upon bighorn sheep is a learned behavior conducted by a few individuals who may not repeat their behavior.<sup>63</sup> Similar behavior has been documented on endangered mountain caribou in the southern Selkirk Mountains, where trophy hunting disrupted sensitive mountain lion communities, female lions took to higher altitudes to avoid incoming, infanticidal young males, and preyed upon mountain caribou.<sup>64</sup>

South Dakota can better plan for bighorn sheep management by selecting relocation sites for bighorn sheep that have little stalking cover.<sup>65</sup> Escape terrain that contains cliffs, rocks, and foliage makes excellent ambush cover for a mountain lion and should be avoided.<sup>66</sup> Also, the amount of mountain lion predation is generally greater on small-sized bighorn sheep populations (those with fewer than 100 individuals) than on other, larger bighorn sheep populations.<sup>67</sup> A host of authors reviewed by McKinney et al. (2006) and Ruth and Murphy (2010) recommend only limited mountain lion removals to benefit bighorn sheep populations.<sup>68</sup>

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

Mountain lions help prevent deadly deer-vehicle strikes<sup>69</sup> that can result in numerous human mortalities and pose significant financial and ecological costs to society.<sup>70</sup> In fact, by reducing vehicle collisions with deer, mountain lions saved drivers \$1.1 million in collision costs annually in South Dakota.<sup>71</sup> Additionally, highways fragment wildlife habitats, which can lead to both genetic inbreeding problems and direct mortality from vehicle collisions.<sup>72</sup> The cost of vehicle-animal collisions can be mitigated with the construction of highway structures that are designed to draw specific species such as deer across them, preventing not only vehicle strikes, but protecting species and people while saving millions of dollars annually.<sup>73</sup>

Moreover, mountain lions help maintain the health and viability of ungulate populations by preying on sick individuals, reducing the spread of disease such as chronic wasting disease (CWD) and brucellosis. For example, during a study in Rocky Mountain National Park, researchers found mountain lions preyed on deer infected with CWD.<sup>74</sup> The study concluded that adult deer preyed upon by mountain lions were more likely to have CWD than deer shot by hunters. According to the study, “The subtle behaviour changes in prion-infected deer may be better signals of vulnerability than body condition, and these cues may occur well before body condition noticeably declines.”<sup>75</sup> This demonstrates that mountain lions select for infected prey and may be more effective at culling animals with CWD, including during the early stages of the disease when they are less infectious, than hunters who rely on more obvious signs of emaciation that occur in later stages of the disease when they are more infectious. Moreover, the mountain lions consumed more than 85% of carcasses, thereby removing a significant amount of the disease from the environment.<sup>76</sup>

This ecosystem benefit is increasingly important as CWD infection continues to grow in prevalence and distribution in South Dakota<sup>77</sup> and neighboring states. Hammering our state's mountain lion population through high levels of trophy hunting undermines one of our best defenses against the spread of this deadly disease.

#### **IV. Trophy hunting increases human-mountain lion conflict and livestock depredation**

Hunting and lethal control of mountain lions results in increased conflicts because lions' social structure are destabilized.<sup>78</sup> A review of predator-removal studies found that the practice is "typically an ineffective and costly approach to conflicts between humans and predators" and, as a long-term strategy, will result in failure.<sup>79</sup> Instead, the authors concluded, non-lethal alternatives to lethal removal of native carnivores, coupled with coexistence (husbandry techniques) may resolve conflicts.<sup>80</sup>

A Washington state study shows that as mountain lion complaints increased, wildlife officials lengthened seasons and increased quotas to respond to what they believed was a growing lion population. However, the public's perception of an increasing population and greater number of livestock depredations was actually the result of a declining female and increasing male population.<sup>81</sup> Heavy hunting of mountain lions skewed the ratio of young males in the population by causing compensatory immigration and emigration, even though it resulted in no net change in the population.<sup>82</sup>

Study authors found that the sport hunting of mountain lions to reduce complaints and livestock depredations had the opposite effect. Killing mountain lions disrupts their social structure and increases both complaints and livestock depredations.<sup>83</sup> Peebles et al. (2013) write:

"each additional cougar [i.e. mountain lion] on the landscape increased the odds of a complaint of livestock depredation by about 5%. However, contrary to expectations, each additional cougar killed on the landscape increased the odds by about 50%, or an order of magnitude higher. By far, hunting of cougars had the greatest effects, but not as expected. Very heavy hunting (100% removal of resident adults in 1 year) increased the odds of complaints and depredations in year 2 by 150% to 340%."<sup>84</sup>

Similarly, a study published just this year shows the very same result: lethal removal of mountain lions is associated with increased conflicts, especially on small hoofstock including sheep and goats.<sup>85</sup> Dellinger et al. (2021) state:

"Removals can thus create a negative-feedback loop that leads to increasing conflict and lethal removal, which could begin to negatively impact the mountain lion population via reduced gene flow and population viability (Hiller et al. 2015, Vickers et al. 2015, Benson et al. 2019). Thus, maintaining an older age structure by reducing lethal removal of resident adults could mitigate depredations (Logan 2019)."<sup>86</sup>

Hunting disrupts mountain lions' sex-age structure and tilts a population to one that is composed of younger males, who are more likely to engage in livestock losses than animals in stable, older populations.<sup>87</sup> In 2019, the Humane Society of the United States published a report on livestock losses from mountain lions using the U.S. Department of Agriculture's data.<sup>88</sup> For South Dakota's cattle and sheep ranchers, 2015 data show that most livestock losses came from maladies (illnesses, birthing problems, weather and theft) with far fewer losses coming from native carnivores and domestic dogs together.<sup>89</sup> In 2015, nearly 96 percent of unwanted



cattle losses in South Dakota were from maladies with only 0.17 percent coming from mountain lions, according to the USDA.<sup>90</sup> According to 2014 data, zero sheep were lost to mountain lions in South Dakota.<sup>91</sup>

Rather than allowing trophy hunting of mountain lions, GFP must make a concerted effort to utilize non-lethal methods when rare conflicts occur, prioritizing these above lethal removal of mountain lions. The current reliance on lethal removal for mountain lions that enter a human community is cruel and not in line with best management practices for mountain lion conservation. Techniques such as hazing and relocation are viable options that prevent unnecessary killing and are largely supported by the majority of South Dakotans, as detailed within the Plan.<sup>92</sup> According to surveys of South Dakota residents in 2018, public education, relocation and hazing are by far the most widely supported methods for addressing human, pet and livestock conflicts with mountain lions.<sup>93</sup>

Furthermore, GFP must work with livestock owners to ensure they are adequately and appropriately employing non-lethal deterrence techniques. Installing predator-proof enclosures, using livestock guardian animals, or utilizing frightening devices are all effective strategies to prevent conflicts with mountain lions and other carnivores. Other livestock husbandry practices are also essential at reducing conflicts with carnivores. Livestock operators should:

- Keep livestock, especially maternity pastures, away from areas where wild cats have access to ambush cover.<sup>94</sup>
- Keep livestock, especially the most vulnerable—young animals, mothers during birthing seasons and hobby-farm animals—behind barriers such as electric fencing and/or in barns or pens or kennels with a top.<sup>95</sup> The type of enclosure needs to be specific for the carnivore species to prevent climbing, digging or jumping.<sup>96</sup>
- Move calves from pastures with chronic predation problems and replace them with older, less vulnerable animals.<sup>97</sup>
- Concentrate calving season (i.e., via artificial insemination) to synchronize births with wild ungulate birth periods.<sup>98</sup>
- In large landscapes, use human herders, range riders and/or guard animals.<sup>99</sup> Guard dogs work better when sheep and lambs are contained in a fenced enclosure rather than on open range lands where they can wander unrestrained.<sup>100</sup>
- Some of the low-cost sound and or visual equipment that deter wild cats include suspended clothing, LED flashing lights (sold as “Foxlights”), and radio alarm boxes set off to make alarm sounds/noises near pastures.<sup>101</sup>

According to USDA data from 2015, only an estimated 11.2 percent of cattle and calf operations in South Dakota used any nonlethal predator control methods.<sup>102</sup> Expanding the use of suitable techniques that are landscape and animal specific is essential to reducing conflicts and preventing the death of livestock as well as wild carnivores.

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

Trophy hunting of mountain lions is not in the best interest of this iconic species, nor does it represent the interests of the public majority. The practice deprives citizens of their ability to view or photograph wild



mountain lions. Nonconsumptive users are a rapidly growing stakeholder group who provide immense economic contributions to the communities in which they visit.<sup>103</sup> The U.S. Fish and Wildlife Service's 2016 wildlife-recreation report indicates that wildlife watchers nationwide have increased 20 percent from 2011, numbering 86 million and spending \$75.9 billion, while all hunters declined by 16 percent, with the biggest decline in big game hunter numbers, from 11.6 million in 2011 to 9.2 million in 2016.<sup>104</sup> Altogether, hunters spent \$25.6 billion in 2016, about one-third that spent by wildlife watchers (Fig. 2).<sup>105</sup>

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

The public values mountain lions and views them as an indicator of healthy environments while posing little risk to people living near them.<sup>106</sup> A new study indicates that Americans highly value wildlife, including top carnivores such as mountain lions, and are concerned about their welfare and conservation.<sup>107</sup> Surveys also show that the majority of Americans, including in Midwestern states, do not support trophy hunting, and are particularly opposed to mountain lion hunting.<sup>108</sup> Authorizing a trophy hunting season is not in the best interest of South Dakotans who prefer that mountain lions remain on the landscape, without threat of persecution.

<sup>1</sup> Chris Darimont, Brian Coddington, and Kristen Hawkes, "Why Men Trophy Hunt," *Biology Letters* 13 (2017); Chelsea Batavia et al., "The Elephant (Head) in the Room: A Critical Look at Trophy Hunting," *Conservation Letters*, no. e12565 (2018).

<sup>2</sup> J. A. Dellinger et al., "Temporal Trends and Drivers of Mountain Lion Depredation in California, USA," *Human-Wildlife Interactions* 15, no. 1 (2021); Kaylie A. Peebles et al., "Effects of Remedial Sport Hunting on Cougar Complaints and Livestock Depredations," *Plos One* 8, no. 11 (2013); Kristine J. Teichman, Bogdan Cristescu, and Chris T. Darimont, "Hunting as a Management Tool? Cougar-Human Conflict Is Positively Related to Trophy Hunting," *BMC Ecology* 16, no. 1 (2016); H. S. Robinson and R. Desimone, "The Garnet Range Mountain Lion Study: Characteristics of a Hunted Population in West-Central Montana: Final Report," *Montana Fish, Wildlife & Parks* (2011).

<sup>3</sup> C. E. Krumm et al., "Mountain Lions Prey Selectively on Prion-Infected Mule Deer," *Biology Letters* 6, no. 2 (2009).

<sup>4</sup> National Shooting Sports Foundation and Responsive Management, "Americans Attitudes toward Hunting, Fishing, Sport Shooting and Trapping 2019," ed. Conducted for the Association of Fish and Wildlife Agencies Under Multistate Conservation Grant Number F19AP00100 (Harrisonburg, VA 2019).

<sup>5</sup> R. A. Beausoleil et al., "Research to Regulation: Cougar Social Behavior as a Guide for Management," *Wildlife Society Bulletin* 37, no. 3 (2013).

<sup>6</sup> Colorado Parks & Wildlife, "Colorado West Slope Mountain Lion (Puma Concolor) Management Plan: Northwest and Southwest Regions," ed. Colorado Department of Natural Resources (2020).



- <sup>7</sup> John W. Laundre, Lucina Hernandez, and Susan G. Clark, "Numerical and Demographic Responses of Pumas to Changes in Prey Abundance: Testing Current Predictions," *Journal of Wildlife Management* 71, no. 2 (2007); K.A. Logan, "Assessing Effects of Hunting on a Puma Population on the Uncompahgre Plateau, Colorado," ed. Mammals Research Colorado Division of Parks and Wildlife, Carnivore Conservation (Colorado 2015); Kenneth A. Logan and Jonathan P. Runge, "Effects of Hunting on a Puma Population in Colorado," *Wildlife Monographs* 209, no. 1 (2021); C. R. Anderson and F. G. Lindzey, "Experimental Evaluation of Population Trend and Harvest Composition in a Wyoming Cougar Population," *Wildlife Society Bulletin* 33, no. 1 (2005).
- <sup>8</sup> Colorado Parks & Wildlife, "Colorado West Slope Mountain Lion (Puma Concolor) Management Plan: Northwest and Southwest Regions."
- <sup>9</sup> Arizona Game and Fish Department, "Guidelines for the 2018-2019 through 2022-2023 Hunting Seasons," (2017).
- <sup>10</sup> T. L. Teel, R. S. Krannich, and R. H. Schmidt, "Utah Stakeholders' Attitudes toward Selected Cougar and Black Bear Management Practices," *Wildlife Society Bulletin* 30, no. 1 (2002).
- <sup>11</sup> F. G. Lindzey et al., "Cougar Population Response to Manipulation in Southern Utah," *ibid.* 20, no. 2 (1992); Kenneth A. Logan and Linda L. Sweanor, *Desert Puma: Evolutionary Ecology and Conservation of an Enduring Carnivore* (Washington, DC: Island Press, 2001); L. M. Elbroch et al., "Trailing Hounds Vs Foot Snares: Comparing Injuries to Pumas Puma Concolor Captured in Chilean Patagonia," *Wildlife Biology* 19, no. 2 (2013).
- <sup>12</sup> H. J. Harlow et al., "Stress Response of Cougars to Nonlethal Pursuit by Hunters," *Canadian Journal of Zoology* 70, no. 1 (1992); C. M. Bryce, C. C. Wilmers, and T. M. Williams, "Energetics and Evasion Dynamics of Large Predators and Prey: Pumas Vs. Hounds," *PeerJ* e3701 (2017); F. Bonier, H. Quigley, and S. N. Austad, "A Technique for Non-Invasively Detecting Stress Response in Cougars," *Wildlife Society Bulletin* 32, no. 3 (2004).
- <sup>13</sup> J. Posewitz, *Beyond Fair Chase: The Ethic and Tradition of Hunting* (Helena, Montana: Falcon Press, 1994); Teel, Krannich, and Schmidt, "Utah Stakeholders' Attitudes toward Selected Cougar and Black Bear Management Practices."; Cougar Management Guidelines, *Cougar Management Guidelines* (Bainbridge Island, WA: WildFutures, 2005).
- <sup>14</sup> S. Grignolio et al., "Effects of Hunting with Hounds on a Non-Target Species Living on the Edge of a Protected Area," *Biological Conservation* 144, no. 1 (2011); E. Mori, "Porcupines in the Landscape of Fear: Effect of Hunting with Dogs on the Behaviour of a Non-Target Species," *Mammal Research* 62, no. 3 (2017).
- <sup>15</sup> Hank Hristienko and Jr. McDonald, John E., "Going into the 21st Century: A Perspective on Trends and Controversies in the Management of the Black Bear," *Ursus* 18, no. 1 (2007).
- <sup>16</sup> Cynthia Jacobson et al., "A Conservation Institution for the 21st Century: Implications for State Wildlife Agencies," *Journal of Wildlife Management* 74, no. 2 (2010); Michael P. Nelson et al., "An Inadequate Construct? North American Model: What's Missing, What's Needed," *The Wildlife Professional*, no. Summer 2011 (2011).
- <sup>17</sup> See e.g., The Humane Society of the United States, "State of the Mountain Lion: A Call to End Trophy Hunting of America's Lion," (Washington, DC 2017); Cougar Management Guidelines, *Cougar Management Guidelines*.
- <sup>18</sup> Batavia et al. (2018) write: "...nonhuman animals are not only physically, socially, and emotionally disrupted [by trophy hunters], but also debased by the act of trophy hunting. Commoditized, killed, and dismembered, these individuals are relegated to the sphere of mere things when they are turned into souvenirs, oddities, and collectibles. We argue this is morally indefensible. Nonhuman animals are not mere objects but living beings with interests of their own, to whom we owe at least some basic modicum of respect (Regan, 1983). To transform them into trophies of human conquest is a violation of duty and common decency; and to accept, affirm, and even institutionalize trophy hunting, as the international conservation community seems to have done, is to aid and abet an immoral practice." Authors then argue that trophy hunting cannot be "presumed [to be] integral to conservation success."
- <sup>19</sup> e.g., A. D. Wallach et al., "What Is an Apex Predator?," *Oikos* 124, no. 11 (2015); R. B. Wielgus et al., "Effects of Male Trophy Hunting on Female Carnivore Population Growth and Persistence," *Biological Conservation* 167 (2013); D. Stoner, M. , M.L. Wolfe, and D. Choate, "Cougar Exploitation Levels in Utah: Implications for Demographic Structure, Population Recovery, and Metapopulation Dynamics," *Journal of Wildlife Management* 70 (2006); S. Creel et al., "Questionable Policy for Large Carnivore Hunting," *Science* 350, no. 6267 (2015); J. L. Weaver, P. C. Paquet, and L. F. Ruggiero, "Resilience and Conservation of Large Carnivores in the Rocky Mountains," *Conservation Biology* 10, no. 4 (1996).
- <sup>20</sup> Stoner, Wolfe, and Choate, "Cougar Exploitation Levels in Utah: Implications for Demographic Structure, Population Recovery, and Metapopulation Dynamics."; Peebles et al., "Effects of Remedial Sport Hunting on Cougar Complaints and Livestock Depredations."; Wallach et al., "What Is an Apex Predator?"; C. T. Darimont et al., "Human Predators Outpace Other Agents of Trait Change in the Wild," *Proceedings of the National Academy of Sciences of the United States of America* 106, no. 3 (2009); Sterling D. Miller et al., "Trends in Intensive Management of Alaska's Grizzly Bears, 1980-2010," *Journal of Wildlife Management* 75, no. 6 (2011); L. Mark Elbroch et al., "Adaptive Social Strategies in a Solitary Carnivore," *Science Advances* 3, no. 10 (2017).
- <sup>21</sup> Chris T. Darimont et al., "The Unique Ecology of Human Predators," *Science* 349, no. 6250 (2015).
- <sup>22</sup> J. A. Vucetich, D. W. Smith, and D. R. Stahler, "Influence of Harvest, Climate and Wolf Predation on Yellowstone Elk, 1961-2004," *Oikos* 111, no. 2 (2005); G. J. Wright et al., "Selection of Northern Yellowstone Elk by Gray Wolves and Hunters," *Journal of Wildlife Management* 70, no. 4 (2006); L. L. Eberhardt et al., "A Seventy-Year History of Trends in Yellowstone's Northern Elk Herd," *ibid.* 71, no. 2 (2007); Darimont et al., "The Unique Ecology of Human Predators."

- <sup>23</sup> Scott Creel and Jay Rotella, "Meta-Analysis of Relationships between Human Offtake, Total Mortality and Population Dynamics of Gray Wolves (*Canis Lupus*)," *PLoS ONE* 5, no. 9 (2010); D. E. Ausband et al., "Recruitment in a Social Carnivore before and after Harvest," *Animal Conservation* 18, no. 5 (2015); Darimont et al., "The Unique Ecology of Human Predators."
- <sup>24</sup> Robinson and Desimone, "The Garnet Range Mountain Lion Study: Characteristics of a Hunted Population in West-Central Montana: Final Report."; H. S. Robinson et al., "A Test of the Compensatory Mortality Hypothesis in Mountain Lions: A Management Experiment in West-Central Montana," *Journal of Wildlife Management* 78, no. 5 (2014); H. S. Cooley et al., "Does Hunting Regulate Cougar Populations? A Test of the Compensatory Mortality Hypothesis," *Ecology* 90, no. 10 (2009); Wielgus et al., "Effects of Male Trophy Hunting on Female Carnivore Population Growth and Persistence."; C. M. S. Lambert et al., "Cougar Population Dynamics and Viability in the Pacific Northwest," *Journal of Wildlife Management* 70 (2006); Teichman, Cristescu, and Darimont, "Hunting as a Management Tool? Cougar-Human Conflict Is Positively Related to Trophy Hunting."
- <sup>25</sup> M. L. Wolfe et al., "Is Anthropogenic Cougar Mortality Compensated by Changes in Natural Mortality in Utah? Insight from Long-Term Studies," *Biological Conservation* 182 (2015), p. 195
- <sup>26</sup> Ibid.; Robinson and Desimone, "The Garnet Range Mountain Lion Study: Characteristics of a Hunted Population in West-Central Montana: Final Report."; Robinson et al., "A Test of the Compensatory Mortality Hypothesis in Mountain Lions: A Management Experiment in West-Central Montana."; H. S. Robinson et al., "Sink Populations in Carnivore Management: Cougar Demography and Immigration in a Hunted Population," *Ecological Applications* 18, no. 4 (2008).
- <sup>27</sup> Wolfe et al., "Is Anthropogenic Cougar Mortality Compensated by Changes in Natural Mortality in Utah? Insight from Long-Term Studies."; Robinson et al., "Sink Populations in Carnivore Management: Cougar Demography and Immigration in a Hunted Population."; H. S. Cooley et al., "Source Populations in Carnivore Management: Cougar Demography and Emigration in a Lightly Hunted Population," *Animal Conservation* 12, no. 4 (2009); Cooley et al., "Does Hunting Regulate Cougar Populations? A Test of the Compensatory Mortality Hypothesis."
- <sup>28</sup> Cooley et al., "Source Populations in Carnivore Management: Cougar Demography and Emigration in a Lightly Hunted Population."; Robinson et al., "Sink Populations in Carnivore Management: Cougar Demography and Immigration in a Hunted Population."
- <sup>29</sup> D. C. Stoner et al., "Dispersal Behaviour of a Polygynous Carnivore: Do Cougars Puma Concolor Follow Source-Sink Predictions?," *Wildlife Biology* 19, no. 3 (2013); Wielgus et al., "Effects of Male Trophy Hunting on Female Carnivore Population Growth and Persistence."; Stoner et al., "Dispersal Behaviour of a Polygynous Carnivore: Do Cougars Puma Concolor Follow Source-Sink Predictions?."
- <sup>30</sup> Anderson and Lindzey, "Experimental Evaluation of Population Trend and Harvest Composition in a Wyoming Cougar Population."
- <sup>31</sup> Stoner, Wolfe, and Choate, "Cougar Exploitation Levels in Utah: Implications for Demographic Structure, Population Recovery, and Metapopulation Dynamics."
- <sup>32</sup> L. M. Elbroch and H. Quigley, "Observations of Wild Cougar (*Puma Concolor*) Kittens with Live Prey: Implications for Learning and Survival," *Canadian Field-Naturalist* 126, no. 4 (2012); Elbroch et al., "Adaptive Social Strategies in a Solitary Carnivore."; L. Mark Elbroch, Jennifer Feltner, and H. B. Quigley, "Stage-Dependent Puma Predation on Dangerous Prey," *Journal of Zoology* 302 (2017).
- <sup>33</sup> Elbroch et al., "Adaptive Social Strategies in a Solitary Carnivore."
- <sup>34</sup> Robinson and Desimone, "The Garnet Range Mountain Lion Study: Characteristics of a Hunted Population in West-Central Montana: Final Report."; Robinson et al., "A Test of the Compensatory Mortality Hypothesis in Mountain Lions: A Management Experiment in West-Central Montana."; Cooley et al., "Does Hunting Regulate Cougar Populations? A Test of the Compensatory Mortality Hypothesis."; Wielgus et al., "Effects of Male Trophy Hunting on Female Carnivore Population Growth and Persistence."; Lambert et al., "Cougar Population Dynamics and Viability in the Pacific Northwest."; Creel et al., "Questionable Policy for Large Carnivore Hunting."; Ausband et al., "Recruitment in a Social Carnivore before and after Harvest."; Darimont et al., "The Unique Ecology of Human Predators."
- <sup>35</sup> Peebles et al., "Effects of Remedial Sport Hunting on Cougar Complaints and Livestock Depredations."; Teichman, Cristescu, and Darimont, "Hunting as a Management Tool? Cougar-Human Conflict Is Positively Related to Trophy Hunting."
- <sup>36</sup> Stoner, Wolfe, and Choate, "Cougar Exploitation Levels in Utah: Implications for Demographic Structure, Population Recovery, and Metapopulation Dynamics."
- <sup>37</sup> I. A. Hatton et al., "The Predator-Prey Power Law: Biomass Scaling across Terrestrial and Aquatic Biomes," *Science* 349, no. 6252 (2015).
- <sup>38</sup> Wallach et al., "What Is an Apex Predator?."
- <sup>39</sup> Stoner, Wolfe, and Choate, "Cougar Exploitation Levels in Utah: Implications for Demographic Structure, Population Recovery, and Metapopulation Dynamics."
- <sup>40</sup> K. Hansen, *Cougar: The American Lion* (Flagstaff, AZ: Northland Publishing, 1992); A. Kitchener, *The Natural History of the Wild Cats* (Ithaca, New York: Cornell University Press, 1991).
- <sup>41</sup> e.g., Weaver, Paquet, and Ruggiero, "Resilience and Conservation of Large Carnivores in the Rocky Mountains."; W.J. Ripple and R.L. Beschta, "Linking a Cougar Decline, Trophic Cascade, and Catastrophic Regime Shift in Zion National Park," *Biological Conservation* 133 (2006); J. A. Estes et al., "Trophic Downgrading of Planet Earth," *Science* 333, no. 6040 (2011); L. Mark Elbroch and Heiko U. Wittmer, "Table Scraps: Inter-Trophic Food Provisioning by Pumas," *Biology Letters* 8, no. 5 (2012); L. Mark Elbroch et al., "Nowhere to Hide: Pumas, Black Bears, and Competition Refuges," *Behavioral Ecology* 26, no. 1 (2015); L. M. Elbroch et al., "Vertebrate Diversity



- Benefiting from Carrion Provided by Pumas and Other Subordinate Apex Felids," *Biological Conservation* 215 (2017); Christopher J. O'Bryan et al., "The Contribution of Predators and Scavengers to Human Well-Being," *Nature Ecology & Evolution* 2, no. 2 (2018).
- <sup>42</sup> Sophie L. Gilbert et al., "Socioeconomic Benefits of Large Carnivore Recolonization through Reduced Wildlife-Vehicle Collisions," *Conservation Letters* (2016); O'Bryan et al., "The Contribution of Predators and Scavengers to Human Well-Being."
- <sup>43</sup> Ripple and Beschta, "Linking a Cougar Decline, Trophic Cascade, and Catastrophic Regime Shift in Zion National Park."; Elbroch and Wittmer, "Table Scraps: Inter-Trophic Food Provisioning by Pumas."
- <sup>44</sup> Elbroch et al., "Vertebrate Diversity Benefiting from Carrion Provided by Pumas and Other Subordinate Apex Felids." Connor O'Malley et al., "Motion-Triggered Video Cameras Reveal Spatial and Temporal Patterns of Red Fox Foraging on Carrion Provided by Mountain Lions," *PeerJ* 6 (2018); Elbroch and Wittmer, "Table Scraps: Inter-Trophic Food Provisioning by Pumas."
- <sup>45</sup> Teel, Krannich, and Schmidt, "Utah Stakeholders' Attitudes toward Selected Cougar and Black Bear Management Practices."
- <sup>46</sup> Lindzey et al., "Cougar Population Response to Manipulation in Southern Utah."; Logan and Sweanor, *Desert Puma: Evolutionary Ecology and Conservation of an Enduring Carnivore*; Elbroch et al., "Trailing Hounds Vs Foot Snares: Comparing Injuries to Pumas Puma Concolor Captured in Chilean Patagonia."
- <sup>47</sup> Harlow et al., "Stress Response of Cougars to Nonlethal Pursuit by Hunters."; Bryce, Wilmers, and Williams, "Energetics and Evasion Dynamics of Large Predators and Prey: Pumas Vs. Hounds."; Bonier, Quigley, and Austad, "A Technique for Non-Invasively Detecting Stress Response in Cougars."
- <sup>48</sup> Bryce, Wilmers, and Williams, "Energetics and Evasion Dynamics of Large Predators and Prey: Pumas Vs. Hounds."
- <sup>49</sup> Ibid.
- <sup>50</sup> Posewitz, *Beyond Fair Chase: The Ethic and Tradition of Hunting*; Teel, Krannich, and Schmidt, "Utah Stakeholders' Attitudes toward Selected Cougar and Black Bear Management Practices."; Cougar Management Guidelines, *Cougar Management Guidelines*.
- <sup>51</sup> Posewitz, *Beyond Fair Chase: The Ethic and Tradition of Hunting*.
- <sup>52</sup> Grignolio et al., "Effects of Hunting with Hounds on a Non-Target Species Living on the Edge of a Protected Area."; Mori, "Porcupines in the Landscape of Fear: Effect of Hunting with Dogs on the Behaviour of a Non-Target Species."
- <sup>53</sup> Hristienko and McDonald, "Going into the 21st Century: A Perspective on Trends and Controversies in the Management of the Black Bear".
- <sup>54</sup> R. J. Lennox et al., "Evaluating the Efficacy of Predator Removal in a Conflict-Prone World," *Biological Conservation* 224 (2018).
- <sup>55</sup> R. Beschta and W. Ripple, "Large Predators and Trophic Cascades in Terrestrial Ecosystems of the Western United States," *ibid.* 42, no. 11 (2009); T. D. Forrester and H. U. Wittmer, "A Review of the Population Dynamics of Mule Deer and Black-Tailed Deer *Odocoileus Hemionus* in North America," *Mammal Review* 43, no. 4 (2013).
- <sup>56</sup> Beschta and Ripple, "Large Predators and Trophic Cascades in Terrestrial Ecosystems of the Western United States."
- <sup>57</sup> Forrester and Wittmer, "A Review of the Population Dynamics of Mule Deer and Black-Tailed Deer *Odocoileus Hemionus* in North America.", p. 300, Lennox et al., "Evaluating the Efficacy of Predator Removal in a Conflict-Prone World."
- <sup>58</sup> Hall Sawyer et al., "Mule Deer and Energy Development—Long-Term Trends of Habituation and Abundance," *Global Change Biology* (2017). Heather E. Johnson et al., "Increases in Residential and Energy Development Are Associated with Reductions in Recruitment for a Large Ungulate," *ibid.* (2016).
- <sup>59</sup> e.g. K. L. Monteith et al., "Life-History Characteristics of Mule Deer: Effects of Nutrition in a Variable Environment," *Wildlife Monographs* 186, no. 1 (2014); Forrester and Wittmer, "A Review of the Population Dynamics of Mule Deer and Black-Tailed Deer *Odocoileus Hemionus* in North America."; K. F. Robinson et al., "Can Managers Compensate for Coyote Predation of White-Tailed Deer?," *Journal of Wildlife Management* 78, no. 4 (2014).
- <sup>60</sup> "Severe pneumonia outbreak kills bighorn sheep: Lamb survival to be closely monitored for several years" <http://www.avma.org/onlnews/javma/may10/100501c.asp>
- <sup>61</sup> Kerry Murphy and Toni Ruth, "Diet and Prey Selection of a Perfect Predator," in *Cougar: Ecology and Conservation*, ed. Maurice Hornocker and Sharon Negri (Chicago and London: University of Chicago Press, 2010); Logan and Sweanor, *Desert Puma: Evolutionary Ecology and Conservation of an Enduring Carnivore*; K. L. Monteith et al., "Effects of Harvest, Culture, and Climate on Trends in Size of Horn-Like Structures in Trophy Ungulates," *Wildlife Monographs* 183, no. 1 (2013); Becky Lomax, "Tracking the Bighorns," *Smithsonian* 38, no. 12 (2008); Luis S. Warren, *The Hunter's Game: Poachers and Conservationists in Twentieth-Century America* (New Haven: Yale University Press, 1997).
- <sup>62</sup> Hall Sawyer and Frederick Lindzey, "Review of Predation on Bighorn Sheep (*Ovis Canadensis*)," *Prepared for Wyoming Animal Damage Management Board, Wyoming Domestic Sheep and Bighorn Sheep Interaction Working Group, Wyoming Game and Fish Department.* (2002).
- <sup>63</sup> Logan and Sweanor, *Desert Puma: Evolutionary Ecology and Conservation of an Enduring Carnivore*; Ted McKinney, Thorry W. Smith, and James C. deVOS, "Evaluation of Factors Potentially Influencing a Desert Bighorn Sheep Population," *Wildlife Monographs* 164 (2006); Toni Ruth and Kerry Murphy, "Cougar-Prey Relationships," in *Cougar: Ecology and Conservation*, ed. Maurice Hornocker and Sharon Negri (Chicago and London: University of Chicago Press, 2010).
- <sup>64</sup> D. D. Katnik, "Predation and Habitat Ecology of Mountain Lions (*Puma Concolor*) in the Southern Selkirk Mountains [Dissertation]" (Washington State University, 2002).





- <sup>65</sup> Murphy and Ruth, "Diet and Prey Selection of a Perfect Predator."; McKinney, Smith, and deVOS, "Evaluation of Factors Potentially Influencing a Desert Bighorn Sheep Population."; Sawyer et al., "Mule Deer and Energy Development—Long-Term Trends of Habituation and Abundance."
- <sup>66</sup> Ted McKinney et al., "Mountain Lion Predation of Translocated Desert Bighorn Sheep in Arizona," *Wildlife Society Bulletin* 34, no. 5 (2006).
- <sup>67</sup> Sawyer and Lindzey, "Review of Predation on Bighorn Sheep (*Ovis Canadensis*)."; McKinney, Smith, and deVOS, "Evaluation of Factors Potentially Influencing a Desert Bighorn Sheep Population."; Ruth and Murphy, "Cougar-Prey Relationships."
- <sup>68</sup> "Cougar-Prey Relationships."; McKinney, Smith, and deVOS, "Evaluation of Factors Potentially Influencing a Desert Bighorn Sheep Population."; McKinney et al., "Mountain Lion Predation of Translocated Desert Bighorn Sheep in Arizona."
- <sup>69</sup> Jennifer L. Raynor, Corbett A. Grainger, and Dominic P. Parker, "Wolves Make Roadways Safer, Generating Large Economic Returns to Predator Conservation," *Proceedings of the National Academy of Sciences* 118, no. 22 (2021); Sophie L. Gilbert et al., "Socioeconomic Benefits of Large Carnivore Recolonization through Reduced Wildlife-Vehicle Collisions," *Conservation Letters* (2016).
- <sup>70</sup> U.S. Department of Transportation, "Wildlife-Vehicle Reduction Study: Report to Congress," <https://www.fhwa.dot.gov/publications/research/safety/08034/08034.pdf> (2008); M. F. McCollister and F. T. van Manen, "Effectiveness of Wildlife Underpasses and Fencing to Reduce Wildlife-Vehicle Collisions," *Journal of Wildlife Management* 74, no. 8 (2010).
- <sup>71</sup> Gilbert et al., "Socioeconomic Benefits of Large Carnivore Recolonization through Reduced Wildlife-Vehicle Collisions."
- <sup>72</sup> J. Downs et al., "Strategically Locating Wildlife Crossing Structures for Florida Panthers Using Maximal Covering Approaches," *Transactions in Gis* 18, no. 1 (2014); S. P. D. Riley et al., "Individual Behaviors Dominate the Dynamics of an Urban Mountain Lion Population Isolated by Roads," *Current Biology* 24, no. 17 (2014).
- <sup>73</sup> U.S. Department of Transportation, "Wildlife-Vehicle Reduction Study: Report to Congress."
- <sup>74</sup> Krumm et al., "Mountain Lions Prey Selectively on Prion-Infected Mule Deer."
- <sup>75</sup> *Ibid.*, p. 210
- <sup>76</sup> Krumm et al.
- <sup>77</sup> Nebraska Game and Parks. 2017. Chronic Wasting Disease (CWD). Retrieved from <http://outdoornebraska.gov/cwd/>.
- <sup>78</sup> Peebles et al., "Effects of Remedial Sport Hunting on Cougar Complaints and Livestock Depredations."; Teichman, Cristescu, and Darimont, "Hunting as a Management Tool? Cougar-Human Conflict Is Positively Related to Trophy Hunting."; L. Mark Elbroch and Howard Quigley, "Social Interactions in a Solitary Carnivore," *Current Zoology* 63, no. 4 (2017); Dellinger et al., "Temporal Trends and Drivers of Mountain Lion Depredation in California, USA".
- <sup>79</sup> Lennox et al., "Evaluating the Efficacy of Predator Removal in a Conflict-Prone World."
- <sup>80</sup> Lennox et al.
- <sup>81</sup> Peebles et al., "Effects of Remedial Sport Hunting on Cougar Complaints and Livestock Depredations.", citing Lambert et al. 2006 and Robinson et al. 2008
- <sup>82</sup> Teichman, Cristescu, and Darimont, "Hunting as a Management Tool? Cougar-Human Conflict Is Positively Related to Trophy Hunting."
- <sup>83</sup> Peebles et al., "Effects of Remedial Sport Hunting on Cougar Complaints and Livestock Depredations."
- <sup>84</sup> Peebles et al., p.6
- <sup>85</sup> Dellinger et al.
- <sup>86</sup> Dellinger et al.
- <sup>87</sup> Peebles et al.
- <sup>88</sup> The Humane Society of the United States, "Government Data Confirm That Cougars Have a Negligible Effect on U.S. Cattle & Sheep Industries," (2019).
- <sup>89</sup> *Ibid.*
- <sup>90</sup> *Ibid.*
- <sup>91</sup> *Ibid.*
- <sup>92</sup> South Dakota Game Fish and Parks, "South Dakota Mountain Lion Management Plan, 2019-2029, Draft," (Pierre, South Dakota 2019).
- <sup>93</sup> *Ibid.*
- <sup>94</sup> J. Polisar et al., "Jaguars, Pumas, Their Prey Base, and Cattle Ranching: Ecological Interpretations of a Management Problem," *Biol Conserv* 109 (2003); J. A. Shivik, A. Treves, and P. Callahan, "Nonlethal Techniques for Managing Predation: Primary and Secondary Repellents," *Conservation Biology* 17, no. 6 (2003); A. Treves and K. U. Karanth, "Special Section: Human-Carnivore Conflict: Local Solutions with Global Applications," *ibid.*; "Human-Carnivore Conflict and Perspectives on Carnivore Management Worldwide," *Conservation Biology* 17, no. 6 (2003).
- <sup>95</sup> S. A. Stone et al., "Adaptive Use of Nonlethal Strategies for Minimizing Wolf-Sheep Conflict in Idaho," *Journal of Mammalogy* 98, no. 1 (2017); Treves and Karanth, "Human-Carnivore Conflict and Perspectives on Carnivore Management Worldwide."; William F. Andelt, "Carnivores," in *Rangeland Wildlife*, ed. P. R. Krausman (Denver: Society for Range Management, 1996).
- <sup>96</sup> A. Eklund et al., "Limited Evidence on the Effectiveness of Interventions to Reduce Livestock Predation by Large Carnivores," *Scientific Reports* 7 (2017).



<sup>97</sup> Polisar, J., I. Matix, D. Scognamillo, L. Farrell, M. E. Sunquist, and J. F. Eisenberg. 2003. Jaguars, pumas, their prey base, and cattle ranching: ecological interpretations of a management problem. *Biol Conserv* 109

<sup>98</sup> Ibid.

<sup>99</sup> Treves and Karanth, "Special Section: Human-Carnivore Conflict: Local Solutions with Global Applications."; "Human-Carnivore Conflict and Perspectives on Carnivore Management Worldwide." Eklund et al., "Limited Evidence on the Effectiveness of Interventions to Reduce Livestock Predation by Large Carnivores." Stone et al., "Adaptive Use of Nonlethal Strategies for Minimizing Wolf-Sheep Conflict in Idaho." M. Parks and T. Messmer, "Participant Perceptions of Range Rider Programs Operating to Mitigate Wolf-Livestock Conflicts in the Western United States," *Wildlife Society Bulletin* 40, no. 3 (2016); W. F. Andelt, "Effectiveness of Livestock Guarding Dogs for Reducing Predation on Domestic Sheep," *ibid.* 20 (1992); W. F. Andelt and S. N. Hopper, "Livestock Guard Dogs Reduce Predation on Domestic Sheep in Colorado," *Journal of Range Management* (2000).

<sup>100</sup> Eklund et al., "Limited Evidence on the Effectiveness of Interventions to Reduce Livestock Predation by Large Carnivores."

<sup>101</sup> M. M. Zarco-Gonzalez and O. Monroy-Vilchis, "Effectiveness of Low-Cost Deterrents in Decreasing Livestock Predation by Felids: A Case in Central Mexico," *Animal Conservation* 17, no. 4 (2014). Stone et al., "Adaptive Use of Nonlethal Strategies for Minimizing Wolf-Sheep Conflict in Idaho." N. J. Lance et al., "Biological, Technical, and Social Aspects of Applying Electrified Fladry for Livestock Protection from Wolves (*Canis Lupus*)," *Wildlife Research* 37, no. 8 (2010); Shivik, Treves, and Callahan, "Nonlethal Techniques for Managing Predation: Primary and Secondary Repellents."

<sup>102</sup> U.S. Department of Agriculture - Animal and Plant Health Inspection Service, "Death Loss in U.S. Cattle and Calves Due to Predator and Nonpredator Causes, 2015," ed. National Animal Health Monitoring System (Fort Collins, CO 2017).

<sup>103</sup> M. L. Elbroch et al., "Contrasting Bobcat Values," *Biodiversity and Conservation* (2017); U.S. Fish and Wildlife Service, "2016 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: National Overview," ed. U.S. Fish and Wildlife Service (2017).

<sup>104</sup> "2016 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation," ed. U.S. Department of the Interior (2016); "2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation," ed. U.S. Department of the Interior (2011).

<sup>105</sup> Ibid

<sup>106</sup> Harry C. Zinn et al., "Societal Preferences for Mountain Lion Management Along Colorado's Front Range. Colorado State University, Human Dimensions in Natural Resources Unit," *5th Mountain Lion Workshop Proceedings* (1996).

<sup>107</sup> Kelly A. George et al., "Changes in Attitudes toward Animals in the United States from 1978 to 2014," *Biological Conservation* 201 (2016).

<sup>108</sup> Remington Research Group, "Trophy Hunting: U.S. National Survey," (2015); The Humane Society of the United States, "State of the Mountain Lion: A Call to End Trophy Hunting of America's Lion."; "New Poll Reveals Majority of Americans Oppose Trophy Hunting Following Death of Cecil the Lion," news release, 2015, [http://www.humanesociety.org/news/press\\_releases/2015/10/poll-americans-oppose-trophy-hunting-100715.html?referrer=https://www.google.com/](http://www.humanesociety.org/news/press_releases/2015/10/poll-americans-oppose-trophy-hunting-100715.html?referrer=https://www.google.com/); The Economist/YouGov, "Moral Acceptability of Various Behaviors - Hunting Animals for Sport," ed. The Economist (2018); National Shooting Sports Foundation and Responsive Management, "Americans Attitudes toward Hunting, Fishing, Sport Shooting and Trapping 2019."

To: Game Fish and Parks Commission  
Re: Proposed Mountain Lion Hunting Season  
August 24th, 2021

Dear Commissioners,

I am writing to oppose the proposed changes to the Mountain Lion Hunting Season.

I recommend a reduction of harvest limits since South Dakota has a small lion population. The current hunt quota of 60 lions is unsustainable for a population still try to reestablish where it was previously driven to near extinction. These are special species and part of a natural and healthy ecosystem. According to the slide presentation by Andy Lindholm presented at one of your meetings, a more sustainable limit should be to reduce harvests from 60-40 for males and from 40 to 25 female. Total sustainable mortality limits for cougar management needs to monitor the total mortality of cougars, not just from harvest, but also any sort of deaths of cougars from road kills, depredation, or other natural causes. This will give the agency a much clearer picture about how many cougars we have and when hunting need to be limited to make sure we have a robust and sustainable population.

In addition, I strongly oppose the use of hounds for hunting Mountain Lions. The practice of using hounds is not only cruel, but also offers hunters an unfair advantage over lions. Hounds are often equipped with GPS collars which the hunters follow, only to shoot the lion out of a tree. This creates additional unfairness to boot hunters as well. According to your own survey, some hunters commented that "Hounds chase the lions out not give boot hunters a fair chance.", "Keep season as is, no dogs". It's evident that some hunters oppose this practice as well.

I hope over time Game Fish and Parks will begin to realize that the practice to trying to "manage species" is much better off being managed by nature itself.

Thank you,

Caryn Lerman  
Hot Springs, SD  
605-745-5970



# MOUNTAIN LION FOUNDATION

## *Saving America's Lion*

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

August 12, 2021

Russell Olson, Chair  
South Dakota Game, Fish and Parks  
221 Lake Ridge Drive  
Wentworth, SD 57075

### **RE: Petition – Mountain Lion Season Restrictions**

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

We write to you on behalf of our South Dakota members to voice our concerns for the proposed harvest limits for the upcoming 2021/2022 and 2022/2023 seasons.

South Dakota Game, Fish and Parks (SDGFP) has recommended a harvest limit of 60 mountain lions or 40 female mountain lions for the 2021-2022 *and* the same for the 2022-2023 seasons. This recommendation is aggressive and does not consider basic mountain lion biology for achieving the population objective of a stable population of 200-300 mountain lions in the Black Hills.<sup>1</sup> **We urge the Commission to put an end to mountain lion hunting in the State, or at minimum, to reduce harvest limits to sustainable levels.**

Except in rare instances, mountain lions do not require management to control growth because their populations are self-regulating. This is driven by mountain lion social structure, territoriality, the abundance of prey, and the carrying capacity of the land to support those populations.<sup>2</sup> Additionally, human encroachment on wild land leads to habitat loss and reduced connectivity, resulting in a lower carrying capacity for both predator and prey species.<sup>3</sup>

As outlined in the *South Dakota Mountain Lion Management Plan, 2019-2029*, SDGFP's mountain lion management goals are restricted to the Black Hills ecosystem in western South Dakota.<sup>1</sup> Based on the

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<sup>1</sup> South Dakota Game, Fish and Parks. 2019. South Dakota Mountain Lion Management Plan, 2019-2029. [https://gfp.sd.gov/userdocs/docs/LionPlan\\_FINAL\\_DRAFT\\_JULY\\_25.pdf](https://gfp.sd.gov/userdocs/docs/LionPlan_FINAL_DRAFT_JULY_25.pdf)

<sup>2</sup> Wallach, A. D., I. Izhaki, J. D. Toms, W. J. Ripple and U. Shanas. 2015. **What is an apex predator?** *Oikos* 124(11): 1453–1461.

<sup>3</sup> Watson, F. G. R, M. S. Becker, J. Milanzi and Nyirenda, M. 2015. **Human encroachment into protected area networks in Zambia: implications for large carnivore conservation.** *Regional Environmental Change* 15: 415-429.

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amount of suitable mountain lion habitat in the Black Hills, we estimate the carrying capacity for mountain lions in the Black Hills to be about 230 adult mountain lions. This means that, without hunting and by natural processes, mountain lion biology and social structure, the mountain lion population in the Black Hills ecosystem would remain stable at around 230 adult mountain lions. As this number is within the SDGFP population objective of 200-300 mountain lions in the Black Hills, we urge you, the Commission, to protect South Dakota’s small mountain lion population and put an end to trophy hunting in the State.

Mountain lion hunting results in additive mortality – rates that far exceed what would happen in nature – and can lead to population instability and decline.<sup>4</sup> In order to maintain a stable population of mountain lions, prevent human-wildlife conflict, and avoid compromising the long-term viability of mountain lion populations by failing to account for all human-caused sources of mortality, hunting of adult mountain lions should not exceed the intrinsic growth rate of the population of interest.<sup>5</sup> The intrinsic growth rate for mountain lion populations has been established to be 1.14, or 14%.<sup>6</sup> Additionally, when female mountain lion harvest exceeds 20% of total harvest, this is also likely to lead to population instability, as females contribute disproportionately to the population.<sup>5</sup>

When setting harvest limits for mountain lions, one must account for **all** sources of anthropogenic mountain lion mortality, not just harvest mortality. Anthropogenic mortality includes hunting, mountain lions killed for public safety, mountain lions killed for preying on domestic livestock, poaching, vehicle collisions, and more.

The *South Dakota Mountain Lion Management Plan, 2019-2029* cites a “population objective of 200-300 mountain lions in the Black Hills ecosystem of South Dakota”<sup>1</sup> and the *2019 Mountain Lion Population Status Update* reports a population estimate of 203 adult/sub-adult mountain lions in the Black Hills prior to the 2018-2019 season.<sup>6</sup> Since this last published estimate, 120 mountain lions have been killed through hunting, alone (Table 1). These numbers do not account for any other source of human-caused mortality and percentages are based off of the 2018 population estimate of 203 adult/sub-adult mountain lions, therefore, total mortality is likely higher. This is not sustainable.

**Table 1.** South Dakota mountain lion harvest mortality since last published mountain lion population estimate of 203 adult/subadult mountain lions\* in the Black Hills, prior to 2018-2019 season.

| Season           | Mountain Lions Harvested | Percent of Population* |
|------------------|--------------------------|------------------------|
| 2018-2019        | 21                       | 10%                    |
| 2019-2020        | 51                       | 25%                    |
| 2020-August 2021 | 48                       | 23%                    |

<sup>4</sup> Robinson, H. S. and R. DeSimone. 2011. **The Garnet Range Mountain Lion Study: Characteristics of a Hunted Population in West-Central Montana.** Final Report. Montana Fish, Wildlife & Parks. Helena, MT.

<sup>5</sup> Beausoleil, R.A., G.M. Koehler, B.T. Maletzke, B.N. Kertson and R.B. Wielgus. 2013. Research to Regulation: Cougar Social Behavior as a Guide for Management. *Wildlife Society Bulletin* 37(3):680-688.

<sup>6</sup> South Dakota Game, Fish and Parks. 2019. South Dakota SURVEY REPORT: Mountain Lion Population Update – 2019 Biennial Report. [https://gfp.sd.gov/userdocs/docs/Mountain\\_Lion\\_Status\\_Report\\_2019.pdf](https://gfp.sd.gov/userdocs/docs/Mountain_Lion_Status_Report_2019.pdf)

For perspective, 51 mountain lions were harvested in South Dakota in 2020, and so far this year, 48 mountain lions have been harvested. This could account for more than 25% of the population in the Black Hills *and* this number does not include other human-caused mortality. Therefore, total anthropogenic mortality is likely higher. Despite this, the proposal before you recommends a harvest limit of 60 mountain lions or 40 female mountain lions for each of the next two years! This is **not** sustainable and **not** the way to achieve a stable population objective of 200-300 mountain lions in the Black Hills.

Harvest limits for the upcoming 2021/2022 and 2022/2023 seasons should not exceed 20 total mountain lions or 4 female mountain lions to account for other anthropogenic mortality, to maintain a stable population, and so as not to exceed the intrinsic growth rate of 14%.<sup>6</sup>

South Dakota's small mountain lion population already faces many threats, including aggressive harvest limits that could account for more than 30% of the State's adult mountain lion population. If it is the goal of SDGFP to maintain a stable mountain lion population, then South Dakota's mountain lions must be given more protections, not fewer.

We urge the commission to end mountain lion hunting in South Dakota or, at minimum, to **lower** the harvest limit to 20 mountain lions or 4 female mountain lions, and **not** to approve the proposed hunt limit of 60 mountain lions or 40 female mountain lions for the 2021/2022 and 2022/2023 seasons.

Sincerely,



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SOUTH DAKOTA  
DIVISION

# The Izaak Walton League of America

DEFENDERS OF SOIL, AIR, WOODS, WATERS, AND WILDLIFE

August 27, 2021

South Dakota Game, Fish and Parks Commission  
523 East Capitol Avenue  
Pierre, SD 57501

Dear Commissioners,

The South Dakota Division of the Izaak Walton League of America thanks you for the opportunity to comment on the proposal pertaining to Aquatic Invasive Species (AIS). The Division is very concerned with the spread of AIS in South Dakota and around the nation. We support all measures that limit and restrict movement of AIS to other waters and areas.

The GFP staff recommends an exemption for launching a boat, dock, or boat lift into waters within the state that is not clean, drained, and dried. This allows equipment to be relaunched in the same water if it was stored on the owner's property or at a marina on the same water. The proposal's supporting information also provides an exemption to existing statute allowing lakeshore or riparian property owners to remove AIS plants or mussels in front of their residence without violating the statute. The Division urges the commission to adopt the two exceptions.

However, the Division asks the Department and the Commission to amend this proposal to include language preventing the movement or relocation of boat lifts, docks, or other equipment into another waterbody for a minimum of three weeks. If equipment is sold or transferred to another party that equipment cannot be deployed or relaunched before at least 21 days. This is based on a regulation approved by the Minnesota Department of Natural Resources. *As of July 1, 2012, a boat lift, dock, swim raft, or associated equipment that has been removed from any water body may not be placed in another water body until a minimum of 21 days have passed.* The Division believes this will help to protect South Dakota's waters and prevent the spread of AIS.

The South Dakota Division of the Izaak Walton League of America strongly encourages your serious consideration and adoption of the suggested language. We appreciate the opportunity to comment on this proposal.

Sincerely,

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