

# South Dakota Mountain Lion Management Plan: 2003 - 2012



## Adaptive Management System Game Program

Division of Wildlife

South Dakota Department of Game, Fish and Parks

April 2005

**Version 05-2**  
**3<sup>rd</sup> Working Draft**



*Improving the quality of human life through effective  
management of South Dakota's fish and wildlife resources.*

## About this Document

This document is for general, strategic guidance for Division of Wildlife and serves to identify the role that Division of Wildlife plays, how we function and what we strive to accomplish related to **mountain lion management**. The planning process is more important than the actual document. By itself this document is of little value; the value is in its implementation. This process will emphasize working cooperatively with interested publics in both the planning process and the regular program activities related to mountain lion management.

While this is a ten-year planning process, this document can be revised at any time depending on circumstances and need. This document is **Version 05-2** (year-consecutive number) of the **South Dakota Mountain Lion Plan 2003 – 2012**.





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## **Introduction**

The mountain lion (*Puma concolor*) is the second largest cat in North America. Males average 7 feet from the tip of the nose to the tip of the tail, and females average 6 feet. Adult females weigh 75 to 105 pounds. Adult males average 110 to 150 pounds with some recorded weights greater than 200 pounds. Coloration of mountain lions varies from reddish to slate gray with tawny the most common. The ears and tip of the tail are generally dark and the underside whitish. Young are marked like adults except they are spotted their first year.

Mountain lions are generally at least two years old when they breed for the first time. A female mountain lion may give birth anytime of the year, with the litter containing between 1 and 6 kittens. The average litter size is 2 to 4 kittens. Gestation lengths for mountain lions are between 82 and 102 days. The female may leave the kittens in the den alone for up to two days while she hunts. After about two months, the kittens will accompany her on hunting trips. Young mountain lions will disperse between 12 and 18 months to establish their own home range territories. There is some evidence that mountain lions as young as six months or less can survive on their own under good habitat conditions (Shaw, 1989).

Young siblings may travel together for a short time after the family breaks up. For the most part, other than a female with kittens or a female accompanied by a male, mountain lions are solitary animals. Lions ensure solitude by establishing a territory or home range. Home ranges have been studied in the Black Hills of South Dakota. Average home range size of male mountain lions is approximately 300 square miles and average size of female home ranges is approximately 90 square miles (Fecske, 2003). Sizes of home ranges may vary based on the population density of mountain lions.

Mule deer (*Odocoileus hemionus*) and white-tailed deer (*Odocoileus virginianus*) are the most important prey item for mountain lions in South Dakota. Other prey species include elk (*Cervus elaphus*), bighorn sheep (*Ovis canadensis*), mountain goats (*Oreamnos americanus*), porcupines (*Erethizon dorsatum*), and other small rodents. Mountain lions will kill their prey and cache the kill by covering with ground litter until their last feeding. Estimates of frequencies of kills range from 7 to 10 days. This will depend upon the seasons and if it is a solitary lion or a female with kittens.

## **Inventory and Status**

In the late 1800's, mountain lions occurred throughout South Dakota and were considered numerous in the Black Hills (Turner 1974, Packet and Hackman 1995). However, in the early 1900's the population declined due to unregulated hunting. In fact, bounties were placed on this animal from 1889 to 1966 (SDGFP 1998a); from 1906 through 1930 there were no mountain lions taken, and in 1931, only one lion was killed in the Black Hills (Young and Goldman 1946). After 1931, a few unverified reports of mountain lions occurred in the Black Hills. A 1959 South Dakota *Conservation Digest* article described the hunt of a 140-pound male mountain lion on Elk Mountain in Custer County.

In 1978, the mountain lion was classified as a state threatened species. Since its listing as state threatened in 1978, the mountain lion population has increased, and a recognized breeding population occurs in the Black Hills.

Under South Dakota's Endangered and Threatened Species Law (SDCL 34A-8), take of state endangered or threatened species is allowed in the following circumstances:

- "...for scientific, zoological, or educational purposes, for propagation in captivity of such fish or wildlife to insure their survival." (SDCL34A-8-8);
- "Upon good cause shown and where necessary to alleviate damage to property or to protect human health, endangered or threatened species found on the state list may be removed, captured, or destroyed pursuant to a permit issued by the secretary of game, fish and parks." (SDCL34A-8-11);
- "Carnivorous animals found on the state list may be removed, captured, or destroyed by any person in emergency situations involving an immediate threat to human life, provided that the removal, capture, or destruction shall be reported to the secretary or his representative within twenty-four hours of the act." (SDCL34A-8-11).

It is believed that transient mountain lions originating from established populations in the Bighorn Mountains and throughout Wyoming recolonized the Black Hills (Berg et al. 1983). Not only have mountain lions reoccupied their former range in the Black Hills, but they also are occasionally sighted in the Missouri River Breaks Region in the center of the state as well as areas in eastern South Dakota. At the time, limited information was available on mountain lions (*Puma concolor*) occurring in the Black Hills of South Dakota, the only verified breeding population in the state. In 1997, South Dakota Department of Game, Fish, and Parks (SDGFP) estimated 40 to 50 mountain lions resided in the Black Hills with an additional 15-25 on the western South Dakota prairie (SDGFP 1998b); estimates were based on anecdotal information and most were unverified. However, only limited information existed at the time on survival of adult mountain lions, estimated at about 80%, and no information is available on densities, survival and sex ratios of kittens, and dispersal of subadults. In 1985, SDGFP began recording sightings of mountain lions in the Black Hills (T. Benzon, South Dakota Department of Game, Fish and Parks, Rapid City, SD, pers. commun.). They observed an overall increase in numbers of reported sightings from 1995 to 1999. However, numbers of sightings is not necessarily correlated to population size.

Numbers of sightings are not randomly distributed in the Black Hills. When numbers of reported sightings were adjusted for county population size, more reports were obtained from the southern counties (Custer and Fall River counties) than the

northern counties (Lawrence and Pennington counties). In addition, although sample sizes are small (n=12), higher incidences of mountain lion deaths (since 1996) occurred in the southern two counties (58%), than in the counties of the northern Black Hills (42%). Results of these independent data sets indicate that the southern Black Hills may have better mountain lion habitat and higher lion densities than the northern Black Hills. Because of the potentially poor relationship between sightings and population size, SDGFP will rely on results of recent research conducted by South Dakota State University (described later in this section) to estimate mountain lion population size and distribution.

In addition to protection as a state threatened species under South Dakota's Endangered and Threatened Species Law, the mountain lion was also protected under SDCL 41-8-2-1, which prohibited hunting of black bears, mountain lions, and wolves. This bill was repealed by the South Dakota State Legislature in 1999. In 2003 the mountain lion was classified as a big game animal (SDCL 41-1-1-4) and removed from the state threatened species list. Hence-forth protection of the mountain lion was continued via a year-round closed season.

To date, there have been no documented mountain lion attacks on humans in the Black Hills. There have been confirmed reports of deer killed by mountain lions in Rapid City; and attacks on livestock and pets (T. Benzon, SDGFP, Rapid City, SD, pers. commun.).

Due to the sensitive nature of mountain lions living near people, the SDGFP drafted response protocols for dealing with mountain lion/ human/ property interactions (SDGFP 1998a) (Attachment A). The mountain lion action plan described state law regarding management of this state threatened predator, and listed both short and long-term management objectives for the species. The first long-term objective of the plan was to determine research and monitoring needs and establish a mountain lion population goal for various areas in South Dakota.

In 1998, a 5-year research project was begun by the Department of Wildlife and Fisheries Sciences at South Dakota State University (SDSU) in cooperation with SDGFP to determine distribution, estimate the current population size, and evaluate potential surveys for monitoring population trends of mountain lions in the Black Hills, South

Dakota. The study has been extended through 2005 to gather information on mountain lion survival, dispersal, densities and population trends. It is critical to understand factors that influence the population dynamics of the species in this unique landscape. By studying how this population of mountain lions responds to conspecifics and the Black Hills and surrounding landscape, we will be able to determine the long-term viability of the population and predict potential factors specific to the region that increase the likelihood of mountain lion attacks on humans. Managers could then take the necessary steps to decrease the likelihood of human fatalities so that humans and mountain lions can co-exist in this system. The research will be extended through 2006 if there is an experimental mountain lion season in 2005 to study the impacts of the hunt on mountain lion dynamics. Results to date of the SDSU research have been published in various locations (see list below).

In 2003 Fecske estimated the mountain lion population in the Black Hills to be 127 – 149 adults, with an estimated carrying capacity of 152 mountain lions (adults and kittens). The current assumption is that the Black Hills mountain lion population is at 165 (range: 164 – 171), which may be the cause of the increase in sighting and problem mountain lion reports in 2004.



## PUBLICATIONS - South Dakota State University Research

- Fecske, D. M., and J. A. Jenks. 2001. The mountain lion returns to South Dakota. South Dakota Conservation Digest 68(4):3-5.
- Fecske, D. M. 2003. Distribution and abundance of American Martens and Cougars in the Black Hills of South Dakota and Wyoming. Ph.D. Dissertation. South Dakota State University, Brookings. 171pp.
- Fecske, D. M., and J. A. Jenks. 2003. Status report of mountain lions in South Dakota. Pages 22-24 in L.A. Harveson, P.M. Harveson, and R.W. Adams, eds. Proceedings of the Sixth Mountain Lion Workshop. Austin, Texas
- Fecske, D. M., J. A. Jenks, and F. G. Lindzey. 2003. Characteristics of mountain lion mortalities in the Black Hills, South Dakota. Pages 25-29 in L.A. Harveson, P.M. Harveson, and R.W. Adams, eds. Proceedings of the Sixth Mountain Lion Workshop. Austin, Texas
- Fecske, D. M., J. A. Jenks, and F. G. Lindzey. 2004. Mortality of an adult cougar due to a forest fire in the Black Hills. The Prairie Naturalist 36:137-140.
- Long, E. S., D. M. Fecske, R. A. Sweitzer, J. A. Jenks, B. M. Pierce, and V. C. Bleich. 2003. Efficacy of photographic scent stations to detect mountain lions. Western North American Naturalist 63:529-532.
- Gigliotti, L. M., D. M. Fecske, and J. A. Jenks. 2002. Mountain lions in South Dakota: A public opinion survey. South Dakota Department of Game, Fish, and Parks, Pierre, SD. 182 pp.
- Thompson, D. J., and J. A. Jenks. 2005. Long-distance dispersal by a subadult male cougar (*Puma concolor*) from the Black Hills, South Dakota. Journal of Wildlife Management 69:In Press.



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## **Progress Report on Version 03-1 of the Mountain Lion Plan**

**Objective 1** (Evaluate legal status of the mountain lion in South Dakota by April 1, 2003.) was accomplished with the outcome of the mountain lion being reclassified as a big game animal (SDCL 41-1-1-4) followed by being delisted from the state threatened species list in 2003.

**Objective 2** (Evaluate strategies for monitoring and censuring mountain lion populations in South Dakota by 2005.) is nearing completion. The research findings will be summarized and referenced in this version of the plan.

**Objective 3** (Maintain a statewide database of mountain lion activity including sightings, human interactions, depredation events and lion mortality.) is a continuing objective. The 2004 Statewide Mountain Lion Report Summary is included in this version of the plan (Attachment B).

**Objective 4** (Develop a list of mountain lion research needs. Evaluate and prioritize the needs annually.) is a continuing objective, however, the strategies will need some revision.

**Objective 5** (Develop mountain lion population management methods that are consistent with established goals and objectives.) is a continuing objective, although some on the initial strategies have been completed and the new version of the plan will expand on this objective.

**Objective 6** (Identify and describe suitable habitat areas and parameters for mountain lions in South Dakota by September 2003.) was accomplished with Fecske's 2003 dissertation.

**Objective 7** (Develop a comprehensive public education strategy for informing and educating Department staff, South Dakota citizens and visitors about mountain lions and personal safety in mountain lion country.) is a continuing objective. Some of the strategies have been accomplished and will continue to be important in this new version of the plan (The mountain lion brochure has been up-dated and widely distributed – Strategy A) (Three articles on mountain lions were produced in 2003-04 for the South Dakota Conservation Digest - Strategy I).

**Objective 8** (Develop a public involvement plan for implementation during 2003 and 2004 for inclusion in this plan - details in Attachment C.) was accomplished. However, a new public involvement plan needs to be developed for the new version of the plan based on continuing management of mountain lions and related issues in South Dakota.

## Issues and Problems

Outline of issues/problems associated with mountain lions and mountain lion management in South Dakota:

### A. Legal and jurisdictional issues:

1. **Legal status of mountain lions.** The mountain lion is presently classified as a big game animal with no open season.
2. **Desire for a hunting season - determining a season structure/harvest strategies if needed.** With the mountain lion now classified as a big game animal there is the potential for polarization of positions between people that want a mountain lion season and people that would be opposed to a hunting season. In addition, there will be many different views on the hunting season design.
3. **Relationships with border states with mountain lions, specifically Wyoming, Montana and Nebraska.** Because the mountain lion is a wide-ranging species, multi-state coordination will be useful in designing management strategies, particularly related to harvest goals, if a hunting season is determined to be a useful management tool.
4. **Mountain lions East River.** In the past couple of years it has become evident that mountain lions are no longer just a Black Hills issue. Prairie lions, particularly East River, increase the complexity of mountain lion issues and management in South Dakota.

### B. Direct impacts to people and property (real and perceived):

1. **Pet and livestock issues.** Mountain lions have the ability to kill or injure pets and livestock. Under South Dakota Codified Law, 41-6-29, game animals may be destroyed to alleviate damage to property or to protect human health. In addition to this legal recourse, SDGFP has shared information with the public via a brochure and web page listing precautions for living in areas with mountain lions.
2. **People.** The mountain lion is one of a small number of wildlife species in North America with the ability to stalk and kill humans. Although mountain lion attacks on people are very rare, SDGFP has developed response protocols designed to minimize any threats from mountain lions to pets, livestock and humans by evaluating every reported interaction and taking an appropriate action.

### C. SDGFP image:

1. **Agency credibility.** With the mountain lion now protected as a big game animal, much attention will be focused on future management direction. It is critical that

the agency makes well-reasoned choices to establish and maintain credibility on this issue. This will require maintaining an appropriate amount of scientific research and demonstrated use of that science in making management decisions.

2. **Internal education.** As with many ongoing research projects, there are varying levels of understanding of data being collected and analyzed by South Dakota State University (SDSU). It is critical that results of the current and future research projects be well-circulated to SDGFP staff. Staff will be provided opportunities to provide input on the development of mountain lion plans to ensure a wide range of expertise and ideas are considered. However, as management planning proceeds, it is also important that the chosen management direction is supported within the agency when comments are made to the public.
3. **Philosophical differences in opinions on management.** As SDGFP proceeds with discussions of management direction for the mountain lion, it is important that varying opinions be sought out and considered in a well-reasoned way. This approach, both internal and external, will help avoid a perception that a select group is developing recommendations.

#### **D. Mountain lion limiting factors:**

1. **Development into mountain lion habitat.** As human development of the Black Hills continues, potential results include the possibility of increased conflicts between lions, people, and pets; and possible impacts to mountain lion population stability.
2. **Illegal kill of mountain lions.** If management options include mountain lion harvest, this mortality factor should be considered in estimating annual losses. A mountain lion hunting season may increase the potential for illegal harvest. Illegal take should continue to be a focus of educational efforts.
3. **Identifying habitats for mountain lions.** Management planning should include an evaluation of habitats likely to support mountain lions with the least likelihood of conflicts with people.
4. **Additional research needs.** SDSU has completed a baseline study to help estimate the mountain lion population and to predict carrying capacity. A follow-up study on mountain lion productivity is in progress. Future studies should be closely tied to information needs for state management planning.

#### **E. Education and outreach:**

1. **Public perception of lion deaths.** Reports of mountain lion deaths are heavily publicized because of the relative newness of this phenomenon. As lion deaths

- increase, the public is likely to question the relationship between death occurrences and population size. SDGFP should be prepared to address this issue.
2. **Public perception of impacts on other wildlife.** With all carnivores, the sporting public is often concerned about predator impacts to big game populations. In Gigliotti's recent public opinion survey (Gigliotti, et al. 2002), 25% of respondents were concerned about mountain lions killing too many game animals, and 52% of respondents were not concerned. SDGFP should be prepared to address the issue of impacts on mountain lions on big game populations in the Black Hills.
  3. **Public education.** SDGFP has circulated a brochure about mountain lions occurrence in the state, which includes recommended precautions when living near mountain lions. In Gigliotti's recent public opinion survey (Gigliotti, et al. 2002), 90% of respondents had previously been exposed to the brochure, and 88% found the brochure's information useful. SDGFP staff have also made themselves available to the public and to the media on this issue. The management plan should address these and other public education opportunities.
  4. **Legislators' involvement.** The South Dakota Legislature is a distinct interest group that should be informed of management planning progress to help gain their concurrence that SDGFP is using a responsible approach.
  5. **Media relations.** In addition to the ongoing media relations developed by SDGFP Region 1 staff, statewide contacts should be explored, such as opportunities to make use of South Dakota Public Broadcasting and to produce a South Dakota-specific video on this issue.
  6. **Public involvement.** Public involvement opportunities need to be made available in relation to mountain lion planning and management direction.

#### **F. Special interest in this species:**

1. **Negative interaction with people / fear factor.** The mountain lion attacks on people in the U.S. are very rare. However, these rare cases do generate a high level of news reporting, which causes a negative reaction among some people. In Gigliotti's recent public opinion survey (Gigliotti, et al. 2002), 5% of respondents were very concerned for their safety while recreating in the Black Hills.
2. **Positive interaction with people.** Like many large predators, the mountain lion evokes a special feeling of wildness for many people. Gigliotti, et al. (2002) categorized survey respondents as strongly pro-lion (23%), slightly pro-lion (34%), neutral (11%), slightly contra-lion (22%), and strongly contra-lion (10%).

3. **National opinions/media.** Because of the positive sentiment mountain lions evoke for many people, state wildlife agency management has been closely scrutinized, and management actions have sometimes been held to a higher standard for mountain lions than for many other wildlife species. In addition, mountain lion threats are newsmakers and are heavily publicized by the media.

#### **G. SDGFP workload and information needs:**

1. **Determining a desired population level; setting a population goal/level; monitoring of populations; population dynamics and life history.** SDGFP will use research data collected by SDSU in setting a desired population goal consistent with available habitat and prey and that minimizes potential threats to people and livestock. Currently SDSU has provided six years of mountain lion research and has generated enough information for sound, scientifically based mountain lion management. Follow-up data will be needed to periodically evaluate management strategies.
2. **Documentation of livestock/pets/wildlife killed by mountain lions.** At present, SDGFP field staff investigate reports of mountain lion sightings and complete a Mountain Lion Observation Report form. Wildlife damage management personnel respond to reports of possible depredation by mountain lions in the same manner as with other depredation complaints. These responsibilities can require a considerable amount of time and money.
3. **Public desire for damage payment for losses due to mountain lions.** Although SDGFP makes payments to private landowners for hunting access and habitat enhancement, the agency does not compensate landowners for direct losses of property to wildlife. According to SDGFP's response protocols all reports of livestock losses from mountain lions are investigated and appropriate action is taken.
4. **Public involvement.** At the August 16, 2002 mountain lion plan development meeting, the group developed an initial list of public involvement ideas and a list of groups with a possible interest in mountain lion management in South Dakota. These ideas will be pursued further in this new version of the mountain lion management plan.

## **Guiding Philosophies of the Department of Game, Fish and Parks: Division of Wildlife**

Values are deeply held beliefs. They form the salient basis for all decisions, actions and attitudes. Agencies do not have values; people do. The following statements reflect the collective values of the people who are the Division of Wildlife in relation to management of mountain lions in South Dakota.

### **WE BELIEVE...**

- that wildlife, including mountain lions, contributes significantly to the quality of life in South Dakota and therefore must be sustained for future generations.
- that mountain lions play an important role in the ecosystem.
- in providing for and sustaining the diversity of our wildlife heritage for present and future generations.
- in management of mountain lions in accordance with biologically sound principles.
- that having mountain lions in South Dakota will require the Division of Wildlife to implement education and involvement strategies related to safely living with mountain lions.
- in providing accurate and timely information to the public concerning mountain lions in South Dakota.
- that both the Division of Wildlife and the public have a responsibility to learn to live with mountain lions in a way that maintains a viable mountain lion population in South Dakota while dealing with problems that mountain lions may cause.
- that the future of mountain lions in South Dakota depends on a public that appreciates, understands and supports mountain lions.

### **Mountain Lion Management Goal**

Goal for mountain lion management in South Dakota is to monitor and maintain mountain lion populations and habitats consistent with ecological, social, aesthetics and economic values of South Dakota citizens while addressing the concerns and issues of both residents and visitors of South Dakota.

## Objectives and Strategies<sup>1</sup>

**Objective 1.** Develop mountain lion management methods that are consistent with established goals and objectives – developed, implemented, evaluated and revised annually.

**Strategies:**

- A. Incorporate revised “Action Plan for Managing Mountain Lion/Human Interactions in South Dakota” into present and future management strategies (Attachment A).
- B. Develop the framework for a mountain lion hunting season. This includes developing a socially and biologically acceptable population number, structure and distribution for mountain lions in South Dakota (Attachment D).
  - Identify research needs, a process and criteria that would be used to evaluate a mountain lion hunting season as part of the framework.
- C. Develop and implement future management strategies based upon completed research and improved information relative to habitat capability, population structure and status.

**Objective 2.** Maintain a statewide database of mountain lion activity including sightings, human interactions, depredation events and lion mortality – documented via annual reports (Attachment B – 2004 Report Summary).

**Strategies:**

- A. Develop a computer database of field reports of statewide mountain lion activity.
- B. Evaluate individual reports when submitted for detail and determination of threat level to humans or livestock and recommend Department action based upon established policy and procedure.
- C. Produce an annual mountain lion report summarizing all field data collected during the calendar year (maintain most recent report on the web page).
- D. Produce an annual location report of mountain lion events that have been verified by Game, Fish and Parks' personnel.

**Objective 3.** Develop a list of mountain lion research needs. Evaluate and prioritize the needs annually.

**Strategies:**

- A. The Management/Research team established in version 03-1 of the plan (Objective 2, Strategy A)<sup>2</sup> shall meet annually and review the status and

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<sup>1</sup> This mountain lion management plan relied heavily on information from the draft Cougar Management Guidelines (2005) developed by the Cougar Management Guidelines Working Group.

results of past and ongoing mountain lion research in South Dakota in cooperation with SDSU and other mountain lion research and management professionals.

- B. The Management/Research team shall be responsible for identifying, developing and prioritizing a list of mountain lion research needs and management options based upon literature review, the best available information and current trends and conditions in South Dakota.
- C. The Management/Research team shall be responsible for identifying and developing research project recommendations for mountain lion research and management and presenting them to the Department Research Review Committee for evaluation and funding.
- D. Develop future research and management strategies as research studies are completed and population numbers, structure and dispersal dictate.

**Objective 4.** Develop a comprehensive public education strategy for informing and educating Department Staff, South Dakota citizens and visitors about mountain lion and personal safety while in mountain lion country (some details in Attachment C).

**Strategies:**

- A. Review and evaluate mountain lion brochure and its present distribution. Make improvements where necessary and appropriate. → This strategy has been recently completed, but it may need to be revised in the future if conditions change.
- B. Intensify frequency of mountain lion presentations by Department Staff to public and civic groups and document the efforts.
- C. Determine if programs and presentations related to mountain lions can be conducted on a regular basis through the school systems by Department Staff (Laurie Root, Chad Tussing, WCO's and Outdoor Campus personnel).
- D. Work with local newspapers and publishers to develop and distribute a "flyer" on mountain lions, mountain lion behavior, and living with mountain lions for distribution with newspaper subscriptions.
- E. Produce a mountain lion information poster for free distribution to educators, realtors, civic groups, and citizens at sports and home shows.
- F. Develop materials on mountain lions for inclusion in the Project Wild Program.

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<sup>2</sup> Mountain lion management/research team: the Department Wildlife Program Administrator, Regional Wildlife Manager Region 1, Regional Wildlife Manager Region 2, and two Department Big Game Biologists.

- G. Produce a short video on mountain lions and living in mountain lion country for Department and statewide distribution.
- H. Encourage Department staff to work with local media to report factual and special interest stories about mountain lions on a more frequent basis.
- I. Produce a mountain lion status and management story for inclusion in the SD Conservation Digest on an annual basis.
- J. Maintain and update as necessary the SDGFP web page with a mountain lion section.

<http://www.sdgifp.info/Wildlife/MountainLions/MtLionIndex.htm>

**Objective 5.** Develop a public involvement plan for implementing the objectives/strategies in this version of the plan (Version 05-2) (details in Attachment C).

**Strategies:**

- A. Plan for periodic public surveys. This plan started with a comprehensive evaluation of public opinion on mountain lions in South Dakota (Gigliotti, et al., 2002). Monitoring of public opinion will continue by inserting a few questions about mountain lions on future public opinion surveys conducted by the SDGFP (e.g., the 2004 Black Hills deer hunter survey had about 3 pages dealing with mountain lions). A detailed assessment of public opinion concerning mountain lions will be conducted in the future if the SDGFP mountain lion management team determines that it is needed (some suggested criteria for determining the need for future public opinion surveys can be found in Attachment C).
- B. Develop Conservation Digest articles summarizing the results of any mountain lion public opinion surveys.
- C. Develop a media plan/policy for mountain lion incidents (communications and public involvement plan). This plan/policy will develop as the Game, Fish and Parks Department gains experience with managing mountain lions. Attachment C contains the second iteration of this plan/policy.
- D. Develop a list of groups and individuals that have an interest or role in mountain lion management and maintain routine contact with them.
- E. Develop a summary status report on mountain lions in South Dakota by 2005, posting the results to the SDGFP web page and up-dating annually.

## Literature Cited:

- Berg, R. L., L. L. McDonald, and M. D. Strickland. 1983. Distribution of mountain lions in Wyoming as determined by mail questionnaire. *Wildl. Soc. Bull.* 11:265-270.
- Fecske, D. M. 2003. Distribution and abundance of American Martens and Cougars in the Black Hills of South Dakota and Wyoming. Ph.D. Dissertation. South Dakota State University, Brookings. 171pp.
- Gigliotti, L. M., D. Fecske, and J. Jenks. 2002. Mountain lions in South Dakota: a public opinion survey – 2002. Report ID#: HD-9-02.AMS. S.D. Game, Fish & Parks, Pierre, SD.
- Paquet, P. and A. Hackman. 1995. Large carnivore conservation in the Rocky Mountains: a long-term strategy for maintaining free-ranging and self-sustaining population of carnivores. World Wildlife Fund, Toronto, Canada. 52 pp.
- Shaw, H. 1989. Soul among lions: the cougar as peaceful adversary. Johnson Books, Boulder, Colorado. 140 pp.
- South Dakota Department of Game, Fish, and Parks. 1998a. Action plan for managing mountain lion/ human/ property interactions in western South Dakota. South Dakota Division of Wildlife, Pierre, South Dakota. 6 pp.
- South Dakota Department of Game, Fish, and Parks. 1998b. Yes, a few mountain lions live in South Dakota. South Dakota Division of Wildlife, Pierre, South Dakota. Pamphlet.
- Turner, R. W. 1974. Mammals of the Black Hills of South Dakota and Wyoming. Misc. Publ. No. 60, University of Kansas Publications, Museum of Natural History. 178 pp.
- Young, S. P., and E. A. Goldman. 1946. The puma: mysterious American cat. Dover Publications, Inc., New York. 358 pp.

## **Attachment A**

### **RESPONSE PROTOCOLS For Managing Mountain Lion/Human/Property Interactions In South Dakota**

#### **INTRODUCTION**

The Black Hills human population has increased in recent years. Many of these people have chosen to live in rural areas or along the foothills. This expansion into wildlife habitat increases the potential for human/wildlife conflicts. In particular, deer populations have been protected from sport hunting in urban areas and scattered homes and open space have provided substantial deer habitat. Coupled with increased ornamental plantings and public feeding, in certain areas there has been a deer population explosion. In other areas of South Dakota mountain lions can occasionally be found, generally associated with stream/river areas. Mountain lions have lived in portions of western South Dakota since at least the time of the 1874 Custer Expedition and are very slowly increasing in numbers due to their protected status. With an increase in human and mountain lion populations in prime deer habitat, mountain lion/human interactions are expected to increase.

#### **MOUNTAIN LION RESPONSE GOALS**

In May 1995, South Dakota Department of Game, Fish and Parks Wildlife Division developed and adopted response goals for dealing with mountain lion/human encounters. In September 2002, the policy goals were updated to reflect the Wildlife Division's increased knowledge of mountain lions and the public's attitude towards them.

Provide education and information programs which teach people how to live safely in wildlife habitats.

When necessary, we will work to control individual problem mountain lions that cause damage to livestock or private property or which pose significant threats to public safety and welfare.

Record all reported mountain lion sightings and activities within the State and maintain a database of these records.

Monitor public attitudes towards mountain lions and mountain lion management efforts to evaluate the effectiveness of our programs in shaping and meeting public expectations.

## **PROBLEM ANALYSIS**

Despite the public's increasing understanding of the role of predators in nature, large predators continue to elicit strong emotions. South Dakota's large predators historically included the grizzly bear, black bear, gray wolf, and mountain lion. Although gray wolves occasionally range into South Dakota from adjoining states, the mountain lion is the only large predator known to reside and breed within the State.

Mountain lions are currently protected under state law as a big game species. Under the Wildlife Division's Strategic Plan Wildlife Diversity Program this species is addressed under a program to restore listed species to established state recovery goals, however no recovery goal was established for this species. The Division of Wildlife will manage for a viable population of mountain lions within the State at about the carrying capacity for the Black Hills. The most suitable habitat for mountain lions is found in the Black Hills and as such will receive the focus of the Divisions management efforts. Mountain lions outside of the Black Hills will be more closely managed to reduce human conflict.

State law (SDCL 41-6-29) provides that mountain lions which are "a threat to the public's health, safety or welfare or which are doing damage to property" may be killed upon permit from the Secretary of Game, Fish and Parks.

In recent years the number of reports of mountain lion sightings in the state has increased, particularly in the Black Hills and western plains. Mountain lion sightings may reflect an increasing mountain lion population, an increasing number of transient mountain lions, increasing human encroachment into mountain lion habitat, increasing concentrations of non-hunted deer near homes, an increasing deer population, and/or a tendency of the public to report mountain lion sightings after hearing of other lion observations.

Mountain lions present a management challenge to the Game, Fish and Parks Department due to several attributes of mountain lion populations, which make investigation difficult. Home ranges and activity areas vary greatly by location, and lions are secretive and highly mobile. Kittens may be born in any month of the year, making reproduction estimate studies more difficult. Intensive research conducted in cooperation with South Dakota State University over the last several years has answered many questions.

Human emotions add to the challenge of mountain lion management. On one end, the threat of livestock losses and human interactions may exaggerate the perceived mountain lion abundance and the need to control lions. The other end of the spectrum includes vigilant members of the public who have challenged mountain lion management strategies that lack sound data to justify hunting seasons or other means of control. Coupled with these human social aspects of mountain lion management is the increasing lack of responsibility for actions; that is, a tendency to locate new residential areas within formerly wild areas with an expectation that government agencies will handle any problems and inconveniences.

The Game, Fish and Parks Department has the responsibility to manage all resident fish and wildlife species. Management of the mountain lion is made more difficult because they

have the potential to destroy private property and threaten human safety. A critical challenge facing the Department is the need to responsibly manage this species so that the species sustains itself as a member of the state's fauna but presents minimal threat to life and property.

## **OBJECTIVES**

This mountain lion response plan is intended to assure the public that the Game, Fish and Parks Department will work seriously and cooperatively in dealing with the challenge of sustaining a mountain lion population in areas where conflicts with livestock and humans are possible and perhaps likely. Short-term objectives are to:

1. Provide Wildlife Division personnel with a uniform procedure for handling mountain lion observation reports and an understanding of mountain lion protection status;
2. Inform the public of Division and Department efforts and encourage their input in finding solutions;
3. Work within current regulations, which allows killing of individual mountain lions that pose a threat to human safety or property.
4. Maintain a database that records mountain lion sightings.
5. Determine research and monitoring needs and establish mountain lion population goals for the Black Hills and the rest of the State.

The long-term objectives of this effort are to:

1. Determine research and monitoring needs and establish a mountain lion population goal for various areas in South Dakota;
2. Promote responsible land-use planning in areas where wildlife conflicts are likely;
3. Encourage individuals to assume a share of responsibility for wildlife conflicts, particularly where their actions contribute to conflict potential;
4. Explore responsible and humane methods of controlling problem mountain lions;
5. Build and maintain cooperative relationships with individuals and groups interested in responsible management of mountain lions and other wildlife species;
6. Regularly evaluate laws and regulations for their effectiveness in protecting and managing mountain lions

## **RESPONSE PLAN**

The Division of Wildlife plans to direct all problem lion management efforts at the individual lions deemed to be dangerous or responsible for depredation. It is also our policy to try and address specific human activities that increase the chance of lion/human interactions.

## **DEFINITIONS**

1. Black Hills – The exterior boundary of the Black Hills Fire Protection District.
2. City – the legal description of the exterior boundary of a community.
3. Residential Development – An area of limited size characterized by an occupied dwelling density of 10 or greater per ¼ section, may often have a homeowners association.
4. Rural Area – An area dominated by agriculture, public land or open spaces - housing may be present but occupied dwellings number 5 or less per square mile.
5. Recreation Area – Any place where people congregate on a regular basis or for an extended period, such as picnic areas, hiking trails, swimming beaches, etc.
6. Unpopulated Lands – Includes all private, state and federally owned lands excluding National Parks and tribal lands that do not fit in any of the above definitions.

### Types of Human/Mountain Lion Interactions:

1. Sighting - a visual observation of a lion or a report of lion tracks or other sign on unpopulated lands or rural areas within South Dakota.
2. Encounter - an unexpected direct neutral meeting between a human and a lion without incident (mountain lion sightings in close proximity to homes, stables or livestock in rural areas and unpopulated lands). A mountain lion is observed for the first time in close proximity or within residential developments and occupied recreational area.
3. Incident - a conflict between a human and lion that may have serious results (e.g. a lion that must be forced to back down). Recurring observations of a lion in close proximity or within residential developments and occupied recreational areas. Livestock is killed in rural areas.
4. Substantial public threat - a mountain lion that is observed within a city near areas where children are regularly congregated, killing wildlife/pets in residential developments or occupied recreational areas or killing livestock.
5. Attack - when a human is bodily injured or killed by contact with a mountain lion.

## **POTENTIAL ACTIONS**

Mountain lions may be destroyed based on their involvement in an attack or if they are judged to be a substantial threat to public safety. Management strategies may emphasize problem prevention. Effort may be made to discourage feeding of wildlife to limit expansion of lion populations in or near areas of substantial human populations.

Although consideration was given to trapping and relocating problem lions, due to their very large home range and the limited amount of available public habitat, this option will seldom be used.<sup>3</sup>

Continue to provide education to increase the public's knowledge about mountain lions and to create an awareness of how to reduce the potential for mountain lion/human conflicts. A brochure on mountain lions has been developed and is available. This brochure is distributed upon request, at sports shows or other functions and to people reporting lion sightings.

In areas with large public land holdings the land management agencies will be contacted whenever a lion presents a substantial public threat or an attack occurs so they can evaluate the possibility of temporary closures to limit the potential for further conflicts.

### **GAME, FISH AND PARKS STAFF RESPONSE**

Also see the Protocol for radio-collared Mountain Lions (at the end of this attachment) as this describes the procedure for handling radio-collared mountain lions used in on-going research.

1. To Sightings:  
Field response is recommended to verify the presence of a mountain lion. Personal contact is encouraged in all situations.
  - A. Provide brochure to reporting party.
  - B. Complete mountain lion observation report form and forward to appropriate personnel (Regional Supervisor, Regional Program Manager, and local Wildlife Conservation Officer(s)).
  
2. To Encounter:  
Field response is **required**.
  - A. Provide brochure to reporting party.
  - B. Complete mountain lion observation report form and forward to appropriate personnel (Regional Supervisor, Regional Program Manager, and local Wildlife Conservation Officer(s)).
  - C. Analyze the situation and provide recommendations on reducing the odds of future conflicts.

General: For any report of the following types of incidents occurring on Federal lands or within Custer State Park notify the appropriate agency as soon as possible.

3. To Incident  
Prompt field response is required in all cases. Where a lion is judged to be a threat to property or public safety it may be killed.

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<sup>3</sup> Two attempts at relocating a problem lion have failed in the Black Hills recently. Unless unforeseeable circumstances are encountered it is unlikely that relocation will be attempted again.

IMMEDIATELY NOTIFY - Regional Supervisor and Regional RPM - Game. Regional Supervisor must notify the Division Director and Assistant Director of Operations, and the Public Information Officer. Local WCOs should be notified as soon as possible.

- A. Provide brochure to reporting party.
- B. Complete mountain lion observation/report form and forward to appropriate personnel (Regional Supervisor, Regional Program Manager, and local Wildlife Conservation Officer(s)).
- C. Analyze the situation and provide recommendations on reducing the odds of future conflicts.
- D. If the lion is determined to be a threat to property or public safety it may be killed. The decision to proceed with this action will be made by the Regional Supervisor.
- E. If Department personnel observe a conflict between a human and a lion or a lion attacking livestock it may be killed immediately.

4. To Substantial Public Threat:

Any time a lion meets the criteria listed above for substantial public threat, the presence of the lion is verified by Department staff and the timeliness is such that there is a realistic potential to track the lion, a concerted effort may be immediately undertaken to locate and destroy the lion, using trained dogs and handlers or by trapping, and all necessary Department staff.

IMMEDIATELY NOTIFY - Regional Supervisor and Regional RPM - Game. Regional Supervisor must notify the Division Director and Assistant Director of Operations, and the Public Information Officer. Local WCOs should be notified as soon as possible.

- A. Provide brochure to reporting party.
- B. Complete mountain lion observation/report form and forward to appropriate personnel (Regional Supervisor, Regional Program Manager, and local Wildlife Conservation Officer(s)).
- C. Analyze the situation and provide recommendations on reducing the odds of future conflicts.
- D. The decision to proceed with tracking or trapping the lion will be made by the Regional Supervisor.
- E. Any mountain lion observed by Department personnel within city limits, attacking wildlife or pets in residential developments or occupied recreational areas, or attacking livestock may be killed immediately.

5. To Attack:

**Immediate field response is required** in all cases. Pursuit for the purpose of destroying the lion may be immediately undertaken using trained dogs and handlers or any method necessary, and all necessary Department staff.

IMMEDIATELY NOTIFY - Regional Supervisor and RPM-Game. Regional Supervisor must notify the Division Director and Assistant Director of Operations, and the Public Information Officer. Institute the **Emergency Action Plan for a Lion Attack**, (A complete emergency response plan is needed, work is beginning on this plan now. When completed, it will be added to this response plan at this point in the plan. A list of the key points that will be considered in developing this plan is located at the end of this attachment.) Local WCOs should be notified as soon as possible.

- A. Complete mountain lion observation/report form and forward to appropriate personnel (Regional Supervisor, Regional Program Manager, and local Wildlife Conservation Officer(s)).
- B. Analyze the situation and provide recommendations on reducing the odds of future conflicts.
- C. Anytime this is observed by Department personnel every attempt may be made to immediately kill the lion.

### DATA COLLECTION

The ability to identify mountain lion presence, movement, trends and behavior patterns provides important guidance for management decisions. A database has been set up for this purpose. Any Division employee who receives information regarding a human/mountain lion interaction is responsible for filling out a mountain lion observation report form (attached). Such forms will be forwarded to the game Regional Program Manager in Region 1 who will see that the information is entered in the database.

### MEDIA GUIDELINES

Following are direction and guidance for handling the media during interactions and providing public information about mountain lions in South Dakota.

1. The “Yes we have a few lions” brochures will be made available upon request, at sports shows and other functions and to anyone reporting a sighting.
2. The action plan is simply a responsible approach for the Wildlife Division to take in the interest of public service. Nobody expects tragic events or disasters of any kind, but a well-planned response and advance information to the public may help alleviate related problems.

3. The Regional Office will provide Information Services in Pierre with a yearly update on the number of reported and confirmed mountain lion sightings, encounters, and attacks. This information will be used to help answer questions from public/media about the frequency of interactions between humans and mountain lions.
4. If a lion is judged to be a substantial public threat and is killed, the Regional Supervisor and the Assistant Director of Operations in Pierre will be notified. They will determine if a press release should be issued on the incident.
5. In the event of an attack, the Regional Supervisor and Assistant Director of Operations in Pierre should be notified immediately. For an attack, the Communications Manager or designee will be dispatched from the Pierre office and will serve as spokesperson. The Regional Supervisor will serve as spokesperson, if necessary, for reported and confirmed sightings.
6. All Division personnel are reminded to be courteous and helpful with the media, but specific questions about interactions must be referred to the appropriate spokesperson.
7. A fact sheet or press release should be developed with the basic information about the situation. Information Services and the Regional Office will coordinate distribution to local and statewide media outlets.
8. If deemed necessary by the Regional Supervisor and Assistant Director of Operations, a press conference may be held.

## **PROTOCOL FOR RADIO-COLLARED MOUNTAIN LIONS**

Mountain lions are wild animals and as such their behavior and actions cannot be predicted. Nothing in the process of radio-collaring a mountain lion and monitoring its movements changes its wild nature.

However, in the interest of public safety, if a monitored lion meets the Department of Game, Fish and Parks, Wildlife Division, Mountain Lion Action Plan criteria of a substantial public threat and remains in an area where it continues to present a risk, an immediate attempt will be made to kill it using any means necessary. To be judged a substantial public threat, a mountain lion would have to be observed within concentrated residential areas (where 10 or more residences can be seen), within view in an area of human recreation, within view of areas where children are regularly concentrated, killing wildlife or pets within concentrated residential areas or repeatedly killing livestock. If any of these criteria are met, the researcher will immediately notify the regional supervisor with the information. If telemetry information indicates that a radio collared lion could represent a substantial public threat, the researcher will intensively monitor that animal and report a “status assessment” to the regional supervisor. Both Wildlife

Division Assistant Directors will be consulted about disposition of the animal based on the “status assessment” for that radio collared lion.

If after receiving a report of a radio-collared lion within a concentrated residential area or area of human recreation, the lion is still within the concentrated residential area when a GF&P representative or the researcher arrives, the lion will be killed. If the lion has moved out of the concentrated residential area or area of human recreation, then the lion will be intensively monitored and a “status assessment” relayed to the regional supervisor and Wildlife Division Assistant Directors.

If repeated (visits) reports of a radio-collared lion occur within a concentrated residential area or human recreation area, a new “status assessment” will be conducted and forwarded to the regional supervisor and Wildlife Division Assistant Directors.

Any radio-collared lion involved in an attack, where a human is bodily injured or killed, will be immediately pursued and destroyed using any means available.

If a radio-collared lion kills livestock, the researcher will meet with the affected landowner and discuss the situation, verify that a radio-collared lion caused the depredation (a radio collared lion is confirmed to be in the area and was observed at the kill site), and determine if some resolution short of killing the lion is acceptable to the landowner. In instances where verification can not be ascertained, but a radio-collared lion is in the vicinity of the kill, the lion will be intensively monitored and a “status assessment” conducted. If no resolution can be reached on a verified kill by a radioed lion, the lion will be killed.

In cases where a monitored mountain lion is regularly frequenting the area of rural residences or areas where livestock are concentrated, but does not meet the criteria of a substantial public threat, it will be up to the researcher to notify people of its proximity or provide them with educational information such as the brochure “Yes, a few mountain lions live in South Dakota.”

A monthly report of radio-collared lion activities will be submitted via email to GFP staff.

## **Response guidelines for human fatalities/injuries due to mountain lions**

### **Key points that should be addressed:**

“In the event of an attack, the responding GFP employee may take any action necessary that is within the scope of the employee’s authority to protect public safety.”

The following points, although numbered, are not ranked sequentially or in order of importance.

#### **1. media contacts**

- a. no speculation, opinion, judgements, hearsay to the media or general public
  - b. identify single agency's information officer to coordinate media contact
  - c. chain of command for information dissemination to on-site media inquiries
  - d. responsible staff to contact state-wide media about event
  - e. responsible staff to conduct follow-up interviews to media
- 2. restrict access to site of attack/fatality**
- a. private property right to restrict public / media
  - b. preservation of on-scene evidence
  - c. treat site as crime scene
  - d. erection of flagging/crime tape (100m in radius around attack site)
  - e. single entrance / exit gate
  - f. only essential authorized personnel permitted inside excluded area
  - g. special consideration of local media?
- 3. command center set-up**
- a. outside of excluded area
  - b. person / agency in charge
  - c. information officer stationed at command center
- 4. collection of physical evidence of attack**
- a. responsible agency / personnel
  - b. at site
  - c. on victim
  - d. on animal
  - e. evidence collection procedures
    - i. human blood
    - ii. animal blood
    - iii. animal saliva
    - iv. animal hair
    - v. clothing
    - vi. weapons
    - vii. pictures, etc.
- 5. collection of non-physical evidence of attack**
- a. responsible agency / personnel
  - b. retain all witnesses on site until questioned / interviewed
  - c. witness interviews
    - i. detailed narrative describing encounter
    - ii. lion behavioral responses
    - iii. actions of people involved
- 6. notification of local LE offices**
- a. on-site command / support roles expected from each agency

- i. site security
- ii. information coordination / dissemination
- iii. treatment of victim
- iv. collection of evidence
- v. pursuit / dispatch of animal

**7. notification of GFP staff & other state personnel (incl. phone numbers)**

- a. local
  - i. trapper
  - ii. supervisor
  - iii. Regional Supervisor
  - iv. administrative support staff
  - v. different if outside Region 1?
- b. Governor's office
- c. Pierre Administration
  - i. administrative support staff
  - ii. Communications Specialist
  - iii. WDM Administrator
  - iv. Division Director & Assistant Directors
  - v. Executive Secretary
- d. other agencies
  - i. SD AHIB
  - ii. SD DOA
  - iii. SD Risk Management
  - iv. USDA-APHIS-WS (Bismarck? Ft. Collins?)
- e. other Regional Supervisors

**8. notification of land management agency where attack occurred (other than GFP)**

- a. list personnel and phone numbers – list & numbers supplied by each Region
- b. on-site command/support roles expected from each agency

**9. treatment of injured person, including collection of evidence**

- a. victim's safety top priority
- b. ensure proper medical aid for victim
- c. responsible agency
- d. evidence collection procedures & equipment
- e. media pictures allowed?

**10. treatment of deceased person, including collection of evidence**

- a. responsible agency / personnel
- b. evidence collection procedures & equipment
  - i. at scene
  - ii. at autopsy – appropriate representative present
- c. treatment of corpse

- i. undisturbed
- ii. covered
- iii. media pictures allowed?

**11. immediate field response to destroy offending animal**

- a. avoid shooting in head to preserve evidence
- b. avoid contamination of carcass by field response personnel, wear gloves and mask
- c. disposition of carcass – treat as evidence
- d. avoid loss of physical evidence of victim on animal
- e. avoid dragging carcass if possible
- f. replace victim with deer carcass if lion cannot be caught

South Dakota  
 Game, Fish and Parks

## Mountain Lion Observation Report

Type of Observation		<input type="checkbox"/> Public		<input type="checkbox"/> Department Personnel	
Date of Incident	Time of Incident	County			
Name of Reporting Party	Address	General Location Description			
Phone					
Elapsed time between observation date and reporting date		Select one			
Township	Range	Section	1/4 Section		
Latitude	Longitude	UTM Coordinates			
Location of Observation (Select One)					Distance From Dwelling
<input type="checkbox"/> City Limits <input type="checkbox"/> Rural Subdivision <input type="checkbox"/> Rural Agriculture <input type="checkbox"/> Unpopulated					Select one
Response (Select One)					Date
<input type="checkbox"/> Phone Call Only <input type="checkbox"/> Drop In Discussion <input type="checkbox"/> Onsite Investigation <input type="checkbox"/> Work					
Event Verification Status (Select One)					Date
<input type="checkbox"/> Unfounded <input type="checkbox"/> Improbable Unverified <input type="checkbox"/> Probable Unverified <input type="checkbox"/> Verified					
By Whom		Title		Date	
Mistaken Identification (Select One)				Lion Brochure Provided	
<input type="checkbox"/> Yes <input type="checkbox"/> No Mistaken species				<input type="checkbox"/> Yes <input type="checkbox"/> No Date	

**Stop here and go to Comment Section if the Observation was Unfounded or Improbable.**

Type of Event (Select One)	
<input type="checkbox"/> Sign <input type="checkbox"/> Visual Observation <input type="checkbox"/> Close Encounter <input type="checkbox"/> Threatening Encounter <span style="color:red">Attack : <input type="checkbox"/> Person <input type="checkbox"/> Livestock</span>	
Reported Lion Behavior (Select One)	
<input type="checkbox"/> Sedentary <input type="checkbox"/> Walking <input type="checkbox"/> Running <input type="checkbox"/> Chasing/Stalking Prey <input type="checkbox"/> Evasive <input type="checkbox"/> Aggressive/Defensive	
Sign (Select all that apply)	
<input type="checkbox"/> None <input type="checkbox"/> Track <input type="checkbox"/> Scat <input type="checkbox"/> Hair <input type="checkbox"/> Scrape <input type="checkbox"/> Sound	
<input type="checkbox"/> Wildlife Kill: Type <input type="checkbox"/> Domestic Kill: Type	
Number Seen	
Adults	Kittens

### Division Action

Division Field Response (Select One)	
<input type="checkbox"/> No Action <input type="checkbox"/> Harassed <input type="checkbox"/> Hunted: <input type="checkbox"/> Trapped:	
<input type="checkbox"/> Dog Pursuit Harassment <input type="checkbox"/> Successful <input type="checkbox"/> Unsuccessful <input type="checkbox"/> Successful <input type="checkbox"/> Unsuccessful	
Field Response Results (Select One)	
<input type="checkbox"/> No Contact <input type="checkbox"/> Harassed <input type="checkbox"/> Relocated <input type="checkbox"/> Euthanized	
By Whom	Date

Disposition of carcass

Comments

## **Attachment B**

### **2004 Statewide Mountain Lion Report Summary**

There were 394 reports of mountain lion sightings registered with the Department of Game, Fish and Parks in 2004. This is almost double the number of reported sightings registered in 2002.

Sightings came from across the state. The Black Hills contributed 203 reported sightings, West River prairie areas 40 reports, the eastern part of the state 141 reports, and Custer State Park had 5 reports.

Most of the reports were generated through telephone contact. There were 198 “on site” investigations generated from phone calls. Fifty-five sightings were verified as consistent with the presence of a mountain lion.

Investigation turned up a variety of animals that had been mistaken for a mountain lion. These include a variety of domestic dogs, bobcats, red fox, gray fox, coyotes and raccoon.

In 2003, 99 of 171 reports involved reports of visual observation of mountain lions. In 2004, 287 of the 394 total reports involved reports of visual sightings. The most described behavior of cougars when sighted was walking, with running the second highest reported behavior.

There were six reports of mountain lions acting aggressively or defensively. Evasive behavior was described in 25 reports. There were 39 reports of mountain lion displaying sedentary behavior. There were 26 reports filed involving domestic livestock or pet assaults and 14 reports of documented wildlife injuries or kills (most of which were deer). Of the 26 reported domestic livestock or pet injuries, two involving livestock and five involving pets were verified as being caused by mountain lions.

Action by GFP normally began with a follow up phone call or on-site visit. This may or may not evolve into an official on-site investigation depending on preliminary information provided by the reporter. In numerous cases GFP personnel conducted phone calls, drop in discussions and follow up investigations in order to verify an event. Wildlife Conservation Officers, Animal Damage Control personnel, Regional Program Managers, Regional Supervisors and Wildlife Biologists were all involved in follow up investigations of mountain lion events.

Mountain lion brochures (87 total) were distributed to those making reports to assist with public education efforts. In addition, GFP personnel conducted

numerous education programs across the state and provided additional report investigation training within GFP to document cougar activity.

Reports were classified into the following categories. In this breakdown, there were several cases where there were no actual observations of mountain lions or their behavior in the individual report. Reports of cougar vocalizations, livestock being frightened through fences, missing pets, discovery of scat, suspicions and other physical evidence were classified as “Other.” Domestic or wildlife injuries or mortalities were classified as sign in some cases because no other evidence of activity was discernable by the reporter.

**Number of Reports Filed:**

Saw Animal	287
Saw Sign	61
Other	46
Total	394

**Number Reported Observed:**

Adults	217
Kittens	45

**Number of Reports by Month:**

January	15
February	4
March	8
April	21
May	20
June	87
July	83
August	40
September	37
October	28
November	33
December	18



**Time Between Observation & Reporting Date:**

Same Day	230
1 Day	66
2-3 Days	57
1 Week	16
More than 1 Week	23

**Location of Observations:**

Within City Limits	85
Rural Subdivision	110
Rural Agriculture	138
Unpopulated	58
Unspecified	3

**Number of Reports by Area:**

Black Hills	203
West River Prairie	40
East River	141
CSP & Other Parks	5
Undetermined	5

**Number of Reports by County (Alpha List):**



**Reported Response (GFP Action):**

Phone Call Only	145
Drop In Discussion	41
On-Site Investigation	198
GFP Work Related	8
E-mails	2

**Sighting/Event Verification:**

Verified	55
Probable but Unverified	149
Improbable and Unverified	77
Unfounded	107
Unspecified	6

**Reported Behavior:**

Sedentary	39
Walking	92
Running	61
Chase/Stalk Prey	23
Evasive	25
Aggressive/Defensive	6

**Distance from Dwellings:**

0-60 Feet	79
20-50 Yards	51
50-100 Yards	39
100-200 Yards	42
200 Yards to 1/4 Mile	94
> 1/4 Mile	94

**Type of Event Reported:**

Visual Observation	231
Observed Sign	39
Close Encounter	11
Threatening Encounter	1
Attack on a Person	0
Attack on Livestock*	15
Mt. Lion Interactive Evidence	3

\*13 of 15 livestock events were determined to be unfounded.

**Classification of Sign Observed:**

Tracks	36
Scat	3
Hair	2
Scrape	0
Sound	8
Wildlife Injury/Kill	14
Domestic livestock injury/kill	26
Other	6

**Reported GFP Field Response:**

No Action	313
Hunted – Successful	7
Hunted – Unsuccessful	3
Collared & Released	4
Euthanized	9
Unlawfully Killed	1
Other Mortality	6

**2004 Mountain Lion Mortalities/Locations/Cause:**

<u>DATE</u>	<u>COUNTY</u>	<u>SEX</u>	<u>CAUSE</u>
Jan. 25	Lawrence	M	Accidentally snared by trapper
Feb. 23	Lawrence	M	Euthanized after interactive injury
Apr. 3	Lawrence	F	Unknown; possible interactive
Apr. 21	Custer	Unk	Unknown; possible collision
Apr. 28	Pennington	M	Starvation; euthanized
Apr. 28	Pennington	M	Starvation
Apr. 30	Custer	M	Removed; domestic goat predation
May 19	Pennington	F	Illegally killed
May 6	Pennington	Unk	Unknown; possible vehicle collision
June 8	Lawrence	M	Removed; domestic cat predation
June 14	Yankton	M	Removed; frequent city limits
July 13	Fall River	M	Removed; domestic sheep predation
July 21	Custer	Unk	Unknown; possible vehicle collision
July 24	Pennington	M	Removed; frequent housing area
July 25	Pennington	F	Removed; injured in cattle encounter
July 29	Meade	F	Vehicle collision
July 30	Meade	M	Vehicle collision
Aug. 7	Meade	M	Vehicle collision
Aug. 13	Meade	M	Vehicle collision
Sept. 28	Pennington	F	Vehicle collision
Nov. 8	Pennington	Unk	Unknown
Nov. 17	Pennington	M	Infanticide
Dec. 12	Fall River	M	Accidentally snared
Dec. 16	Pennington	F	Vehicle collision
Dec. 22	Fall River	F	Accidentally snared

## **Attachment C**

### **Education Outreach and Public Involvement (some additional details associated with Objectives 4 and 5)**

#### **Suggested criteria for determining the need for a future detailed public opinion survey about mountain lions in South Dakota:**

1. The information from the previous survey becomes so out-dated that managers can no longer trust the information to be relevant. The initial mountain lion survey was of the general public, was very detailed and had a relatively high response rate. The results of this initial survey, barring unusual circumstances, can be expected to represent public opinion for the next 5 to 10 years.
2. Significant changes in mountain lion management are being considered and public opinion may play an important role.
3. Significant changes in mountain lion populations have occurred that may have affected public opinion concerning mountain lion management.
4. Significant mountain lion incidences have occurred that may have changed public opinion concerning mountain lions in South Dakota.
5. There is a need to evaluate the education outreach and public involvement efforts concerning mountain lion management.

Some public opinion information was collected in the 2004 Black Hills deer hunter survey and based on criteria 2 and 3 we plan on conducting another detailed public opinion survey of the general public in the summer of 2006.

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### **Media/Communications Plan**

Mountain lion incidences have the potential to become very negative issues impacting public support for mountain lions and generating negative public attitudes towards SDGFP. The following are guidelines and principles for managing mountain lion incidences:

1. Develop a standard procedure for informing the public for all mountain lion incidences requiring SDGFP action. Suggested format would be a news release detailing all relevant information on the incident and a named contact for additional information.
2. The goal is for SDGFP to become the recognized authority on mountain lions and the first place to go to for information about mountain lions. This will require a policy of providing as much information as possible concerning mountain lion incidences. However, at the same time SDGFP must be seen to provide consistent information, thus some internal coordination may be required on sensitive issues.

3. A few simple questions will help determine the nature of the incident and actions that should be taken:
  - ⇒ Do you think the incident would make the front page?
  - ⇒ How do you think people in your community would react to the incident?
  - ⇒ Would it be a “hot” topic for local talk?
  - ⇒ Would suppression of information about the incident appear to a reasonable person to be protective or self-serving on the part of the Department?
  - ⇒ Would suppression of information about the incident seem to place the interests of the Department above the general public interest?
  - ⇒ Is there an obvious concern for public safety?
4. Responsibility to the public and good relationships with the news media requires providing honest, accurate and timely information on all events, whether positive, negative or perceived as negative. A proactive procedure is preferable to unplanned reactive responses, ranging from ignorance of the event to a “no comment” answer. If you cannot determine clear answers to the above questions, you should contact your immediate supervisor as soon as is reasonably possible. Through that contact, your supervisor will help determine whether or not the incident is a sensitive or critical issue.
5. Should the incident be determined sensitive/critical, there is a need for an internal communication process as well as answering questions from the public or media. Beginning the internal process will be the first priority to avoid confusion and any potential for a perceived cover-up.

**Internal Reporting Guidelines/Principles: → for sensitive issues & critical incidents**

1. If necessary, supervisory lines should be crossed to expedite the reporting procedure.
2. The supervisor who is contacted will immediately notify the division director’s office of the circumstances.
3. The director’s office will:
  - a. Determine whether this even constitutes a significant incident sufficient to continue procedure, whether other agencies are involved and need to be notified and whether the Governor’s office needs to be notified.
  - b. Designate a point-of-contact employee, whether that is someone from Information Services or a local contact.
  - c. Provide details to the point-of-contact person about the specific incident.
  - d. Notify SDGFP Secretary and SDGFP Commissioners.
4. The point-of-contact person will, if possible, make immediate contact with the employee(s) directly involved in the incident. The contact person will then prepare a fact sheet for employees and press contacts. The fact sheet should include the who, where, what, when, how and other pertinent background facts. The fact sheet should also identify sensitive areas and which points should be referred to the point-of-contact person.

5. The fact sheet should be transmitted to the director's office, the Secretary's office, and the Executive Management Team (EMT) as soon as possible (using whatever electronic or express mail means are quickest).
6. The Information Services staff will make immediate press contacts to media in the vicinity of the event. Statewide and national media, if warranted, may also be notified. The director or Department Secretary will make this decision.
7. The point-of-contact person will communicate updates to the director's office, Secretary's office and EMT as events dictate.
8. The point-of-contact person will remain available for press contacts. These duties will take precedence over normal duties until terminated by the director's office.
9. A follow-up report from the employee(s) with direct involvement in the event is recommended. Suggested changes to prevent such incidents in the future should be listed in the summary. Copies of the written report will be submitted to the immediate supervisor, the regional supervisor and the director's office.

**External Reporting Procedure: → for sensitive issues & critical incidents**

1. The employee(s) with direct involvement in the event will first begin the internal reporting procedure as soon as possible after the event is under control.
  2. If circumstances allow, the employee(s) should write down brief notes or a summary of what has occurred. At the very least, rough notes about key facts will be very helpful.
  3. The point-of-contact person, as designated by the Division Director, will attempt to get in touch with the front-line employee(s) immediately. This conversation will help create the fact sheet, which will be used for internal staff as well as the media.
  4. If the media contacts the front-line person before the internal contact is made, *DO NOT PANIC*. Tell the reporter only what you know to be true about the situation. Do not speculate as to cause or consequences. If the honest answer to a question is, "I don't know," tell them exactly that. Also, inform the reporter that a fact sheet will be developed and distributed as soon as it is ready. Be sure to get a name and number so the fact sheet can be delivered to the person who called.
-

## Plan for Public Involvement and Input

### Strategies for Public Involvement and Input:

1. Actively seek out and facilitate involvement of all potentially affected interests.
2. Provide the public with the understanding that their contributions will be used in the writing of up-dated versions of the mountain lion management plan.
3. Ensure communication of interests.
4. Provide the potentially affected interests with the information they need to participate in a meaningful way.
5. Communicate to participants how their input was used in the mountain lion management plan.
6. Achieve informed consent from potentially affected interests with regards to the mountain lion management plan.

### Additional Objectives:

*Internal* – Increase communication and cooperation between Division sections, produce a management plan that represents an agency consensus. Keep the GFP Commission well informed.

*External* – Expand the public’s awareness and knowledge of mountain lions.

### Potentially Affected Interests (continuous up-dating):

*Internal* – Game Staff, Human Dimensions/Planning, Communication Staff, Regional Staff and Wildlife Conservation Officers

*External* – hunters, guides/outfitters, sportsmen/women, conservationists, environmentalists, economic interests, local residents, landowner/operators, etc.

### Roles and Responsibilities:

*Human Dimensions/Planning* – The responsibility for making the involvement process happen, making sure all the appropriate people are involved internally, and ensuring the information presented is the most comprehensive package possible given the available data and time frame. This means HD/P is responsible for making sure that information about biological, economic, social, and political factors are integrated into the final management plan. This also includes:

- Providing assistance to Communication staff who will draft press releases and provide educational programming
- Scheduling and coordinating public forums
- Maintaining records of the entire process.

*Communication, Wildlife Conservation Officers, and Regional Staff* – Will provide a critical link to the public both in terms of implementing public involvement/input activities, but also as communicators and educators of the public.

**Public Information/Input tools:**

*Information* – Division web-site, news releases, public forums/open houses, mountain lion round table meeting, school and community education programs

*Avenues for Input* – E-mail, letters, web-site, staff attendance at existing meetings (hunting clubs, conservation groups, neighborhood groups, school groups, etc.)

**Evaluation:**

At the end of the management planning process an evaluation will be done to assess the effectiveness of the involvement/input activities. This evaluation will include both internal and external viewpoints. The results of the evaluation will be included in future versions of the mountain lion management plan.

**Additional Information Items Included:**

**Public Mailing List** – Partial list of addresses and contact information for hunting clubs, sportsmen/women’s groups, conservation organizations, neighborhood groups, schools, school related groups

Black Hills Chapter of the Safari Club  
Jeff Olson  
2525 W Main Suite 211  
Rapid City SD 57702

Mike Williams  
SD Izaak Walton League  
605 3<sup>rd</sup> Avenue NW  
Watertown SD 57201

Chad Scholten  
SD Bowhunters Inc.  
212 W Pine Street  
Spearfish SD 57783

Sharon Seneczko  
Black Hills Cougar Foundation  
Custer,SD 57730

Neighborhood Groups (??)  
PTAs (??)  
Elementary/High Schools (??)

**Organizational Contact List** – Partial list of addresses and contact information for other interested organizations including but not limited to non-governmental organizations, other government agencies i.e. Forest Service, Fish & Wildlife Service, other state game agencies

Mitch McKie  
Rocky Mountain Elk Foundation  
400 Rimrock Road  
Spearfish, SD

Chris Hesla  
SD Wildlife Federation  
PO Box 7075  
Pierre SD 57501

Nebraska Game & Parks Commission  
2200 N 33<sup>rd</sup> Street  
Lincoln NE 68503

North Dakota Game & Fish Department  
100 N Bismarck Expressway  
Bismarck ND 58501-5095

Wyoming Game & Fish Department  
Joe Sandrini, Wildlife Biologist  
P.O. Box 615, 254 Seneca Ave.  
Newcastle, WY 82701

Wyoming Game & Fish Department  
Daryl Lutz  
Regional Wildlife Coordinator  
3030 Energy Lane, Suite #100  
Casper, WY 82604

Montana Game & Fish

US Fish & Wildlife Service  
Ecological Services  
420 S Garfield Avenue Suite 400  
Pierre SD 57501

Black Hills National Forest  
Forest Supervisor  
25041 Highway 16  
Custer SD 57730

Wind Cave National Park  
Dan Roddy  
RR1 Box 190  
Hot Springs SD 57747-9430

South Dakota State University  
Dr. Jonathan Jenks  
Department of Wildlife and Fisheries Sciences  
P.O. Box 2140B  
Brookings, SD 57007

Other colleges/universities (??)

**List of Public Mountain Lion Informational Resources** – Listing of web-sites, books, pamphlets, programs all concerning education and awareness of mountain lions for the public's use.

Web-sites:

[www.mountain-lions.org/](http://www.mountain-lions.org/)

[www.fs.fed.us/htnf/cougar.htm](http://www.fs.fed.us/htnf/cougar.htm)

[www.coopext.colostate.edu/wildlife/mountain\\_lions.html](http://www.coopext.colostate.edu/wildlife/mountain_lions.html)

[www.projectwildlife.org/living-mountainlions.htm](http://www.projectwildlife.org/living-mountainlions.htm)

<http://www.sdgap.info/Wildlife/MountainLions/MtLionIndex.htm>

Youth Books:

Stone, Lynn M. 1989. **The Cougar**. Rourke Enterprises, Vero Beach, FL.

Wrobel, Scott. 2000. **Mountain Lions**. Smart Apple Media, Mankato MN.

Adult Books:

Baron, David. 2004. **The Beast in the Garden: A modern parable of man and nature**. W.W. Norton & Company, Inc. New York, NY.

Bolgiano, Chris. 1995. **Mountain Lion: An unnatural history of pumas and people**. Stackpole Books. Mechanicsburg, PA.

Busch, Robert H. 2004. **The Cougar Almanac: A complete Natural History of the Mountain Lion**. The Lyons Press. Guilford, Connecticut.

Danz, Harold P. 1999. **Cougar!** Swallow Press / Ohio University Press. Athens, Ohio.

Etling, Kathy. 2004. **Cougar Attacks: Encounters of the worst kind**. The Lyons Press. Guilford, Connecticut.

Hansen, Kevin. 1992. **Cougar: the American Lion**. Northland Publishing, Flagstaff, AZ.

Kobalenko, Jerry. 1997. **Forest Cats of North America: cougars, bobcats, lynx**. Firefly Books, Willowdale, Ont.

Logan, K.A., L.L. Swenor. 2001. **Desert Puma Evolutionary Ecology and Conservation of an Enduring Carnivore**. Island Press, Washington.

Shaw, Harley. 1994. **Soul Among Lions: The Cougar as Peaceful Adversary**. The University of Arizona Press. Tucson.

## Attachment D

### South Dakota Mountain Lion Management Plan: 2003 - 2012 / Version 05-2

#### Outline for an Experimental Mountain Lion Season in 2005

##### Biological information that supports having a mountain lion season:

Fecske's (2003) research suggests that the current mountain lion population in the Black Hills is around its carrying capacity (although the carrying capacity concept is not an absolute, fixed number as many different dynamic factors are involved). Best estimates for the current Black Hill mountain lion population put the number of mountain lions at 165 lions of all ages. Some additional evidence that the Black Hills mountain lion population is at carrying capacity is based on sighting trends and confirmed lion mortalities. There was a 57% increase in mountain lion sightings from 2003 to 2004 and a significant jump in mortalities in 2004 (Figure 1). Causes of mortalities in 2004: vehicles (6), GFP (5), unknown (5), snares (3), starvation (2), lion fights (1), infanticide (1), illegally killed (1) and removed by GFP after being injured by cattle trampling (1).

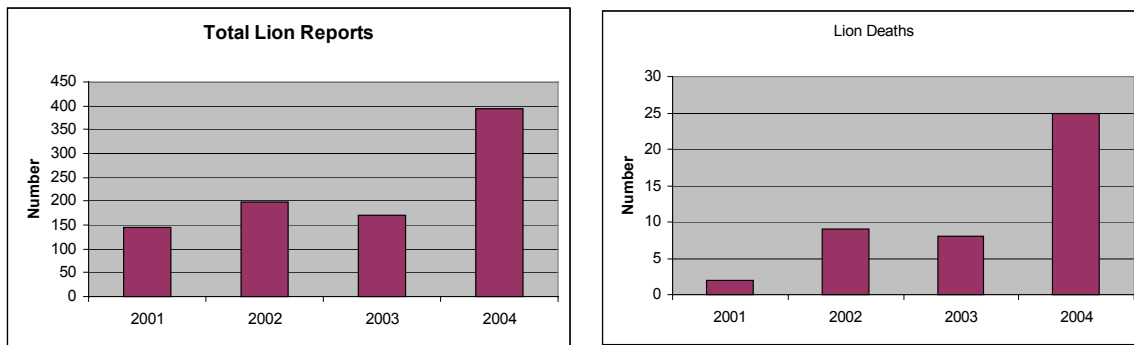


Figure 1. Mountain lion reports filed and mortalities in South Dakota 2001-04.

Research by Shaw (1989) suggests that, for the most part, mountain lions that kill livestock or pets are not "bad" lions but rather sub-dominant lions that can not establish a territory in optimal habitat (either lions too young or too old to establish or hold a territory). Lions without territories have a couple of options, either stay and try to establish a territory or move until a suitable territory can be found. Male lions establish very large territories and vigorously defend them; therefore it is most difficult for male

lions to establish territories after reaching adulthood and leaving their mother's territory. Lions without territories keep moving until they can find an unoccupied, suitable territory and are referred to as transients. It is mostly these transients (usually males) that come into contact with people and cause problems.

**Some justifications for and benefits from an experimental lion season for 2005:**

**1. A mountain lion season may be a more effective solution for dealing with problems caused by mountain lions.**

One of the main goals for the recommended experimental lion season will be to determine if a limited harvest of mountain lions via a general hunting season will reduce problems caused by mountain lions. GFP's response plan for managing mountain lion / human / property interactions (Attachment A) requires a significant amount of staff time and resources. GFP's implementation of this plan has been very effective at dealing with problems caused by lions, however there are two inefficiencies with this system. One is the cost and the other is that it is reactive rather than proactive. In other words, people must first experience some problems before an action can be taken (may only involve a threat or potential problem, but nevertheless is reactive). Over time this causes bad publicity for the mountain lion.

**2. An experimental lion season in 2005 provides an opportunity to extend our seven years of continuous research on mountain lions.**

This summer will see an end to seven years of research on mountain lions in South Dakota. However, there are some types of management questions that can not be answered by pure research alone. Division of Wildlife operates under an adaptive management system, which is simply a process of applying research to learn from management decisions and actions. Having an experimental lion season in 2005 will provide an opportunity to continue the research without a break and learn some valuable answers to some management questions (listed later in this document).

**3. In addition to the research benefit, a lion season has a number of economic, recreational, social and political-environmental benefits.**

**Economic.** Mountain lion research and management is very expensive. Division of Wildlife is responsible for the management of all South Dakota wildlife; however, the money for this management is derived from a very limited number of "game" species. If

mountain lions can be hunted without harming their population it would be the appropriate and responsible action for GFP to take. Two of the management questions that GFP will seek to answer will be the potential impact on mountain lion populations from a hunting season and the interest in and potential for providing funding for wildlife research and management that a lion season could provide.

**Recreational.** The abundant wildlife in South Dakota is a recognized quality-of-life factor for many citizens and hunting provides a considerable amount of high quality recreation. The mountain lion in South Dakota is not in danger of extinction and in fact has a viable population. A mountain lion season would be designed to provide a benefit to hunters rather than losing a similar amount of lions to vehicles, GFP actions, and a number of other mortality factors currently acting on the lion population at its carrying capacity.

**Social.** Public opinion in South Dakota ranges from those wanting total protection for mountain lions, including lions causing problems, to those wanting total elimination of mountain lions from South Dakota. Public opinion does not provide a unified answer on a lion season; however, a significant majority favors responsible mountain lion management, whatever that means to the individual. The best an agency can do is to demonstrate fair, reasonable, and responsible decisions that balances the needs of both wildlife and humans. The recommended experimental lion season is just another step in the evolution of responsible mountain lion management in South Dakota.

**Political-Environmental.** As a top predator in the ecosystem the mountain lion plays an essential role in the proper functioning of the ecosystem (continued research is very important). South Dakota is very fortunate to have a self-sustaining, viable, healthy population of mountain lions. It took a long time for mountain lions to become reestablished in South Dakota to the current population level and we need good sound research and management to maintain this valuable asset. However, there is a portion of the public that fears mountain lions or at least the problems that they can cause. If mountain lion problems continue to escalate, growing negativity towards mountain lions could eventually sway public opinion to the level that political action could be taken that would not be in the best long-term management interests of mountain lions. A lion season would communicate to some people that mountain lions are being managed

responsibly. In other words, a lion season may be one of the best long-term strategies for maintaining a viable mountain lion population in South Dakota. For example, hunters are often the strongest proponents for saving wildlife and could become a strong voice for continued mountain lion research and management.

**Suggested experimental mountain lion season as it relates to the overall management goals and objectives for mountain lions:**

The proposed experimental mountain lion season is consistent with the South Dakota Mountain Lion Management Plan's goal and fits under Objective 1 in Version 05-2 of the plan. The specific objectives of the experimental mountain lion season are to answer some management questions (to help set effective and appropriate hunting seasons if decisions are made to use hunting seasons as a management tool) and biological questions (to determine the impact of hunting seasons on the mountain lion population). The most important season objective will be to determine if a prescribed mountain lion season can reduce the amount of human-lion conflicts while still maintaining a healthy, viable mountain lion population in the Black Hills.

**Based on the proposed mountain lion season** we will be seeking answers to the following management and biological questions.

**Management Questions:**

1. How many days does it take to reach the quota using the prescribed lion season?
2. How many hunters participated in the hunt?
3. What kinds of law enforcement problems resulted from the mountain lion season?
4. Hunter attitudes (satisfactions and evaluations) of the hunt and public attitudes towards the hunting season and mountain lions in general.
5. Did this season reduce the amount of mountain lion problems (measured by sightings, conflicts with humans, number of lions that GFP had to remove)?

**Biological Questions:**

1. Age structure and sex of mountain lions harvested.
2. Potential impact on both mountain lion populations and behavior (territory size and structure).

### **Suggested experimental mountain lion season for 2005:**

The 2005 experimental lion season will use a harvest objective of managing the mountain lion population in the Black Hills at about 80-85% of carrying capacity to evaluate the management and biological objectives outlined for this experimental lion season. GFP will recommend a mountain lion hunting season design based on a limited harvest quota system. It is felt the quota system will give us the most control over the harvest, being able to stop harvest as soon as management quotas are met. The proposed quota would be 20 lions:

#### **Quota for the 2005 Experimental Mountain Lion Season**

##### **→ Guiding Principle = Conservative Harvest**

- **Population maintenance goal → 80-85% of carrying capacity (still allows population growth)**
- **current estimate of lions in the Black Hills = 165 (140 in S.D. Black Hills)**
- **2005 experimental harvest quota → 14% of 140 = 20 lions**

#### Season Dates: October 1 – December 31, 2005

- The season will end when the quota of 20 is reached or on December 31, 2005, whichever comes first.
- It will be the hunter's responsibility to stay informed of the status of the quota and season end date. GFP will provide notification to hunters via media outlets, the GFP web page and a recorded message on an 800-number.

Open Area: Black Hills Fire Protection District (start at the Wyoming border follow I90 to Rapid, then down 79 to the Cheyenne river, then the Cheyenne river to Wyoming) (Excluding Custer State Park, Wind Cave, Jewel Cave and Mt. Rushmore)

#### Licenses: Unlimited resident & nonresident

- One license per hunter (a person may harvest only one lion per season)
- Resident fee: \$5 + \$5 surcharge = \$10
- Nonresident fee: \$45 + \$5 surcharge = \$50

#### Requirements and Restrictions:

- Use of dogs not allowed / Trapping not allowed / Baiting not allowed
- Harvest of mountain lions with kittens present or spotted lions (kittens) not allowed
- Only firearms and archery equipment currently described in ARSD and SDCL as legal for the taking of deer/antelope are allowed (includes muzzleloaders)
- Mandatory check within 24 hours of harvest at the Rapid City Regional office of the Game, Fish and Parks

- A lion trapped, must be released and may not be pursued for 24 hours after it's release.
- Hunting hours: ½ hr before sunrise to ½ hr after sunset

Related Rule changes:

- Bobcat season in the Black Hills closed to the use of hounds.

**Additional thoughts:**

For the 2005 experimental lion season we recommend a "general" mountain lion hunting season. Under this "general" mountain lion season, any interested hunter could purchase a license and legally take a lion if the opportunity arose. It can be expected that licensed deer and elk hunters would purchase these licenses and may use them as they pursued their primary game, provided of course that all other regulations were followed. Hounds would not be allowed to aid in hunting as with other big game. This would provide maximum participation in the season by resident and nonresident hunters while still protecting the mountain lion population with an established quota system.

We also propose to prohibit the killing of lions with kittens present or spotted lions (kittens). A hunter would only be allowed to harvest one lion per year. A mandatory check, within 24 hours of harvest, would also be required and must be done at the Rapid City Regional GFP Office. Harvest and research data would be collected at this time to enhance our ability to assess lion age, sex, health factors and DNA samples. The hunter taking a lion lawfully would then be able to retain the entire carcass.

Regarding the prairies of South Dakota, we do not propose to implement a management season outside of the Black Hills Fire Protection District for the 2005 experimental lion season. Nor do we support legislation that would allow people to "shoot lions on sight that are about to do damage". We feel that that with proper lion management in the Black Hills, including a tightly regulated hunting season, the incidence of human/lion interactions on the prairie will be greatly reduced. Any problem lions that do arise on the plains will continue to be addressed on a case-by-case basis by GFP staff, as deemed appropriate by our current policies. Livestock depredation or public threats will be dealt with quickly, as they have been in the recent past.

## **Attachment E**

### **Specific Public Involvement Plan (March – August, 2005)**

#### **Some Human Dimensions Information**

**Third Working Draft – Version 05-2**

### **Specific Public Involvement Plan (March – August, 2005)**

#### **March 2005**

- first review of the 1<sup>st</sup> Working Draft (Cooper, Hansen, Keyser, Kintigh, Wrede, Benzon, Art Smith, Griffin, Schmitz, Kanta, McCormick, Nachtigall, Waite, Gigliotti) → send out by March 17<sup>th</sup> and complete by March 23<sup>rd</sup>
- Note: include SDSU in the process, however, Dr. Jenks will not be back from Africa until March 24<sup>th</sup> (send him a copy and include his comments/suggestions in the 2<sup>nd</sup> Working Draft)
- make changes and send 1<sup>st</sup> working draft to the printers by March 28<sup>th</sup>
- Send a copy of the 2<sup>nd</sup> working draft to Commissioners on March 31<sup>st</sup> and to a selected list of staff for review: Cooper, Hansen, Keyser, Vandel, Kintigh, Wrede, Benzon, Art Smith, Griffin, Schmitz, Kanta, McCormick, Nachtigall, Alexander, Gigliotti, Schlueter, Halseth, Waite, Lindbloom, Stone, Leif, Petersen, Schauer, Alvine, Morlock, Dave McCrea, Gates, Wicks, Deisch, Pennock, Jenks, Dan Thompson

#### **April 2005**

- April 7-8: PowerPoint presentation to the Commission introducing the plan
- make assignments and schedules for the meetings/tasks by April 6<sup>th</sup> (at least to the best of our ability to complete this task) → will be part of the presentation to the Commission
- Have 3<sup>rd</sup> working draft ready by April 7<sup>th</sup>
- April 11: unless major changes are suggested by the Commission, put the 3<sup>rd</sup> Working Draft on our web page and seek public comment; news releases talking about the plan and telling people that it is available on the web page or by requesting a copy from GFP

#### **April – May 2005**

##### **Internal Input and Review**

- Have at least 5 meetings with GFP staff to present the plan, answer questions and get input and review comments

##### **External Input and Review**

- Have a minimum of six public meetings (evenings) (Spearfish, Rapid City, Custer, Chamberlain, Sioux Falls and Aberdeen) to present the plan, answer questions and get

input and review comments. → actually many more are being considered by regional staff

- Schedule additional meetings as requested by special groups.
- Make frequent news releases related to progress on the topic and to announce the various places that we will be conducting public meetings.

### **June 2005**

- Review all comments received, make revisions, if needed, to the plan and produce the 4<sup>th</sup> Working Draft.
- Put the 4<sup>th</sup> Working Draft on our web page and continue collecting input.
- If a decision is still in place to conduct an experimental mountain lion season in 2005 prepare the documents to make the recommendation to the Commission in July.

### **July 2005**

- Commission proposal.

### **August 2005**

- Commission takes final action on proposal

## **Development of List of Frequently Asked Questions**

- What is the biological justification for the specific quota of 20 mountain lions?
- What are the justifications for the season dates and the length of the mountain lion season?
- Why is the mountain lion season limited to the Black Hills?
- Why are dogs not allowed for hunting mountain lions?
- Why not just trap and relocate problem mountain lions?
- What is the justification for a \$10 license fee?
- What would GFP's response be if a hunter shoots a lactating female?

The public involvement process will add to this list of questions. GFP staff will provide written answers to the identified questions and this will become part of the public involvement process. Questions and answers will be added to our web page (and regularly up-dated).

## Some Human Dimensions Information

**Table A.** Comparing attitudes from the general public sample (2002) with the sample of resident Black Hills deer hunters (2004) – I would support a mountain lion season if the state acquires data that the mountain lion population is healthy and could sustain a prescribed level of harvest.

Attitude – Support for a mountain lion season ...	General Public (2002)		Black Hills Deer Hunters (2004)	
	Number	Percent	Number	Percent
<b>Strongly Agree (+3)</b>	331	30.6%	1,029	55.7%
<b>Moderately Agree (+2)</b>	281	26.0%	374	20.3%
<b>Slightly Agree (+1)</b>	163	15.1%	207	11.2%
<b>Neutral / No Opinion (0)</b>	154	14.2%	130	7.0%
<b>Slightly Disagree (-1)</b>	28	2.6%	28	1.5%
<b>Moderately Disagree (-2)</b>	43	4.0%	20	1.1%
<b>Strongly Disagree (-3)</b>	81	7.5%	58	3.1%
<b>Total</b>	1,081	100%	1,846	100%
Pearson Chi-square: $X^2=204.97$ ; $df=6$ ; $p<0.001$				
<b>Mean</b>	1.26		2.06	
<b>95% C.I.</b>	1.15 – 1.37		1.99 – 2.12	
<b>SUMMARIZED RESULTS</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
<b>AGREE</b>	775	71.7%	1,610	87.2%
<b>NEUTRAL / NO OPINION</b>	154	14.2%	130	7.0%
<b>DISAGREE</b>	152	14.1%	106	5.7%
<b>Total</b>	1,081	100%	1,846	100%
Pearson Chi-square: $X^2=110.15$ ; $df=2$ ; $p<0.001$				

**Note: Non-scientific poll by Rapid City Journal on March 31, 2005:**

**Should there be a hunting season on mountain lions?**

Response	Percent
<b>YES</b>	<b>57%</b>
<b>Don't Know (6%) / Don't Care (3%)</b>	<b>9%</b>
<b>NO</b>	<b>35%</b>
<b>Total Votes</b>	<b>536</b>

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**Table B. Interest in a Mountain Lion Season –** If South Dakota had a mountain lion season, how interested would you be to have an opportunity to hunt mountain lions in South Dakota?

Interest in a mountain lion season (scale)	2004 Black Hills Deer Hunters		
	Residents	Nonresidents	Combined
Not Interested (0)	23.6%	31.9%	24.2%
Slightly Interested (1)	16.5%	23.1%	17.0%
Moderately Interested (2)	18.6%	19.4%	18.6%
Very Interested (3)	39.3%	24.4%	38.1%
No Opinion (missing)	2.1%	1.3%	2.0%
Number	1,846	160	2,006
Mean	1.75	1.37	1.72
95% C.I.	1.70 – 1.81	1.18 – 1.55	1.67 – 1.77
Pearson Chi-square: $X^2=17.08$ ; $df=4$ ; $p=0.002$			
ANOVA: $F=14.64$ ; $df=1/1,964$ ; $p<0.001$			

Based on this information I would venture that we sell 5,500 mountain lion licenses for 2005 (based on the price of the license being \$10).



**Table C.** General attitude toward mountain lions in South Dakota comparing South Dakota residents (2002 general public survey)<sup>1</sup> with a sample of 2004 resident Black Hills deer hunters.

Attitude towards Mountain Lions in South Dakota	S.D. Residents (2002) <sup>1</sup>		Black Hill Deer Hunters (2004)	
	Number	Percent	Number	Percent
I enjoy having mountain lions AND I <u>do not</u> worry about problems they may cause.	271	24.8%	468	25.5%
I enjoy having mountain lions BUT I <u>do</u> worry about problems they may cause.	418	38.2%	808	44.0%
I <u>do not</u> enjoy having mountain lions AND I <u>do</u> worry about problems they may cause.	143	13.1%	312	17.0%
I <u>do not</u> enjoy having mountain lions BUT I <u>do not</u> worry about problems they may cause.	43	3.9%	28	1.5%
I have no particular feelings about mountain lions regardless of problems caused or not caused by them	218	20.0%	220	12.0%
<b>Total</b>	<b>1,093</b>	<b>100%</b>	<b>1,836</b>	<b>100%</b>
<b>SUMMARY RESULTS</b>				
Enjoy mountain lions	689	63.0%	1,276	69.5%
Do not enjoy mountain lions	186	17.0%	340	18.5%
No opinion	218	20.0%	220	12.0%
Worry about problems caused by lions	561	51.3%	1,120	61.0%
Do not worry about problems caused by lions	314	28.7%	496	27.0%
No opinion	218	20.0%	220	12.0%

<sup>1</sup>Gigliotti, L. M., D. M. Fecske, and J. A. Jenks. 2002. Mountain lions in South Dakota: A public opinion survey. South Dakota Department of Game, Fish, and Parks, Pierre, SD. 182 pp.