

# MOUNTAIN LION FOUNDATION

*Saving America's Lion*<sup>TM</sup>

April 13, 2007

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State Director

USDA APHIS Wildlife Services

6135 NE 80th Ave., Ste. A-8

Portland, OR 97218

**Re: Environmental Assessment: Wildlife Services' Implementation of the  
2006 Oregon Cougar Management Plan**

Dear Director Williams:

On behalf of the Mountain Lion Foundation and our members and supporters in Oregon and across the United States, I present these comments on the *Environmental Assessment: Wildlife Services' Implementation of the 2006 Oregon Cougar Management Plan*. The Mountain Lion Foundation (MLF) is a national non-profit conservation and education organization dedicated to conserving cougars throughout their range and to promoting coexistence between cougars and humans.

MLF has conducted a thorough review of the Environmental Assessment (hereafter, "the EA") and Proposed Action contained therein that if enacted would result in the killing of as many as 200 cougars annually by USDA Aphis Wildlife Services (hereafter, "Wildlife Services or "WS") agents, which would be in addition to the hundreds killed in the state by sport hunters and other government agents under the 2006 Oregon Cougar Management Plan (ODFW 2006). The EA falls far short of providing the necessary justification and evidence that the proposed action is either warranted or will not have a

significant impact on cougar populations, biodiversity or human health and safety. **We therefore oppose the Proposed Action. An Environmental Impact Statement is required to meet the applicable federal laws.**

Moreover, the analysis presented therein is based on the highly questionable science presented in the 2006 Cougar Management Plan and is wholly inadequate for assessing the impact of the Proposed Action Alternative on cougar populations, biodiversity, and non-target populations. **Wildlife Services must develop an Environmental Impact Statement if it engages in activities in accordance with the Cougar Management Plan.**

The Mountain Lion Foundation incorporates its earlier comments on the 2005 Draft Oregon Cougar Management Plan, which are germane to the EA, and are attached as part of our formal comments.

## **Introduction**

Under its obligations under NEPA and other federal law, Wildlife Services is obligated to undertake an environmental assessment of proposed activities and justify those activities based on the best available science. These actions should also serve the common interest of the public. Accordingly, the EA in question must justify in these terms why Wildlife Services should undertake the killing of as many as 200 cougars a year in the state of Oregon, which will be in addition to the hundreds killed each year by sport hunters and other agents. Yet the EA falls far short of these obligations because it neither reflects the best available information on cougar ecology, population dynamics, factors that influence the rate and types of human-cougar conflicts, or the appropriate and effective techniques for addressing such conflicts as laid out in the Cougar Management Guidelines (CMGWG 2005). The EA relies on an inappropriate and ineffective cougar population model used in the 2006 management plan (ODFW 2006) and on the unproven and potentially counterproductive approach of indiscriminate lethal control of cougars in an effort to reduce livestock and pet depredations and public safety concerns. As a result, **the EA as written is fatally flawed and should be withdrawn.**

### **Purpose and need for Proposed Action**

The purpose stated in the EA is “to assist ODFW with meeting cougar conflict management objectives described in the 2006 Oregon Cougar Management Plan.” However, the EA does not provide an adequate justification, scientific or otherwise, for Wildlife Services to assist ODFW in the indiscriminate killing of as many as 200 cougar annually in Oregon, which will be in addition to the hundreds killed each year by sport hunters and other government agents. Specifically, there is no support for the argument that reducing cougar densities will achieve the desired goal of reducing conflicts, or more specifically the number of reported conflicts (ODFW 2006). The EA’s reliance on an unsupported argument is problematic because there is no empirical foundation for the claim that the number of complaints about cougars is related to cougar population size (CMGWG 2005, Paul Beier, attached letter). Rather, the number of complaints is likely correlated to human population size, media coverage, social tolerance, and possibly numbers of livestock.

There are several additional and serious flaws inherent in the stated objectives. First, there is no distinction made between sightings and “incidents.” The vast majority of sightings in Oregon are likely misidentifications. Beier and Barrett (1993) reported that as many as 90 percent of mountain lion sightings were misidentifications. Without verification by a wildlife professional trained in the identification of mountain lion sign, the use of “complaints” to monitor mountain lion activity or conflicts is indefensible.

Second, because there is apparently no requirement, much less standards or protocols, that complaints be verified, the system may significantly overstate the actual number of conflicts involving mountain lions.

Third, Oregon has experienced an increase in human populations and the expansion of industrial, residential and recreational activity in mountain lion habitat. As noted in the 2006 Cougar Plan, “human population growth into rural and sub-urban areas” is one of many factors that can lead to the increased potential for conflicts. In fact, human intrusion into mountain lion habitat has been identified as the primary cause of increased conflicts (Torres et al. 1996). Therefore, **setting the benchmarks for**

**complaints at 1994 levels without factoring in the increased human population is scientifically flawed and indefensible.**

Fourth, it is inappropriate to pool incidents involving perceived or verified threats to public safety with mountain lion-pet conflicts. We are unable to find any research that suggests that predation on pets is a precursor to an attack on humans. Indeed, mountain lions may be unable to distinguish between pets and natural prey or competitors. Combining these two categories serves only to exaggerate the frequency at which mountain lions pose an actual threat to public safety but also enables individuals or organizations with a vested interest in removing mountain lions to deceive the public into supporting such efforts in the name of public safety.

In sum, it is scientifically unsupportable and therefore entirely inappropriate to use complaints as indices of the number of mountain lions, much less as indices of risk to humans from mountain lions. Rather than indiscriminately killing large numbers of mountain lions in an effort to reduce conflicts, ODFW should marshal its resource towards a comprehensive public education campaign that would be effective in promoting coexistence between humans and mountain lions.

The proposition that reducing cougar density in order to reduce conflicts between cougars and human interests is not supported by the best-available science. As the Cougar Management Guidelines state, “Short-term, non-selective cougar population reduction has not been demonstrated to reduce depredation” on livestock or domestic animals (CMGWG 2005). Moreover, the Guidelines state that there is no evidence that reducing cougar densities will reduce the likelihood of an attack on humans. Rather they argue that “In rare cases where a cougar exhibits dangerous behavior and needs to be removed, this job is best done by a professional to expeditiously track and kill the individual cougar, rather than via sport hunting” (CMGWG 2005).

Furthermore, **the proposed action could actually increase conflicts between cougars and human interests.** The indiscriminate removal of cougars not involved in conflicts with human interests may actually increase the likelihood of attacks on humans by removing cougars that may be more wary of people and by skewing cougar populations towards younger cougars that are frequently implicated in attacks and

depredation on livestock (CMGWG 2005). However, the EA never discusses this possibility.

The EA also fails to discuss a recent study conducted in the Pacific Northwest that evaluated the status and trend of a cougar population in relation to concerns about human-cougar conflicts (Lambert et al. 2006). Specifically they found that while public complaints concerning cougars were increasing, the cougar population was actually in decline. Their conclusions are particularly relevant to the situation in Oregon and so are provided here.

Our research indicates that *wildlife managers should not assume that increasing cougar/human complaints correspond with increasing cougar populations*. Indeed, increased complaints may accompany a rapidly declining population as shown here. Furthermore, *increased hunting could actually result in increased cougar complaints* because of the younger age structure of the cougar population and the higher proclivity of young animals to encounter humans and cause complaints.

The conflicts surrounding cougar management in our study area are not uncommon in other regions of North America. *Other populations that are believed to be increasing, as suggested by more frequent cougar encounters, could be declining as well.* [Lambert et al. 2006, emphasis added]

The EA also argues that the Proposed Action is justified and necessary because cougars are ostensibly limiting ungulate populations. Prey populations are influenced by a variety of factors, including but not limited to climate, human activity, habitat changes, and predation. However, the EA provides no substantive evidence that mountain lions are limiting ungulate populations in Oregon. Instead, it recites the results of several unpublished studies and reported levels of ungulate mortalities due to cougar, which are wholly insufficient for assessing population level impacts of cougar predation. Moreover, even if the EA documented that cougars were limiting ungulate populations there is no evidence that the Proposed Action would alleviate this concern. As the Cougar

Management Guidelines (CMGWG 2005) state, indiscriminate killing of cougars “to benefit wild ungulate populations is not supported by the scientific literature.”

### **Population Model**

To justify the Proposed Action the EA relies heavily on a cougar population estimate offered by ODFW (2006) that several noted cougar experts have determined is inadequate for the purposes for which it is being used by ODFW and WS. ODFW uses a deterministic model developed by Keister and Van Dyke (2002). This model does not meet the criteria for assessing cougar populations as put forth in the Cougar Management Guidelines (CMGWG 2005). It does not provide any analysis of the sensitivity of the model. i.e. there is no range or confidence level provided. Deterministic population models are not appropriate or suitable for predicting the size of a cougar population over the period of several decades because these models are susceptible to unacceptable rates of errors. The model relies heavily on levels of human-caused mortality such as harvest indices as well as sighting and complaint reports from the public that are known to be inaccurate indices of cougar numbers. Moreover, the model’s approach of extrapolating across regions the cougar density estimates obtained from small scale studies is faulty in that it will overestimate cougar densities (Smallwood 1997). Our arguments are supported by the Cougar Management Guidelines (CMGWG 2005) and by comments on the 2005 Draft Oregon Cougar Management Plan provided by Drs. Paul Beier and Becky Pierce (letters attached). Consequently, the EA’s reliance on the population model developed by Keister and VanDyke (2002) to assess the need for and potential impacts of the Proposed Action is indefensible and does not support the justifications provided for the Proposed Action.

### **Potential Impacts on Cougar Populations and Biodiversity**

The EA dismisses that there could be any significant impacts on either cougar populations or biodiversity. This summary conclusion is inappropriate because it ignores the body of evidence that suggests that ecosystem health is strongly influenced by the

structural and functional role of cougars in the system, that the reduction or extirpation of cougars can result in negative consequences to biodiversity as discussed below, and that the Proposed Action could impact cougar populations in Oregon, as well as in other adjoining states where populations are known to be in decline (Lambert et al. 2006).

The cougar is the only large native obligate carnivore sustaining viable populations across most of the western United States (CMGWG 2005). Cougars are considered an important umbrella species (Beier 1993, Logan and Sweanor 2001) and are an indicator species for habitat connectivity. Cougars strongly influence energy flow in ecosystems and have a greater influence on ecosystem processes than their mere numbers would suggest and therefore meet the criteria for a keystone species (Logan and Sweanor 2001). As a top level carnivore, cougars play an integral role in maintaining the integrity of the natural landscape, and their removal can lead to significant ecological alteration and a loss in biodiversity and ecological integrity (Terborgh et al. 1999, Ripple and Beschta 2006). The removal of or abandonment by cougars has been shown to have devastating effects on native vegetation (Terborgh et al. 1999, Ripple and Beschta 2006). The unpredictable “domino effect” of removing or seriously diminishing the population of a species like the cougar is ecologically perilous and must be considered by WS.

Cougars need not be completely removed from an area to have cascading effects on its ecosystem. Rather, the decline of a cougar population below some threshold size may result in decreased species diversity, triggering an ecological chain reaction that ends with degraded or simplified ecosystems (Souček et al. 2005). Because cougars are considered a strongly interactive species wildlife agencies should strive to maintain population sizes that are ecologically effective rather than simply those that are minimally viable (Souček et al. 2005):

[C]onservation plans should contain a requirement for ecologically effective population densities; these are densities that maintain critical interactions and help ensure against ecosystem degradation. This goal replaces the de facto nonecological practice of requiring only the attainment of minimum viable populations. ...Ecosystems are complex and always changing. For these reasons, conservation should facilitate

extensive spatial access for highly interactive native species, according to their needs and ecological opportunities. In particular, highly interactive species...should be given the benefit of the doubt in our management and recovery efforts.

To our knowledge, neither ODFW nor WS has determined minimum viable population for cougar populations in Oregon, or ascertained how many cougars are required to maintain ecological effectiveness.

Cougars require large swaths of connected habitat to survive. The western U.S. has experienced a rapid increase in human populations and development in areas inhabited by cougar, exacerbating loss and degradation of cougar habitat (Beier 1996), increases in conflicts between domestic animals and cougars (Torres et al. 1996), and public safety incidents (Beier 1991). Development and fragmentation of wildlife habitat threatens to sever the linkages between core habitat areas, thereby isolating cougar populations. Isolation prevents interchange among neighboring populations, threatening loss of genetic heterozygosity as a result of inbreeding, which eventually leads to extinction.

Human-caused mortalities in those habitat fragments may pose the most serious threat to long-term cougar viability (Murphy et al. 1999). Beier (1993) suggested that a minimum of 1,000 to 2,200 square kilometers is necessary to prevent localized extinctions of cougars, provided that connectivity with neighboring core areas is maintained. Placement of roads across cougar habitat also divides populations, allows greater access by humans, and greatly increases the likelihood that vehicles will kill or maim lions and their prey. In Oregon, human populations increased 20.4 percent from 1999 to 2000 and have increased an additional 5.1 percent since 2000.

Habitat loss and overkill have been identified as the primary factors that can lead to the endangering of cougar populations (Logan and Sweanor 2001). While these two factors affect a multitude of species, the low fecundity of cougars and their need for expansive ranges makes them particularly vulnerable to local and regional extinctions. However, despite the scientific recognition of their ecological importance, and in the face of continuing loss, degradation, and fragmentation of their habitat, most government

agencies charged with wildlife management continue to make landscape-level decisions regarding cougars that focus on lethal removal rather than on conservation (Torres et al. 2001, Logan and Sweanor 2001). Miller et al. (2002:206) cautioned that:

If we continue to manage carnivores without considering the indirect effects on habitat quality and species diversity, we will undoubtedly continue to alter the structure and function of an area in ways that we may later regret. We contend that it is not a question of whether or not carnivores play an important role [in ecosystem health]. It is a question of how they play their role.” Maintaining self-sustaining populations of cougars and identifying those populations at risk is critical not only to the species but also to the ecosystems in which they reside.

The EA also fails to consider that since cougar populations in Oregon are connected to those populations in California, Idaho, Nevada and Washington that any analysis of potential impact of undertaking the Proposed Action must consider the impacts on the populations overlapping with these neighboring states. Lambert et al. (2006) found cougar populations were declining in Washington and Idaho precisely due to expanded predator control efforts and increased human-caused mortality of cougars. However, the EA does not incorporate their findings in its assessment of potential impacts and therefore does not reflect the best available information.

In sum, the EA fails to adequately consider the impacts of the Proposed Action on either cougar populations or on biodiversity. Moreover, due to the use of an inappropriate model and faulty assumptions about the relationship between reported cougar conflicts and cougar population size, the Proposed Action, if undertaken, could result in significant impacts to cougar populations, biodiversity and even human health and well-being.

## **Conclusions**

The *Environmental Assessment: Wildlife Services' Implementation of the 2006 Oregon Cougar Management Plan* is fatally flawed. The EA does not utilize the best available science, neglects to investigate alternative hypotheses for why the number of reported human-cougar conflicts have increased, incorporates a flawed and inappropriate

cougar population model, and fails to consider the potential impacts of the Proposed Action on cougar populations in Oregon and in adjoining states, on biodiversity, and on human health and well-being. We therefore oppose the Proposed Action. Federal law must be followed and it is mandatory that an Environmental Impact Statement be prepared to accurately consider the impacts of the Proposed Action on cougar populations, biodiversity and human health and safety.

Sincerely,

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Conservation Biologist

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