

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION

Species: Mountain Lion
Region: 5
Hunting Districts: 530/590
Year: 2019

1. Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).

Increase the total mountain lion quota in HD530/590. The total quota was last changed in HD530/590 in 2018-19 (Table 1).

Change From:

General Lion Licenses

Harvest Quota: 10 Any Legal Lion.
Dec 01-Apr 14

Change To:

General Lion Licenses

Harvest Quota: **15** Any Legal Lion
Dec 01-Apr 14

Table 1. Mountain lion quotas, harvest and season closure dates for HD 530/590, 1996-97 through 2018-19 season.

Season	Total Quota	Harvest			Quota Filled	Date Closed
		Male	Female	Total		
1996/97	3	0	0	0	No	
1997-98	3	1	2	3	Yes	Jan-15
1998-99	5	1	1	2	No	
1999-00	5	3	1	4	No	
2000-01	5	1	1	2	No	
2001-02	5	1	2	3	No	
2002-03	5	1	0	1	No	
2003-04	5	0	1	1	No	
2004-05	5	1	3	4	No	
2005-06	5	1	0	1	No	
2006-07	5	3	1	4	No	
2007-08	5	2	0	2	No	
2008-09	5	3	0	3	No	
2009-10	5	4	1	5	Yes	Feb-18
2010-11	5	0	0	0	No	
2011-12	5	2	3	5	Yes	Dec-10
2012-13	5	3	2	5	Yes	Feb-23
2013-14	5	4	3	7	Yes	Feb-1
2014-15	8	4	1	5	No	
2015-16	8	1	0	1	No	
2016-17	8	2	3	5	No	
2017-18	8	3	5	8	Yes	Jan -17
2018-19	10	4	7	11	Yes	Jan-27

The 1996/97 season was the first year that HDs 530 and 590 were grouped together as a separate lion management area. The quota was set at 3 lions for the 1996/97 and 1997/98 seasons but was increased to 5 lions (no female sub-quota) beginning with the 1998/99 season. In 2013-14, we went over quota with 4 males and 3 females harvested and the season closed on February 1, 22 days earlier than the previous

season. In 2014-15, 4 males and one female were harvested. The males were 1, 2 and two lions' age couldn't be determined but the female was 9 years old. In 2015-16, one male lion was harvested and was 4 years old. In 2016-17, 2 male lions and 3 females were harvested. The males were aged 2 and 4 while the females were two yearlings and a 3-year-old. In 2017-18, 3 male lions and 5 females were harvested. The males were aged at 1, 2 and 5 years old while the females were two yearling, one two-year old, one eight-year old and one unknown age. In 2018-19, 4 males and 7 females were harvested.

Prior to the 1988/89 season no mountain lions had been harvested from either HD 530 or 590. Since the 1988/89 season 82 lions (45 males, 37 females) have been taken with 57% (47 of the 82 lions) coming in the last 8 seasons. Forty-two of the 82 (51%) hunter killed lions have come from HD 530. Forty-three lions have been killed by hunters in HD 590 – with 29 of the 43 (67%) being taken in the last 6 years. Sightings of lions and lion sign have been increasing along the Musselshell River and in the Bull Mountains in recent years. Lack of reliable snow cover and the broken ownership (i.e. many different landowners) are the major impediments to harvesting lions in the Bull Mountains. A nuisance lion was killed in HD 590 in May of 2008 and another in December 2010. Increasing the quota will allow more harvest if/when snow conditions are favorable. Landowners and sportsmen in the area support an increased lion harvest, and FWP would like to keep lion conflicts to a minimum in this area.

The rate of lion harvest (lions killed/day of season) can be an indicator of population size or trend. While the current lion season runs through April 14 unless the quota is filled, prior to 1998 lion season ended on February 15 each year. Therefore, in order to compare harvest rates over time only the period between December 1 and February 15 can be evaluated. In HDs 530/590 harvest rates remained steady through 2009 then started to increase (Figure 1). These data would suggest that lion densities may be increasing but remain near the low end of the density gradient. The quota of 10 lions may be low.

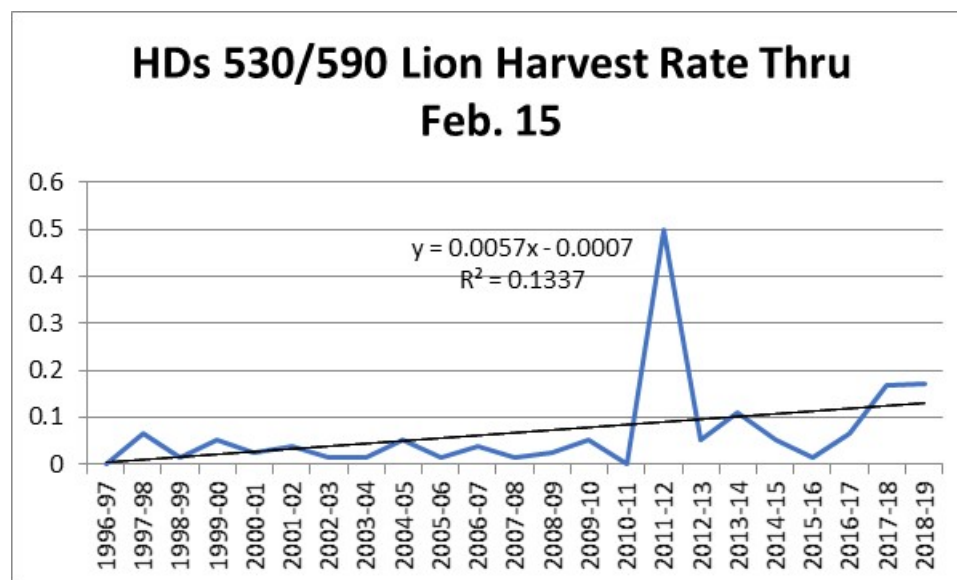


Figure 1. Lions harvested per day in HDs 530-590 From December 1 through February 15th 1996-2019.

2. What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.

The objective of the change is to maintain the lower number of landowner complaints about mountain lions around their buildings. We achieved this lower number in recent years following quota increases. Lion harvest, especially in the prairie environment, is likely more a function of good snow conditions than lion population size. 2011 was a big snow year and there were a lot of lions killed in these districts. 2014 was also a pretty good snow year. Historically, 1996-97 was a good snow year and there was no lion harvest. So, I think it's fair to say that lion numbers have increased in HD530/590 in the last couple of

decades despite the lack of significance of the trend line. This winter the lion season closed before this area had any snow across most of 530/590. The early season closure may indicate an increasing mountain lion population in these districts.

3. How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc.

Success will be measured by maintaining the lower number of landowner complaints about mountain lions around their buildings. We achieved this lower number of complaints in recent years following previous quota increases. Success will also be measured by using lion hunters to manage mountain lions and nuisance mountain lions in these hunting districts and not having to take that recreational opportunity away by using Wildlife Services or FWP to deal with nuisance mountain lions.

4. What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).

The regional objective is to maintain healthy mountain lion populations and to maximize a landowner's ability to manage lions in a manner that is compatible with his livestock operation. Increasing the quota will allow more harvest if/when snow conditions are favorable. Landowners in the area support an increased lion harvest, and FWP would like to keep lion conflicts to a minimum in this area. Adjacent hunting districts in Region 7, with similar habitats, have also seen an increase in mountain lion harvest in recent years and have increased their quotas accordingly.

5. Provide information related to any weather/habitat factors that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).

Snow condition survey information: The winter of 2017-18 was ideal for lion hunting and 8 lions were harvested and the season closed Jan. 17. The earliest season closure since the winter of 2010-11. The winter of 2018-19 was very mild through January and then had significant snow fall and cold temperatures the rest of the winter. The season closed January 27 which means most of the lions harvested this winter were taken when there was minimal snow for tracking.

Describe access problems related to change, etc.: Sightings of lions and lion sign have been increasing in the Bull Mountains and along the Musselshell River in recent years. Lack of reliable snow cover and the broken ownership (i.e. many different landowners) are the major impediments to harvesting lions in the Bull Mountains and along the Musselshell River.

Overwinter survival information (i.e. bad winter lost what % of population): Winter severity doesn't appear to be a factor in this population's trend. Whitetail and mule deer numbers are also up in these two hunting districts providing an abundant prey base.

6. Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).

No comments have been received in opposition of the proposal from landowners or sportsmen. This proposal was presented to the area wardens. No conflicts with landowners, sportsmen or other members of the public are anticipated.

Submitted by: Ashley Taylor

Date: 3/23/2019

Approved:

Regional Supervisor / Date

Disapproved / Modified by:

Name / Date

Reason for Modification: