

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

Species: Mountain Lion

Region: 3

Hunting District: LMUs: 301, 302, 314, 317, 319, 321, 322

Year: 2026

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

- For LMU 301: decrease the **FEMALE** quota from 7 to **4** AND the **MALE** quota from 13 to **6**.
- For LMU 302: decrease the **FEMALE** quota from 6 to **2** AND the **MALE** quota from 4 to **2**.
- For LMU 314: decrease the **FEMALE** quota from 4 to **2** and the **MALE** quota from 7 to **4**
- For LMU 317: decrease the **FEMALE** quota from 4 to **1** (male quota unchanged)
- For LMU 319: decrease the **FEMALE** quota from 2 to **1** AND the **MALE** quota from 3 to **2**.
- For LMU 321 decrease the **FEMALE** quota from 1 to **0** (male quota unchanged).
- For LMU 322: increase the **MALE** quota from 4 to **5** (female quota unchanged).

In 2023 the Fish & Wildlife Commission implemented quotas to affect a 40% reduction in mountain lion numbers in select LMUs. Within Region 3 these LMUs included: 302, 304, 314, 317, 320, 380. In 2024 the Fish & Wildlife Commission approved the proposal to implement Male and Female quotas in all Region 3 LMU's, thus doing away with female subquotas. Additional background information:

- LMU 301: from 2015-2021, there was a quota of 8 lions with a female subquota of 4. This was reduced to 7 with a female subquota of 3 in 2022. The quota was increased to 20 lions in 2023 by the Fish and Wildlife Commission (7 female, 13 male). This proposal is to reduce the total lion quota to 10 lions (female quota = 4, male quota = 6) for 2026.
- LMU 302: in 2022 male and female specific quotas were implemented with a female quota of 3 and a male quota of 2. In 2023 this quota was increased to a female quota of 6 and a male quota of 4.
- LMU 314: from 2012-2021 the female subquota was 2 with a total quota of 6; in 2022 the total quota was changed to 5 with an unchanged female subquota; in 2023 the female subquota was increased to 4 with a total quota of 11. In 2024, a female quota of 4 was adopted with a male quota of 7.
- LMU 317: from 2012-2022 the female subquota was 2 with total quota of 4; in 2023 the female subquota was increased to 4 with a total quota of 7. In 2024 a female quota of 4 was adopted with a male quota of 3.
- LMU 319: since 2014 there has been a female sub/quota of 2 with a total quota of 4 lions (2014-2021) and 5 lions (2022-present).
- LMU 321: from 2015 through 2023 this district was managed as a total quota with a female subquota. During this time total quota was 3 with a female subquota of 1. In 2024 season structure was altered to include a separate male and female quota of 2 males and 1 female.
- LMU 322: The male harvest quota has been maintained at 4 since 2022. The current harvest limit of 4 is at the low end of the male harvest range from the LMU over the past 15 years. During that time, male harvest ranged from 4-12 and averaged 6.4. Prior to the 2022 hunting season, potential male harvest was reduced to increase survival of some males to older age class. Monitoring of ages from harvested male lions indicates that objective has been achieved. During all years the male harvest quota has been maintained at 4, the number of male harvests has met or exceeded that limit. A portion of lion hunters have expressed an interest in additional male harvest opportunity and see that opportunity as currently sustainable.

2. Why is the proposed change necessary?

The proposed quota adjustments are necessary to ensure population objectives established by the Commission in 2023 are on target. Mountain lion management direction in the Southwest Mountain Lion Ecoregion of Region 3 since 2023 has been establishing quotas to affect a 40% reduction in lion numbers over a 6-year period in select LMUs. At this time there was limited information on the mountain lion population in this area. Estimates of lion numbers, population growth, and estimates of harvest needed to reach the desired effect size were based on assumed harvest rates from the Northwest Ecoregion. Since that time our information on mountain lions in the Southwest Ecoregion has greatly advanced (see section 3). Estimates from work conducted by FWP's Mountain Lion Monitoring Program, harvest information, and age structure of harvested individuals indicate that current realized harvest is affecting an ecoregional population reduction. This reduction is likely comparable to a 40% ecoregional reduction in mountain lions between 2023 and 2028.

Ecoregional harvest within Region 3 has averaged 63 mountain lions harvested annually for the past 3 years of complete data. Current quotas would allow up to 123 total mountain lions to be harvested (not including harvest from limited licenses or super tag). In 2024 no district within the Southwest Ecoregion of Region 3 fully closed to mountain lion harvest prior to the April 14th end of the winter season. If harvest of mountain lions began approaching the current quotas, it would be reasonable to expect severe consequences for regional mountain lion populations beyond the evident population declines currently occurring. Harvest mortality rates will be amplified if high quotas and harvest are maintained on a declining population. Research on harvested lion populations demonstrates that high hunting mortality is largely additive, without compensation from reproduction or recruitment. While local mountain lion populations have been shown to be resilient to harvest pressure, this is largely predicated on immigration from source populations. If regional harvest pressure has created widespread sinks, then this resilience will likely be impaired. Quota reductions are being proposed to accord with Commission direction and maintain chase/harvest opportunity in measure with the lion population in these LMUs. Quota adjustments are not expected to meaningfully reduce harvest that is currently being realized in the ecoregion, but to bring quotas closer to harvest levels that are biologically reasonable. The proposed quota reductions would reduce the overall quota from 136 to 110 lions; however, this quota would still be 75% greater than the average realized harvest over the past 3 years. The proposed overall quota would be higher than those maintained from 2015 – 2020 (Total quota range 97 – 99 lions) in which harvest of mountain lions was maximized.

While all available evidence suggests the mountain lion population is declining at a regional scale, some local areas or LMUs may still have robust lion numbers. In LMU 322 multiple indicators suggest local lion numbers have been stable or possibly growing. In this case it appears that the population could provide additional harvest opportunity. Therefore, an increase in quotas is proposed here.

3. 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).

Since the mid-1990's (i.e. prior to any formal FWP lion conservation strategy), Region 3 has practiced lion management that maintains populations at sustainable levels while providing for maximum recreational opportunity. This was accomplished by using harvest trend as a surrogate for the collective regionwide lion population and employing a consistent population management objective over several years. When an apparent population level response is detected in the harvest, a change in population management objective is recommended (Fig. 1).

In 2023 the Fish & Wildlife Commission implemented quotas to affect a 40% reduction in mountain lion numbers in select LMUs over a 6-year period. Within the Southwest Ecoregion portion Region 3 these LMUs included: 302, 304, 314, 317, and 320. At this time there was limited information on the mountain lion population in Southwest Montana. Estimates of lion numbers, population growth, and estimates of harvest needed to reach the desired effect size were based on assumed harvest rates from the Northwest Ecoregion at the time.

FWP's Mountain Lion Monitoring Program conducted Spatially Explicit Capture Recapture (SECR) sampling in the Southwest Ecoregion during the winters spanning 2023-2025. Estimates from the 2023/2024 winter were not feasible due to low recapture rates. However, in the winter of 2024/2025 recapture rates were the highest ever obtained by the program, allowing tighter estimates of lion numbers and density. Further refinements were made to the lion habitat model incorporated in the SECR estimates to better reflect mountain lion winter habitat use, particularly in the Southwest Ecoregion. Based on these estimates the density of lions in the Southwest study area was 0.8 independent lions/100km² (90%CI: 0.73 – 0.92/100km²). The median estimate in 2023 of lion density in the Southwest Ecoregion was 1.47/100km², approximately 84% higher than estimated in the study area in 2025. The SECR based estimate from 2025 represents an unexpectedly low current density of mountain lions. For reference, out of 31 study areas/treatment periods for which estimates were made of either resident adults or independent lions across the West, only one estimate was lower than that in the SW MT study area (Table 1). Extrapolations from the study area to the ecoregion and population estimates based on an Integrated Population Model are still being tested and refined. However, model runs to date indicate a limited lion population and that current harvest levels are affecting a decline in the population congruent with a 40% population decline by 2028.

A growing divergence between harvest numbers and quotas, particularly since 2021, indicates that current harvest pressure is negatively impacting lion populations. Figure 1 shows the harvest and quota trends from 1995 through 2025 in those LMUs within Region 3 that occur in the Southwest Ecoregion and the major management trigger points. A growing divergence between total- and female harvest from total- and female quotas, respectively, suggested a shift in management in 2002 from maximizing recreational opportunity to allowing the lion population to rebound (Management Trigger #1). After 11 years of more conservative quotas and harvest, management objective again switched to maximizing recreational opportunity at sustainable population levels in 2013 (Management Trigger #2). There was significant divergence between the total- and female quotas and total- and female harvest, respectively, but both the female and total harvest remained stable from 2013-2021, suggesting harvest levels were maximized at that time. The 2021 male lion harvest was only 73% of that observed the previous year and has not rebounded since, despite quotas being increased. This suggests the mountain lion population was no longer able to sustain harvest levels. Declining harvest and increasing quotas has resulted in an increasing divergence between harvest and quotas, such that quotas were 123% higher than realized harvest in 2024. This growing discrepancy suggests mountain lion populations have been declining.

Regionally, there has been a significant reduction in the proportion of harvested males that are 6 years old or greater. Since 2020 only 3% of males have been aged ≥ 6 years old (90% CI: -.4% to 2.8%), compared to the long-term average back to 1995 of 10% (90% CI: 6.5% to 16.2%). A similar reduction in the proportion of females harvested at ≥ 6 years old has occurred. In the past 5 years 12% of females have been aged ≥ 6 years old (90% CI: 9.4% to 21.7%), compared to the long-term average of 19% (90% CI: 13.4% to 32.2%). A decline in the proportion of ≥ 6 years-olds in the harvest has been associated with a corresponding decline in lion survival rates, suggesting current harvest levels have been negatively impacting survival and populations. Based on these harvest trends it appears harvest pressure has resulted in declining regional mountain lion abundance since 2021, if not earlier.

Specific LMU information:

- LMU 301: When the quota total was 8 (2015-2021) and average of 6 lions a year were harvested. The quota was reduced to 7 lions in 2022, and this quota was met March 1st with a harvest of 7 lions (3 female, 4 male). The quota was raised to 20 in 2023, but harvests did not increase. In 2023, hunters harvested 6 lions (1 female, 5 male). In 2024, hunters harvested 5 lions (2 female, 3 male). This winter season (as of 3/25/26) hunters harvested 4 lions (2 female, 2 male). Ages of harvested lions averaged 3.2 from 2022-2024 with a minimum age of 1 year old and maximum age of 8.
- LMU 302: High quotas since 2015 have made this district effectively unlimited for mountain lions. Currently quotas allow for up to 10 lions (6 female, 4 male). These quotas were based on 2023 lion population projections. However, recent information and historic harvest indicate a more limited population. Females harvested at 6 years old or older comprised 26% of the harvest on average from 2015 through 2021, however no females in this age class have been harvested since this time. No males 6 years old or older has been harvested since 2015 when quotas were increased. Much of the interest in maintaining these high quotas was over concerns for a bighorn sheep reintroduction project. However, since the reintroduction a total of 37 bighorn have been marked and collared. Data from these individuals indicates very low levels of mountain lion predation (only 2 post-reintroduction). Mountain lion predation appears to be having no significant impact on this bighorn sheep population which is estimated to be increasing by 27% annually. During the past 3 seasons on average 2 males and 2 females are harvested annually. The proposed quota would sustain historic levels of harvest, but be more biologically reasonable.
- LMU 314: In 2023, 2 male and 2 female lions were harvested. In 2024, 1 female and 5 males were harvested. Although snow conditions were less ideal in 2023, snow conditions were good during much of the 2024 season. The number of lions encountered per day by hunters that harvested a lion in HD 314 has followed a general downward trend since 2009. This, combined with fact that increased quotas were not met in the past two years suggests that the current quotas are likely not sustainable long-term.
- LMU 317: In 2023, 2 male and 2 female lions were harvested. In 2024, 0 females and 3 males were harvested. Although snow conditions were less ideal in 2023, snow conditions were good during much of the 2024 season. The number of lions encountered per day by hunters that harvested a lion in HD 317 has followed a general downward trend since 2012. This, combined with fact that increased quotas were not met in the past two years suggests that the current quotas are likely not sustainable long-term.
- LMU 319:
 - During winter 2024-25, lions were captured and collared in LMU 319 as part of MT's lion population study in the SW Ecoregion. Movement data and tracking efforts strongly suggest that the resident population of lions in LMU 319 cannot sustain a 5-lion harvest.
 - The number of females harvested in LMU 319 has declined from an average of 2.2 cats 2016-2020 to 1.2 cats 2021-2025. The female SQ/Q has been 2 during this 10-year period.
 - The percent of harvested males 6 years old or greater has declined significantly during 1999-2023 (Fig. 2). No males 6 or older have been harvested in LMU 319 since 2015.
- LMU 321: this LMU overlaps the area in which estimates of independent lion densities were obtained in 2025. This suggested lions currently occur at very low densities in the area (Table 1). Furthermore, winter lion habitat in this area is more limited than the remaining sample area. A habitat model based on extensive telemetry data indicates this district is largely devoid of suitable winter habitat, with adequate habitat existing in a narrow band along the periphery of the West Pioneers. This suggests a very limited number of lions are ever likely to occur in the area. Two collared male lions did disperse into the area in 2025. Both of these males survived

less than a year. One male was killed by the other collared male. The remaining male was the one lion harvested in the district this season. The number of lions harvested per day of the open season was over 0.35 in 2014, but dropped to the current 0.03 in 2015. This corresponds to the timing of an increase from 1 male to 2 in the quota. On average over the past 3-years the harvest has included 2 males and 0 females. Given the limited habitat it is unlikely that this district can sustain female harvest. The current proposal would maintain historic harvest rates, but avoid unintended consequences of female harvest.

- LMU 339: during LY2024, the female quota of 5 did not fill (only 4 were harvested). The former female subquota of 2 filled consistently over time, in less than 60 days, regardless of snow conditions. Given the LY2024 quota of 5 did not fill, lowering this quota to somewhere between 2 and 5 is reasonable.
- LMU 350: during LY2024 four females were removed from this LMU (quota was set at 2). The removal of this many females will likely impact the near-term sustainability of harvest at the 5-lion level.

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

LMU 302: Harvest was low during this current season. To date, only 1 male and 1 female were harvested in the district this year. However, this was also a historically low snow year. Therefore, this most recent year of harvest was not included in estimates of historic harvest levels.

LMU 314: Lion hunting occurs across a matrix of both public and private lands in HD 314. Although a substantial portion of the winter lion habitat occurs on private lands, many hunters have obtained access to private lands.

LMU 317: Lion hunting occurs on both public and private lands. Many hunters have obtained access to private lands in LMU 317.

LMU 319: Within LMU 319 there is a large swath of big game winter range on Mt Haggin WMA that is closed during the winter season and was assumed to be a reservoir for lions. However, searching of this area by houndsmen and women on contract with the MT Lion Population study last winter has turned up very little evidence of lion movement in this area, dispelling the reservoir concept.

LMU 321: Suitable winter mountain lion habitat is very limited in this district and primarily exist in a narrow band of habitat along the periphery of the West Pioneers. This suggests that winter lion density will be very low in this LMU under any circumstances.

5. 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).

Proposals were discussed at the annual Region 3 lion management meeting in Three Forks on March 26th. A minimum of twenty houndsmen and women, two Region 3 game wardens, and six Region 3 area wildlife biologists were in attendance. Proposed changes were generally either openly supportive or elicited no comment. In LMU 319 there was one comment that the male quota should be lowered further to 1. A commenter suggested that the surrounding districts would also need lower male quotas for this to be successful. An individual asked when we lower quotas to such an extent if we are actually managing

the population. One commentor suggested returning to total and female subquotas with a total quota of 2. In LMU 322 one commentor suggested waiting an additional year before increasing the male quota.

Submitted by: Bozeman biologist Julie Cunningham, Livingston biologist Michael Yarnall, Sheridan biologist Dean Waltee, Dillon biologist Jesse Newby, Butte biologist Vanna Boccadori
Date: 3 April 2026

Approved: Kelly Proffitt
Regional Supervisor / Date

Disapproved / Modified by: _____
Name / Date

Reason for Modification:

Approved: BFW, Game Management Bureau, April 15, 2026

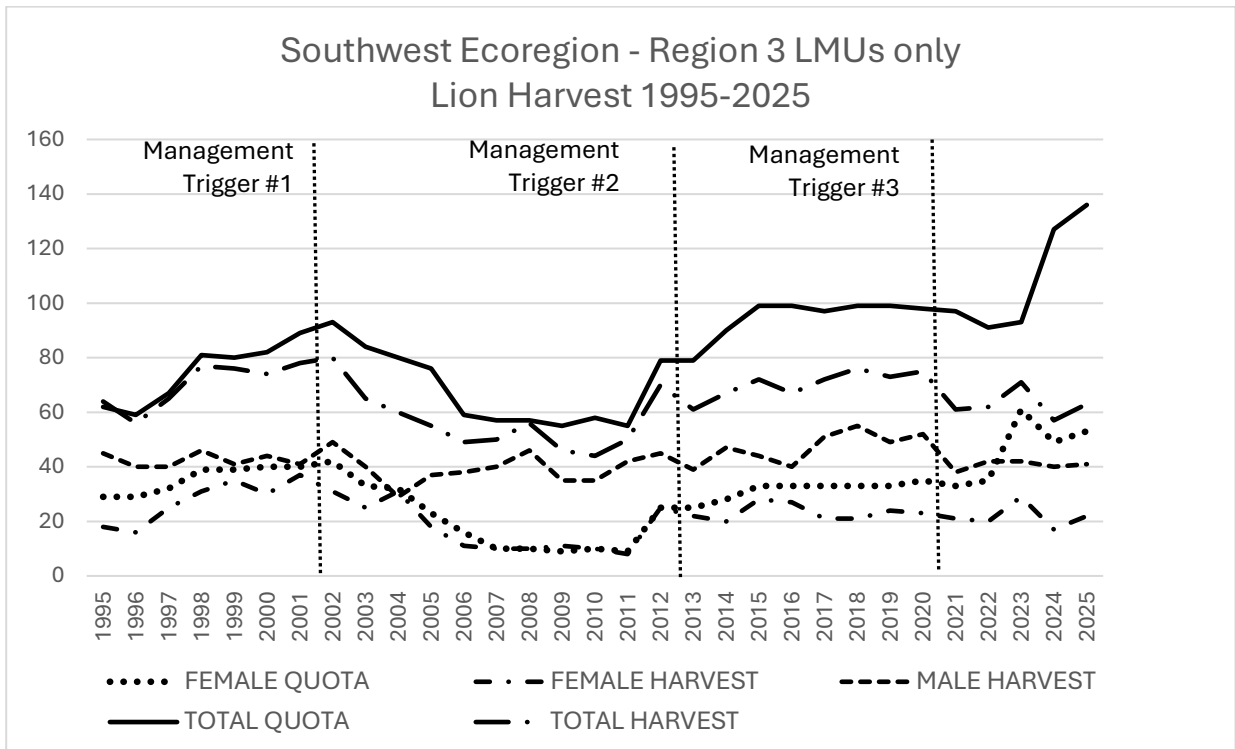


Figure 1. Lion quota and harvest trends for Region 3 LMU's located in the **Southwest ecoregion**, 1995-2025. Management triggers denote apparent population level responses to population management objectives.

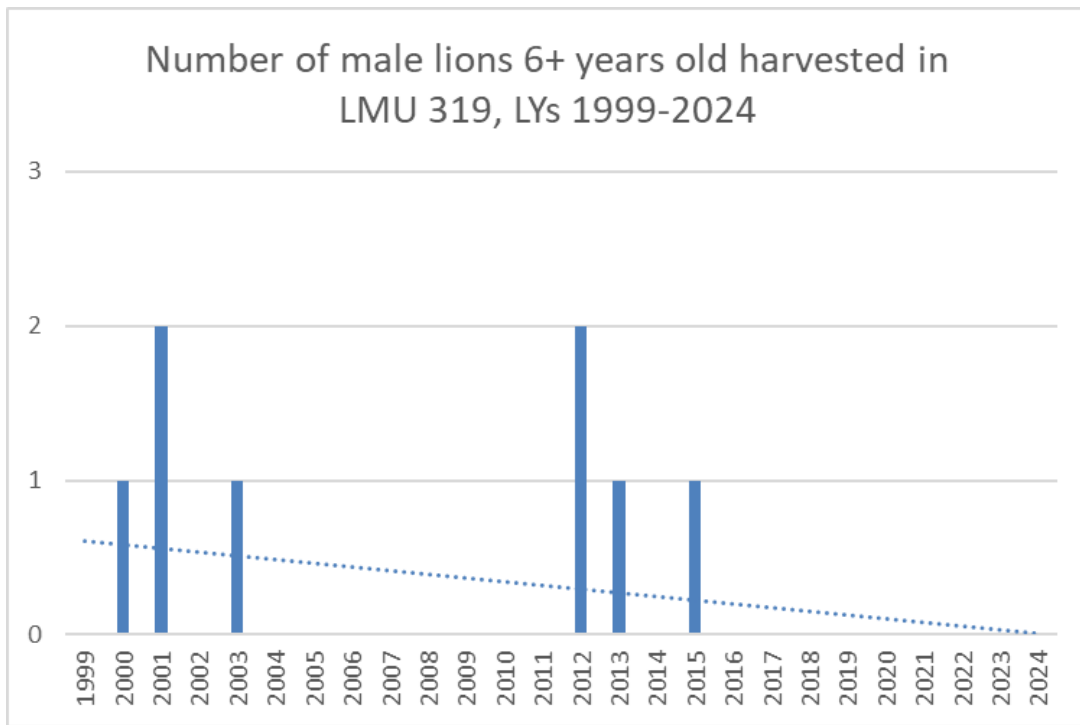


Figure 2. Trend in the percent of male lions harvested in LMU 319 that are 6 years old or greater during 1999-2024. Data presented here is only from those harvested male lions that were able to be aged using cementum annuli aging of the premolar.

Table 1. Estimates of resident adult or independent mountain lion densities for study areas and / or treatment periods in the Western United States. Note that densities estimates are derived using a wide variety of methodologies and assumptions and may not be directly comparable. For example, several studies confined themselves to estimating the density of only resident adults as opposed to all independent lions, which were estimated for the Southwest Ecoregion.

Source	Study Location	Resident/Independent Lions/100 km ²
Proffitt et al. 2015	Montana-Bitterroot 2	5.20
Wilson et al. 2004	Vancouver Island 1	4.95
FWP Monitoring Project 2020	Montana-Libby	4.90
Proffitt et al. 2015	Montana-Bitterroot 1	4.50
FWP Monitoring Project 2021	Montana-Superior	3.60
Stoner et al. 2006	Utah - Oquirrh	2.80
FWP Monitoring Project 2023	Montana-Little Belts	2.80
Beausoleil et al. 2021	Washington-Columbia	2.79
Beausoleil et al. 2021	Washington-Kittias	2.37
Beausoleil et al. 2021	Washington-King	2.34
Choate 1973	Utah-Monroe	2.00
FWP Monitoring Project 2022	Montan-Lincoln	2.00
Ruth et al. 2019	Yellowstone 2	1.98
Beausoleil et al. 2021	Washington-Stevens	1.96
Ross & Jalkotzy 1992	Alberta	1.90
Cooley et.al 2009	Washintong-Central 2	1.87
Hopkins et al. 1986	California	1.75
Wilson et al. 2004	Vacouver Island 2	1.70
Cooley et.al 2009	Washington-Central 1	1.58
Robinson & DeSimone 2011	Montana-Garnet	1.56
Beausoleil et al. 2021	Washington-Okanogan	1.55
Logan et al. 1996	New Mexico 1	1.47
Logan et al. 1996	New Mexico 2	1.47
Logan et al. 1986	Wyoming	1.45
Seidensticker et al. 1973	Idaho	1.33
Quigley & Craighead 2004	Wyoming - NW	1.30
Spreadbury 1989	British Columbia	1.02
Ruth et al. 2019	Yellowstone 1	0.95
FWP Monitoring Project 2025	South-west Montana	0.80
Lindzey et al. 1994	Utah-Southern	0.48

