



COLORADO

Parks and Wildlife

Department of Natural Resources

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MEMORANDUM

TO: Parks and Wildlife Commissioners

FROM: Heather Dugan, Acting Director

DATE: January 6, 2023

SUBJECT: April 2023- March 2024 Mountain Lion Harvest Limit Recommendations

This memo summarizes Colorado Parks and Wildlife (CPW) staff recommendations for mountain lion harvest limits for the April 2023- March 2024 season.

Regular Lion Season

Staff recommends a statewide harvest limit of 674 mountain lions for the April 2023- March 2024 season. This represents an increase of 20 lions from the 2022-2023 season harvest limit. Staff proposes no change to harvest limits for seven of Colorado's eight lion Data Analysis Units (DAUs, Map 1). The West Slope Mountain Lion Management Plan was approved in September of 2020 and consolidated thirteen West Slope DAUs into two larger-sized DAUs; harvest limit recommendations are status quo for a third consecutive year for both NW and SW DAUs.

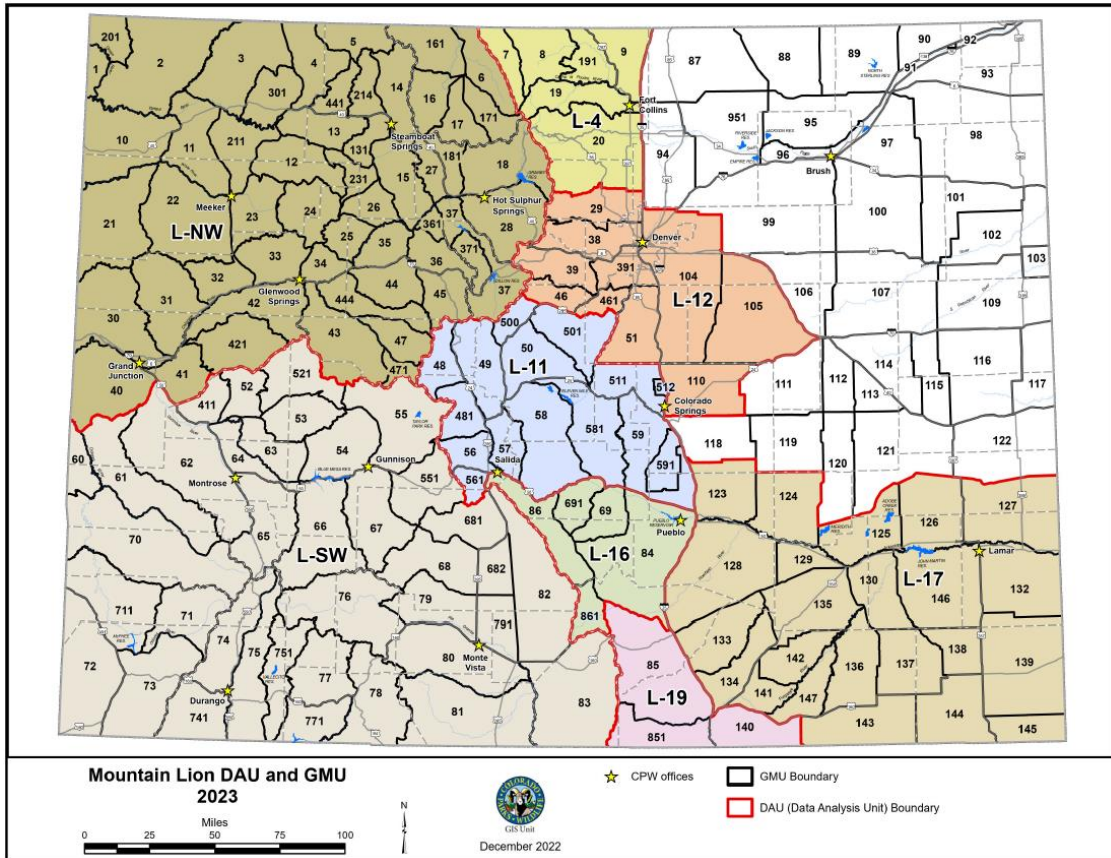
April Lion Season

In 2014, an April season was established to provide for additional lion hunting opportunity in DAUs where harvest, total mortality and female composition objectives were not being met and where an April season was not in conflict with other local resource priorities including sage-grouse lekking and turkey hunting. The only change from last year is the recommended closure of the April season in L-4. For 2023, units with open April 1-30 lion season recommendations are L-12, L-17, the portion of L-11 not included in the Upper Arkansas research project and the Glenwood Springs Special Management Area (GMUs 43, 44, 45 and 444).



Lion harvest limit groups without an April season will open with full harvest limits on November 27, 2023.

Map 1. Map of Colorado mountain lion management areas (Data Analysis Units- DAUs).



Summary of Lion Harvest and Mortality

A summary of 3-year averages (2019-2021) for harvest, total human-caused mortality and total female or adult female composition is presented below for each 2023-2024 lion DAU (Table 1). These metrics are evaluated annually against the respective DAU objectives and are used as the basis for harvest limit recommendations.

In last year’s April 2021- March 2022 lion season, hunters in Colorado harvested 486 lions, including 287 males and 199 females. The proportion of total females in statewide harvest was 41%, which is below the maximum threshold of 45% used in all “stable” management strategy East Slope DAUs. Additionally, statewide harvest mortality and human-caused mortality totals did not exceed objectives.

Table 1. 2023-2024 Mountain Lion Harvest Limit Recommendations by Data Analysis Unit

2023-2024 Colorado mountain lion recommendations, harvest, total human-caused mortality and female proportion data for harvest limit recommendations																		
Region	DAU	DAU Mgmt. Strategy	Harvest Limit				Harvest					Total Human-Caused Mortality					2023 April status recommendation	
			Current Year '22-'23	Proposed Apr '23- Mar '24 Rcmndtn	Harvest Limit Change	'23-'24 Predicted Harvest	3-Year Harvest Average	THRESHOLD		3-Yr Avg % Female in Harvest	Proportion of ADULT FEMALES in prior year harvest	THRESHOLD		3-Year Total Human-Caused Mortality Average	3-Yr Avg % Female in Total Mortality	THRESHOLD		
								DAU Harvest Objective or Threshold				Female Harvest Composition Threshold (Adult F in NW, SW, L19)				Total Human-Caused Mortality Threshold		Female Total Human-caused Mortality Composition Threshold
NW	NW	Stable	243	243	0	204	204	243	NA	12.2%	Not to exceed 22% ADULT FEMALE in H in any year	227.7	NA	269	NA	Closed		
NW	NW	Glenwood SMA	33	33	0	15	15	33	NA	NA	NA	23	NA	NA	NA	Open		
SW	SW	Stable	185	185	0	139	139	185	NA	16.9%	Not to exceed 22% ADULT FEMALE in H in any year	178	NA	284	NA	Closed		
NE	L-4	Stable	30	30	0	22	22	18	31%	NA	not to exceed 45% FEMALES in Harvest	36	40%	20	50%	Closed		
SE/NE	L-11	Stable/Research	43	43	0	36	36	40-42	43%	NA	not to exceed 45% FEMALES in Harvest	48	45%	45	50%	Open in all huntcodes except LE049 per Research goals		
NE	L-12	REDUCE	41	41	0	17	17	Research Obj.	25%	NA	none	37	34%	Research N/A	NA	Open		
SE/SW	L-16	Stable/Research	15	35	(+20)	33	16	35	34%	NA	not to exceed 45% FEMALES in Harvest	20	36%	40	50%	Closed- Research		
SE	L-17	REDUCE	25	25	0	17	17	Research Obj.	34%	NA	none	17	34%	Research N/A	NA	Open		
SE/SW	L-19	Stable	34	34	0	32	32	34	NA	8.6%	3-yr ADULT FEMALE % in harvest not to exceed 20%	39	NA	41	NA	Closed		
NE/SE	L-99	n/a	5	5	0	0	0	n/a	0%	n/a	n/a	1	0%	n/a	n/a	Open		
STATEWIDE TOTALS:			654	674	(+20)	515	498					626						
Total Human-caused mortality includes harvest, control (CPW, APHIS, landowner), roadkills																		

Justification for Changes in Harvest Limits

L-16 (Wet Mountains): An increase of 20 lions is recommended for the next phase of the Upper Arkansas Research Project. The 9-year research plan was approved by the Parks and Wildlife Commission in December 2016 to address deer survival and human-lion conflict response to varied mountain lion harvest levels and called for a low harvest phase in L-16 until the last 3 years of the study. That plan now requires an increase in allowable harvest for the final 3 years to address the human-lion conflict response question. The deer survival response has been sufficiently addressed and continuing that aspect of the study would require an increased harvest of 58 lions versus the recommended increase of 20 lions to explore the human-lion conflict response question. The specific recommendation is to increase the harvest limit from 15 to 35 in GMUs 69, 84, 86, 691 & 861 as a cross-over study design to evaluate if human-lion conflicts increase with increased mountain lion harvest during the final 3 years of the study. This will result in an overall reduction in lion harvest of 127 over the life of the study compared to what would have been allowed had the pre-research harvest limits remained in place and filled each year.

Therefore, staff recommends an increase of 20 lions in the statewide 2023-2024 harvest limits.

Two figures have been included for your information and review as part of this memo:

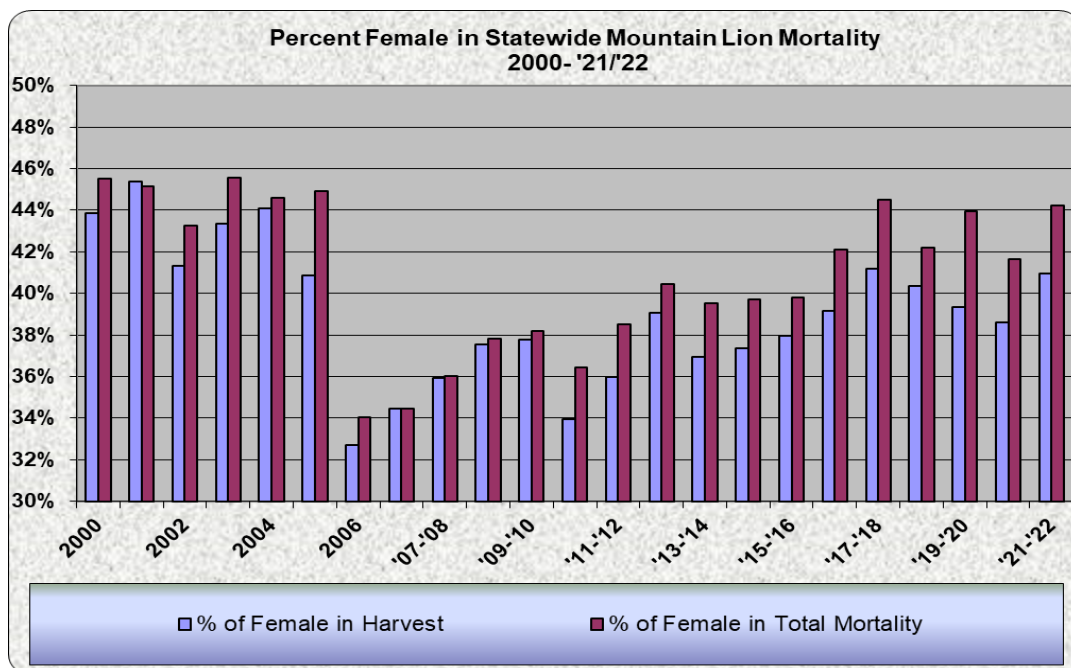


Figure 1. Annual historic female composition in harvest and total mortality. Outreach efforts to voluntarily reduce female harvest began in late 2005.

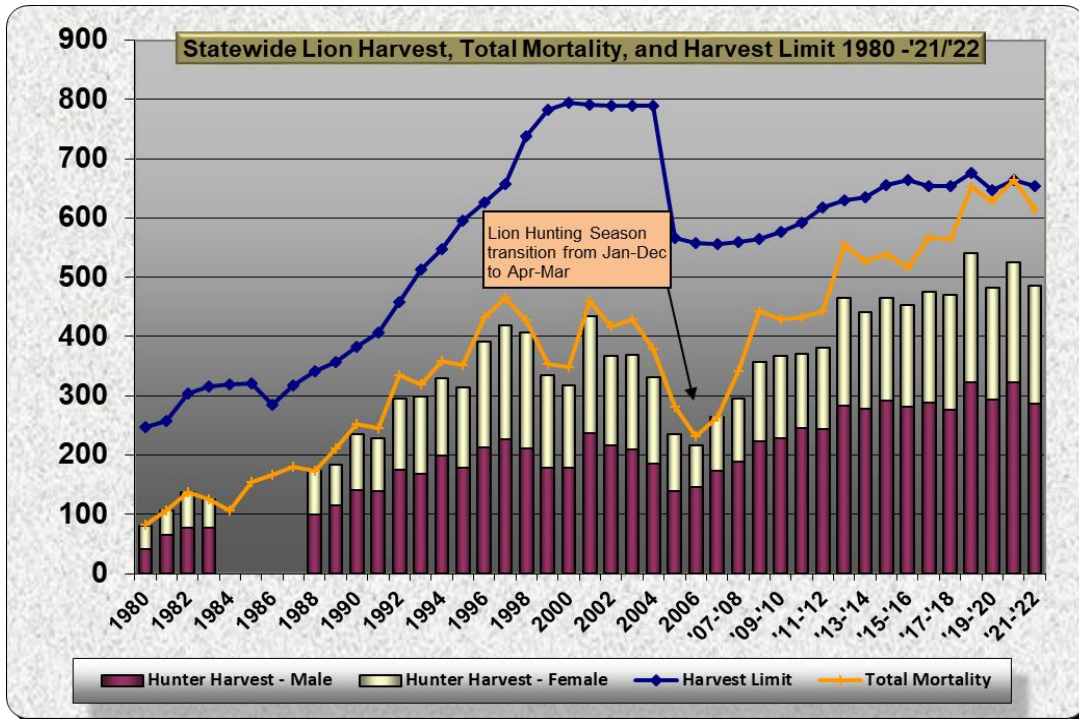


Figure 2. Historic mountain lion harvest limits and reported mortality (1980-present). All Lion Management Plans (LMPs) were revised in 2004 affecting harvest limit levels from 2005-present.