

# Mountain Lion Management Update



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January 2024 PWC Meeting- Denver



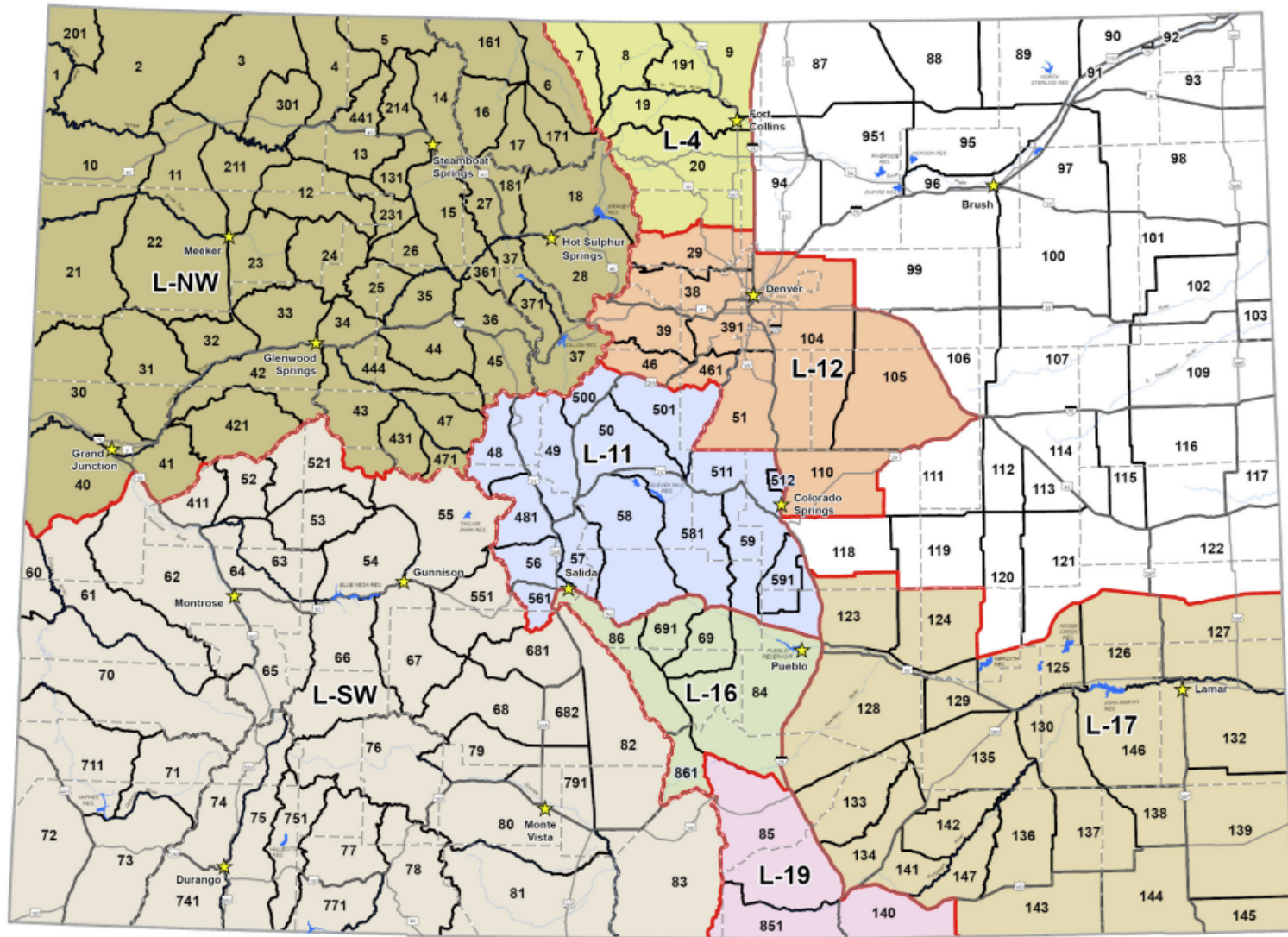
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# Available Mountain Lion Harvest Limits

Unit	Valid Units	Season Dates	Harvest Limit	# Lions Taken	Status	Description
45	45	Nov 18, 2019 - Mar 31, 2020	1	1	CLOSED	Closed April 1-30,
46	46	Apr 01 - 30, 2019 & Nov 18, 2019 - Mar 31, 2020	6	0	Open	
47	47	Nov 18, 2019 - Mar 31, 2020	1	0	Open	Closed April 1-30,
48	48,56,481,561	Apr 01 - 30, 2019 & Nov 18, 2019 - Mar 31, 2020	10	3	Open	
49	49,57,58,581	Apr 01 - 30, 2019 & Nov 18, 2019 - Mar 31, 2020	12	6	Open	
50	50,500,501	Apr 01 - 30, 2019 & Nov 18, 2019 - Mar 31, 2020	10	5	Open	
51	51	Apr 01 - 30, 2019 & Nov 18, 2019 - Mar 31, 2020	7	0	Open	
52	52,411	Nov 18, 2019 - Mar 31, 2020	10	2	Open	Closed April 1-30
53	53,63	Nov 18, 2019 - Mar 31, 2020	10	9	Open	Closed April 1-30
54	54,55,551	Nov 18, 2019 - Mar 31, 2020	7	5	Open	Closed April 1-30
55	see unit 54					Closed April 1-30

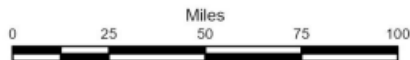


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**Mountain Lion DAU and GMU 2024**

**DRAFT**



GIS Unit  
December 2023

★ CPW offices

□ GMU Boundary

□ DAU (Data Analysis Unit) Boundary



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# West Slope Mountain Lion Plan

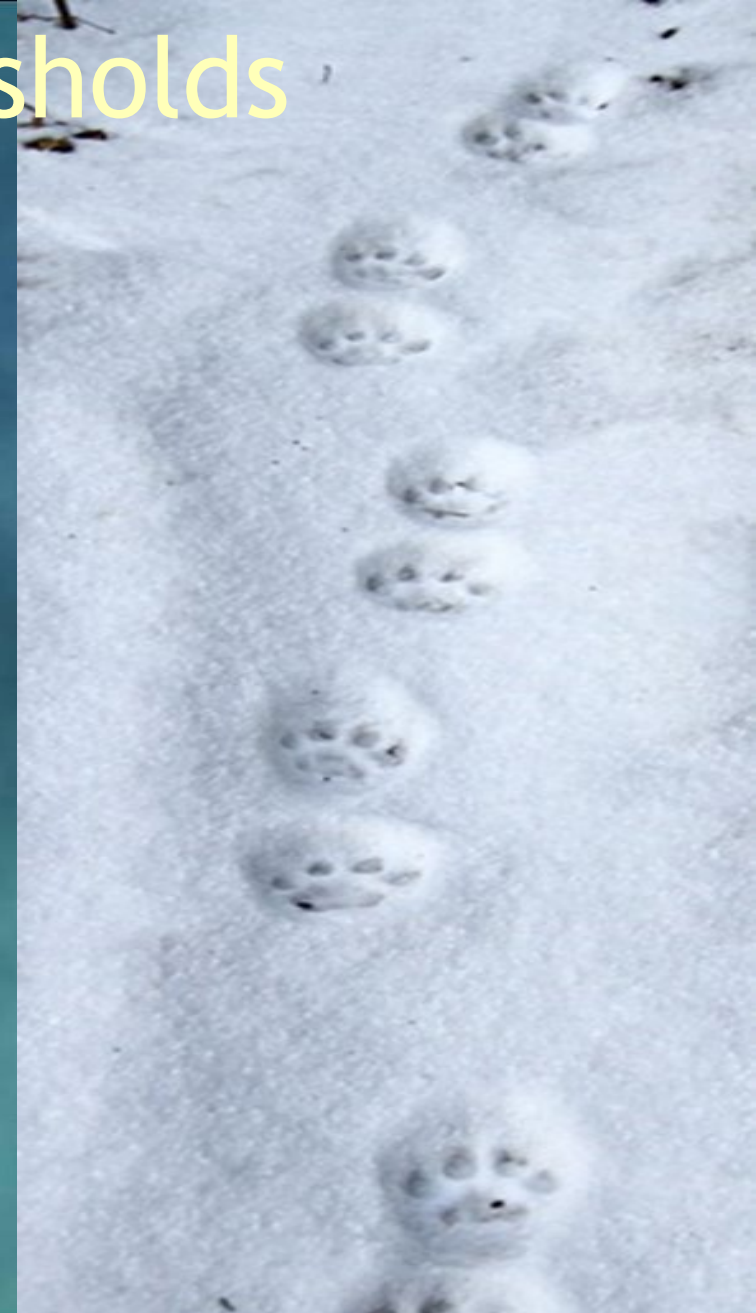
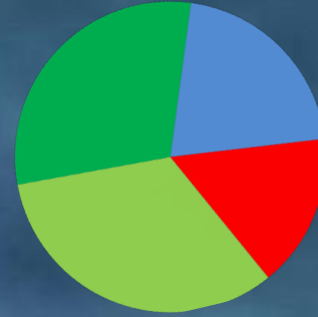
- Larger Scale
- ‘Stable’ population objective
- Two independent management thresholds: evaluated annually and applied to entire West Slope at DAU scale
- Lion Density Monitoring



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# West Slope Plan management thresholds

- The Adult Female proportion in harvest will not exceed 22% of the total DAU harvest composition (in any single year)
- Total human-caused mortality will not exceed 17% of projected lion population in the DAU (using a running 3-year average)
- Both selected to achieve a stable population level
- Both thresholds received broad support from lion advocacy groups



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# East Slope DAUs

- Most plans around 20 years old
- L-19 updated in 2019
- Two DAUs under Research Objectives
- Harvest and Mortality thresholds
- In “stable” objective DAUs
  - 45% or lower female (adult and subadult) proportion in harvest
  - 50% or lower female (adult and subadult) proportion in total mortality



*Currently different than West Slope Plan BUT...East Slope Planning Process underway*



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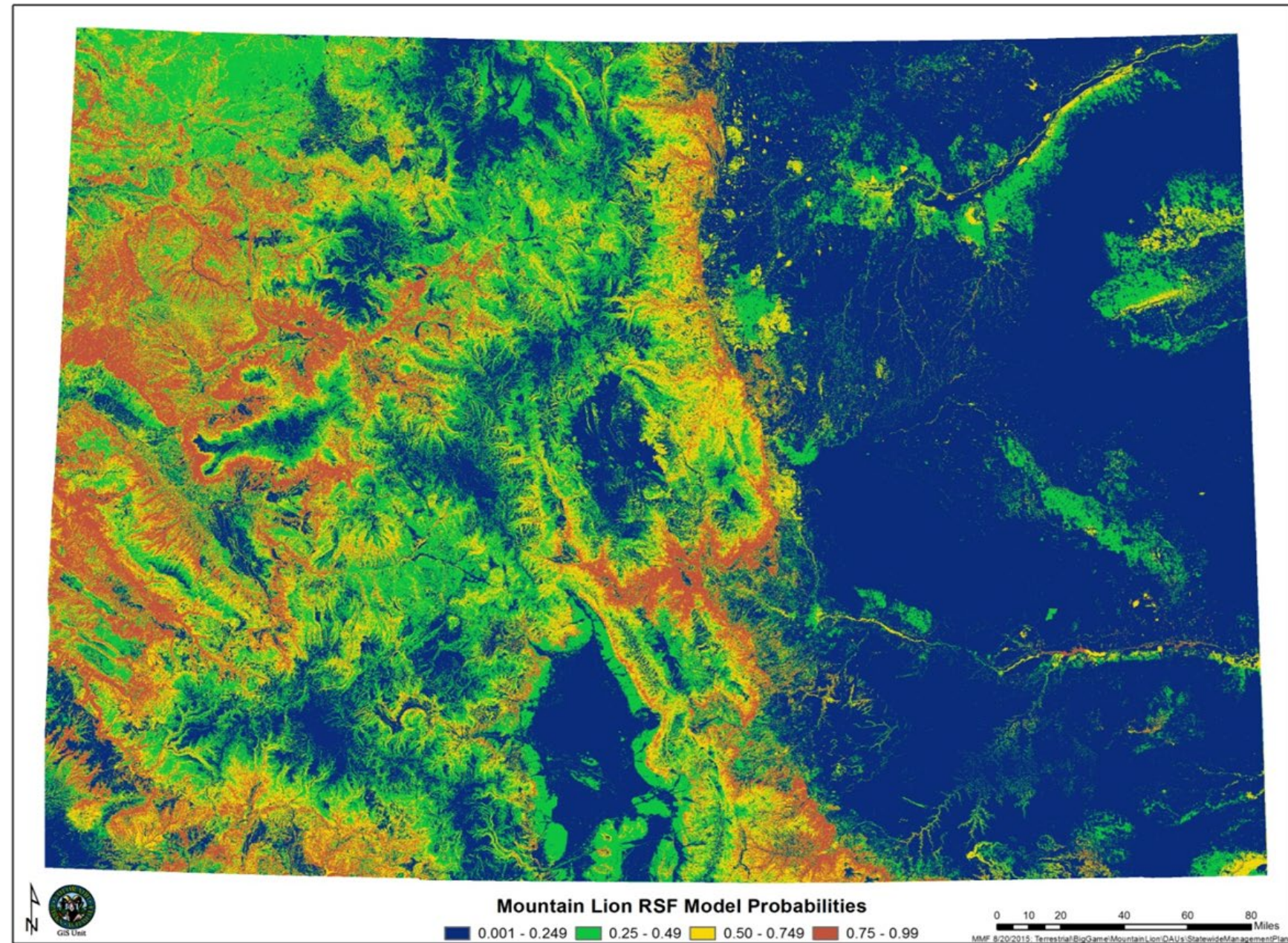
# RSF Model



# Population Projection

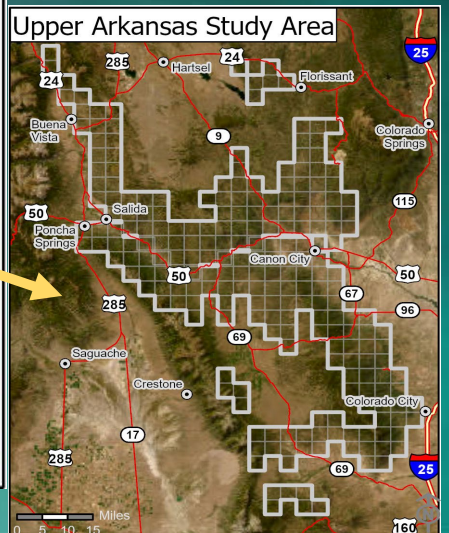
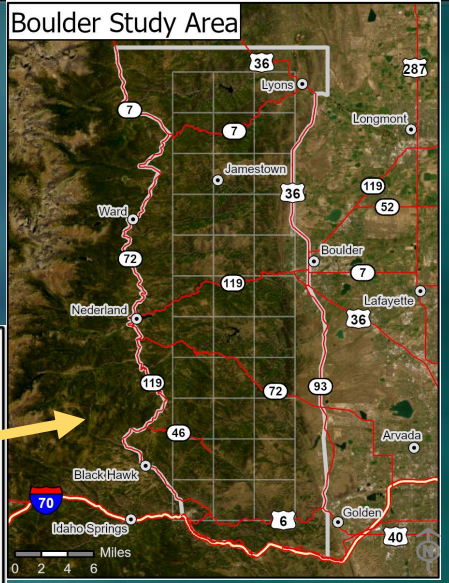
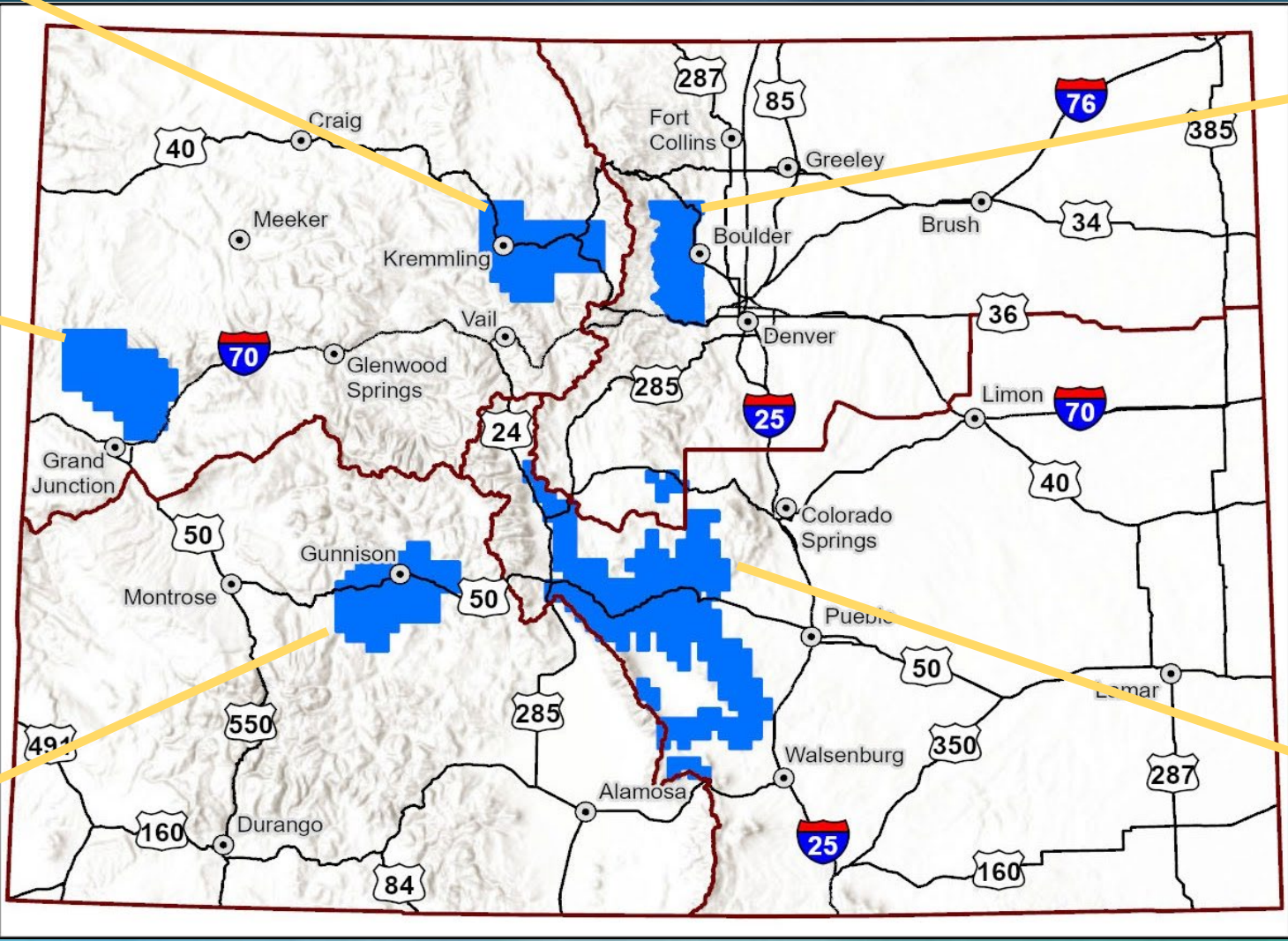
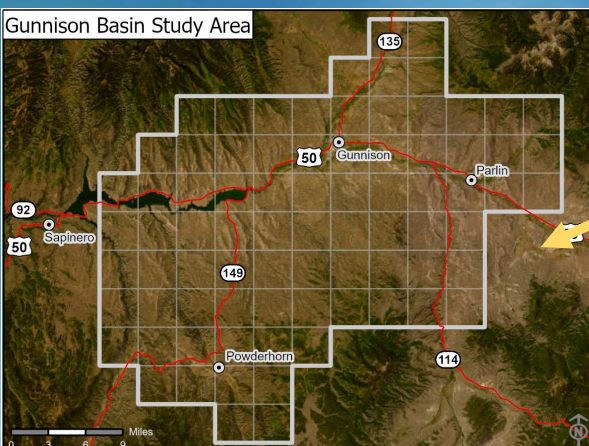
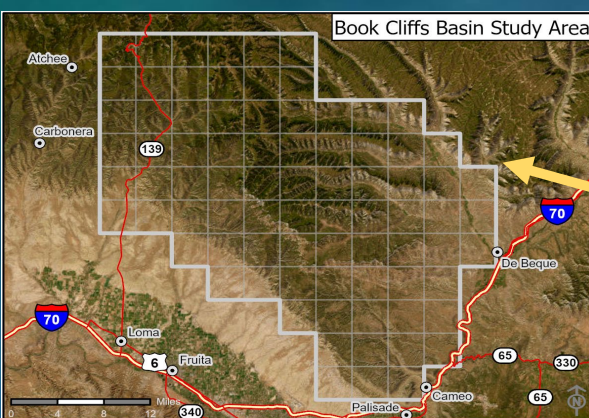
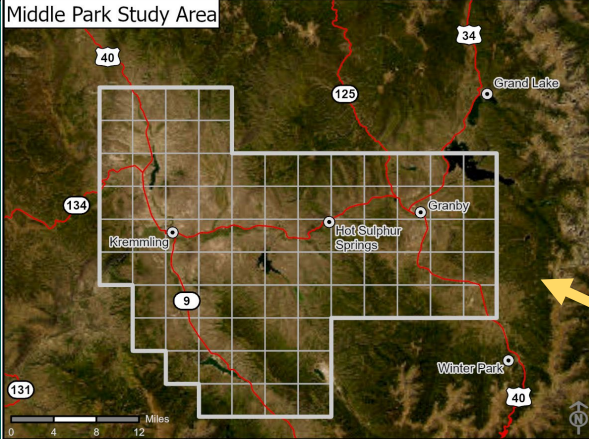


# Mortality Threshold



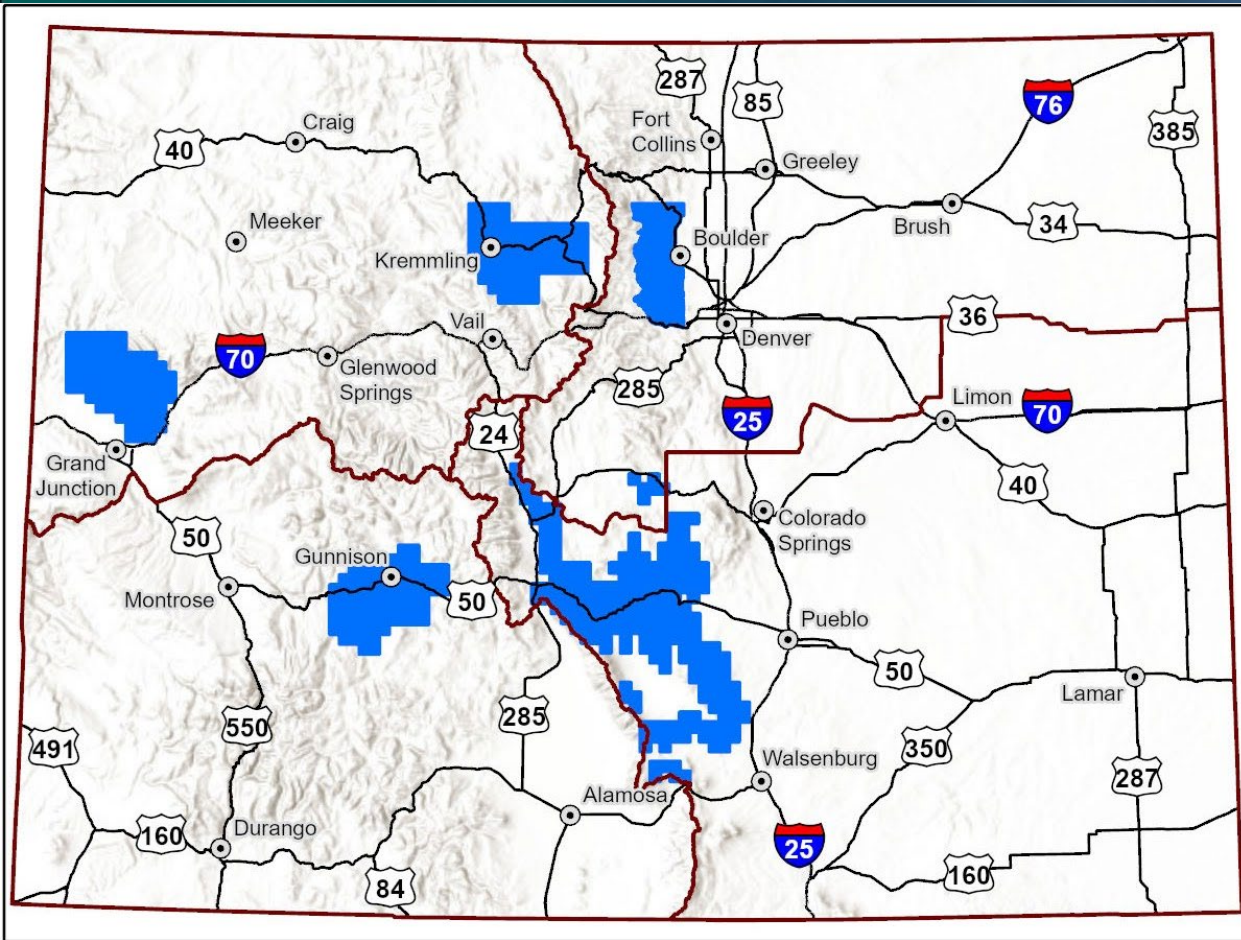
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# Recent study areas with density estimates





# Modeled lion density versus measured



STUDY AREA	MODELED DENSITY (Independent lions/100 km <sup>2</sup> , pre-hunt)	MEASURED DENSITY (Independent lions/100 km <sup>2</sup> , pre-hunt)
Boulder	3.5	4.1
Upper Arkansas	3.5	2.9- 3.8*
Middle Park	2.7	2.1- 2.8
Gunnison	2.7	3.7
Book Cliffs	~3.5+	Jan '24 captures
		* preliminary estimates

# Current statewide estimated mortality rates

- Annual harvest rate= 11.5% – 13.3 %
- Annual total human-caused mortality rate= 14.2% – 16.4%

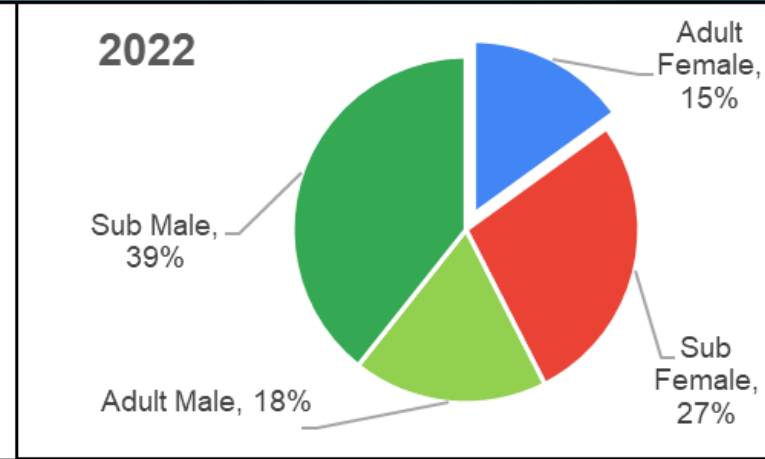
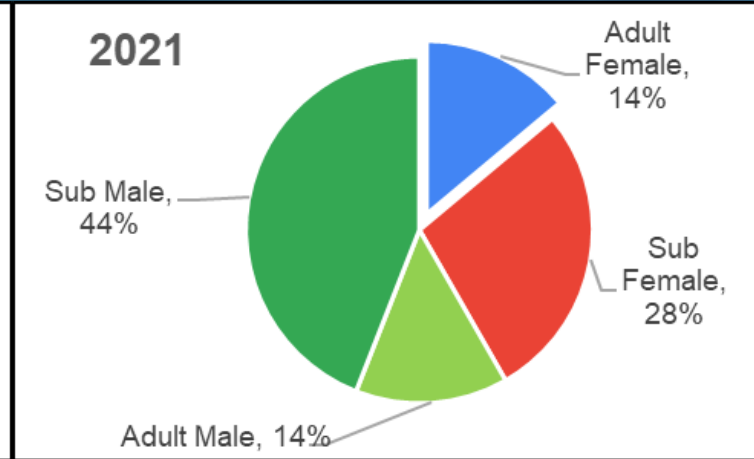
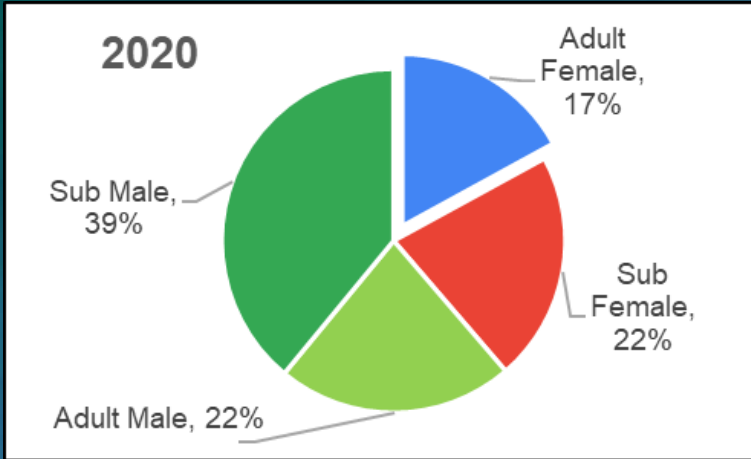
West Slope Management Plan threshold= not exceed 17%  
total human-caused mortality



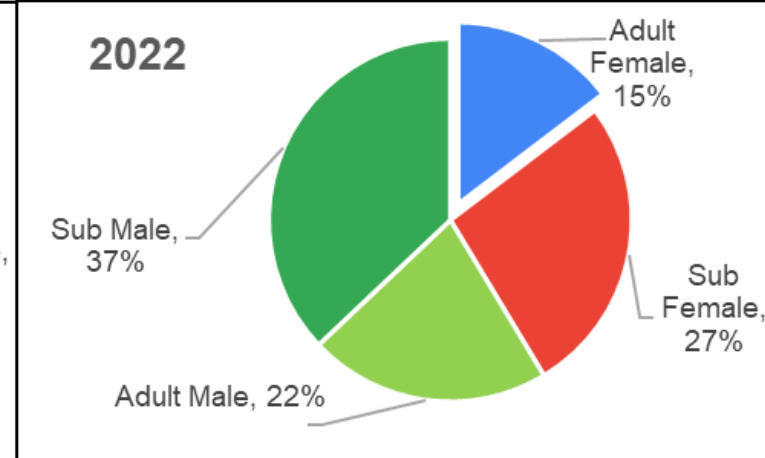
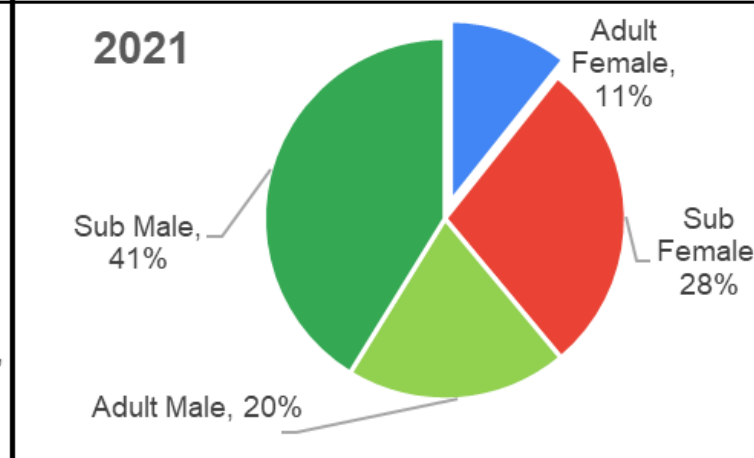
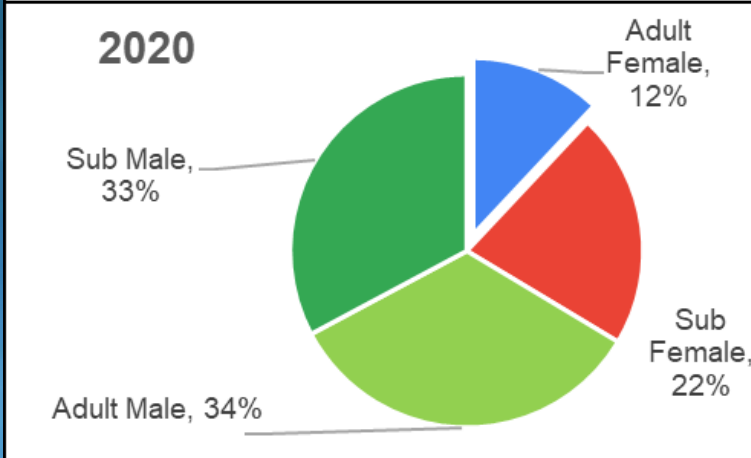
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# Proportion of each sex-age classes in harvest

West Slope

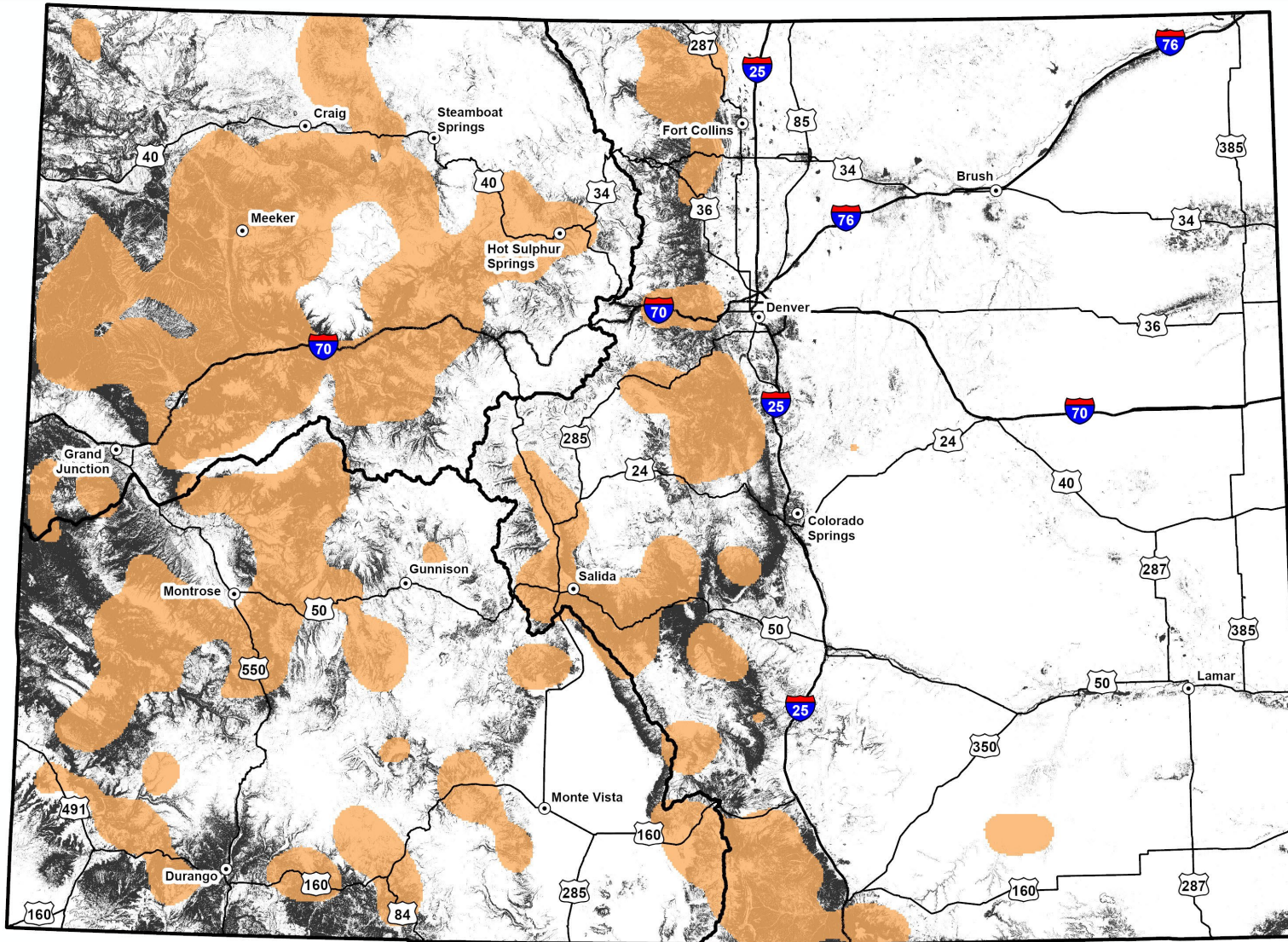


East Slope

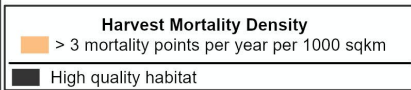


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49 % of Colorado's best lion habitat has little to no harvest



Lion Mortality From Harvest Only (10 years: 2013 - 2022)



0 10 20 40 60 80 Miles

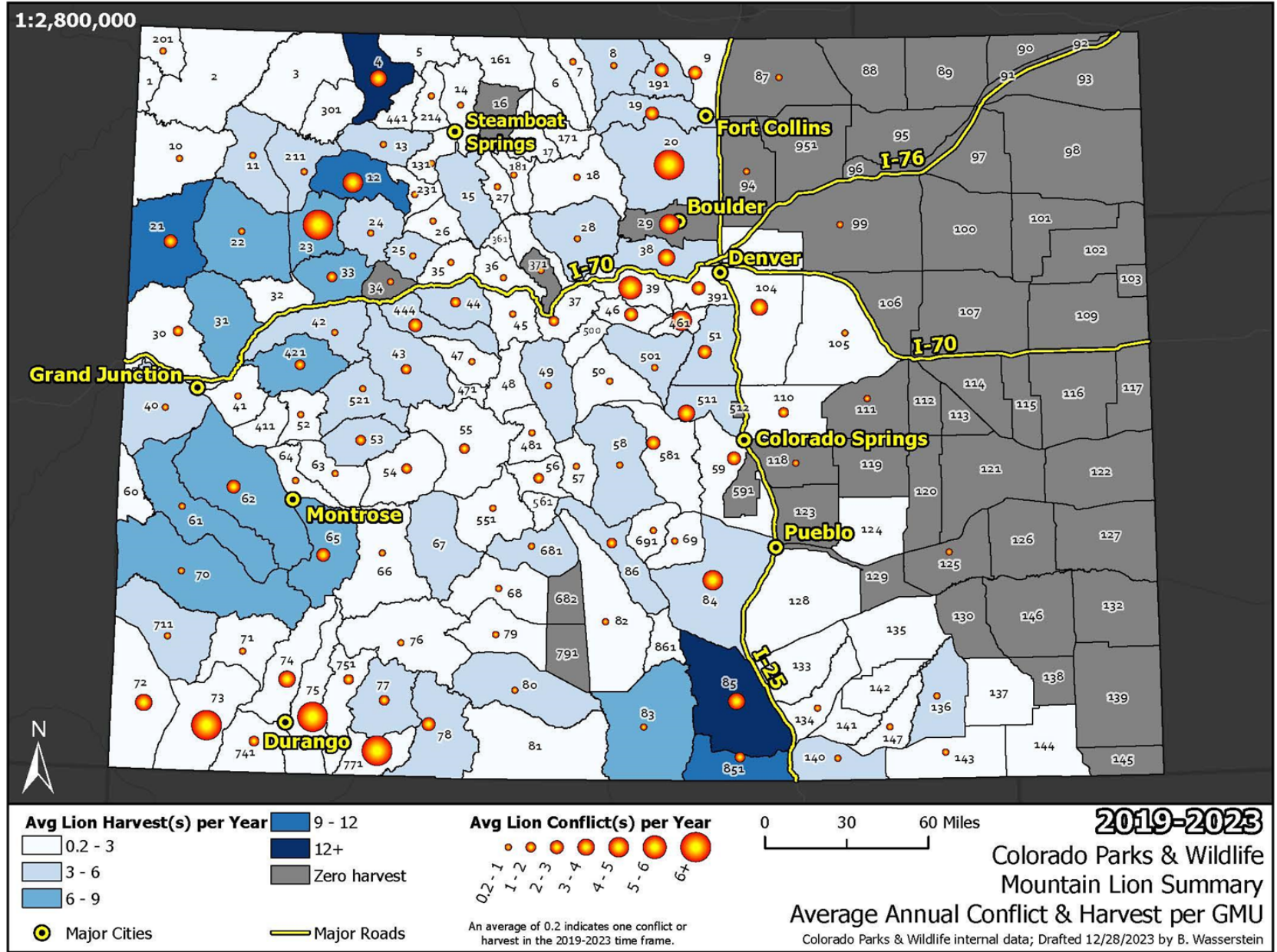


MMF 12/22/2023: Terrestrial Big Game Mountain Lion DAUs Statewide Management Plan



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# Human-lion conflict versus harvest levels



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