

CR 14-09 Supplemental Support Material for Cougar Season
(For February 2014 Commission Meeting)

Cougar population and harvest statistics are provided to illustrate current lion population dynamics as calculated by the NDOW Lion Population Model (Figure 1; Tables 1-3). The 2014-15 Lion Harvest Limit was calculated to reflect literature estimates on lion productivity and population sustainability that would be compatible with the current population estimate. The recommendation reflects keeping current percentages of the total statewide harvest for our 4 Hunt Group Units the same for the time being. Specifically, the Eastern Region, Western Region and Southern Region will be allotted 46%, 34% and 20% of the harvest respectively and Interstate Unit 091 will retain its 2 lion limit.

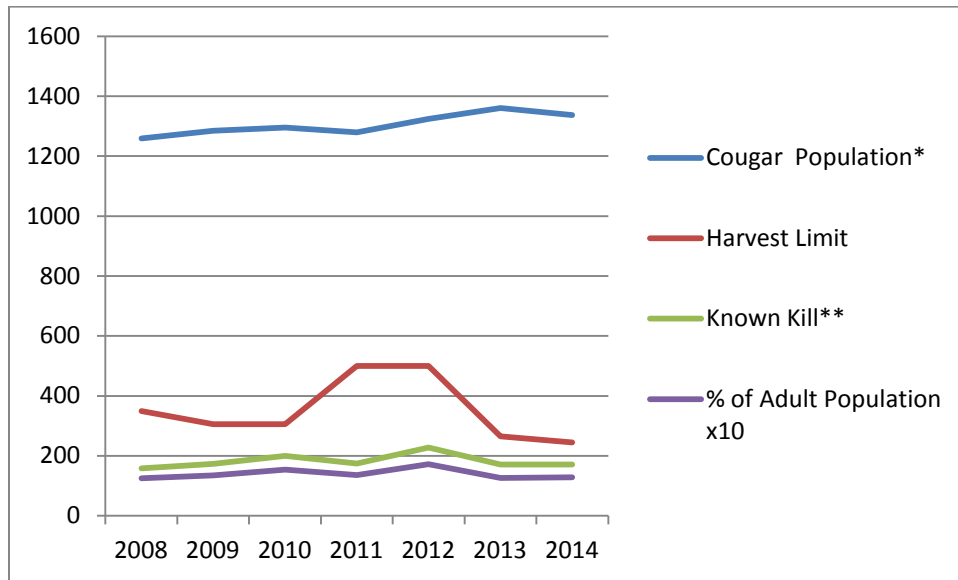


Figure 1. Nevada Cougar Population and Harvest Statistics (2008-2014).
(*Adult population calculation based on Nevada’s Lion Population Model; **Known kill includes all sources of mortality. 2013/2014 kills are estimates based on past years’ data.)

The mountain lion was classified as a game animal in Nevada in 1965. The current Nevada Mountain Lion Management Plan (2008) as well as most recent literature from western scientists suggest that healthy lion populations can support harvest limits calculated between 15 to 25% of adults to maintain population viability and reduce the risk that segments of that population would become sink population sub-units (Andreasen et al 2012; Hornocker and Negri 2010; South Dakota Game Fish and Parks 2003; Utah Division of Wildlife Resources 2011). When population demographic data suggest a possible concern, harvest limits can be calculated using less than 15% of current adult estimates. Data from the 2012 season confirmed that while juvenile and sub-adult numbers in the harvest were below 5 and 10-year averages, the percentage of females in the harvest was higher than the 5 and 10-year averages and was tied for an all time high with 2003. The 2012 harvest marked the third highest total cougar harvest on record. Favorable snow conditions during the later part of the season likely contributed the high take in 2012. There are no concerns relative to the age distribution reflected in the harvest, but the 2014-15

harvest limits were calculated after taking recent harvest trend data into consideration and only reflect consideration for the increased female harvest. To that end 18% was used instead of 20% last year.

Table 1. Nevada Cougar Population and Harvest History (1980-2014).

Year	Cougar Population	Harvest Limit	Harvest Limit as % of Adult Population	Known Kill	Total Kill as % of Adult Population
1980	1143	N/A	N/A	62	5.4
1984	1930	N/A	N/A	123	6.4
1985	2022	N/A	N/A	126	6.2
1986	2002	N/A	N/A	119	5.9
1987	2119	N/A	N/A	126	5.9
1988	2074	N/A	N/A	157	7.6
1989	2112	N/A	N/A	208	9.8
1990	2192	N/A	N/A	106	4.8
1991	2079	N/A	N/A	210	10.1
1992	2124	N/A	N/A	204	9.6
1993	1968	N/A	N/A	221	11.2
1994	1813	251	13.8	213	11.7
1995	1438	240	16.7	178	12.4
1996	1347	273	20.3	182	13.5
1997	1501	277	18.5	247	16.5
1998	1479	313	21.2	181	12.2
1999	1389	287	20.7	157	11.3
2000	1464	290	19.8	228	15.6
2001	1524	317	20.8	197	12.9
2002	1511	337	22.3	160	10.6
			Prev 10-Year Avg	181	13.7
2003*	1517	349	23	229	15.1
2004	1415	349	24.7	138	9.8
2005	1247	349	28	147	11.8
2006	1302	349	26.8	168	12.9
2007	1266	349	27.6	192	15.2
			Prev 5-Year Avg	186	14.4
2008	1259	349	27.7	158	12.5
2009	1285	306	23.8	173	13.5
2010	1295	306	23.6	200	15.4
2011	1279	500	39.1	174	13.6
2012	1324	500	37.8	227	17.1
2013	1360	265	19.5	171	12.6
2014	1337	245	18.3	171	12.8

* 1st year of regional harvest limits.

Green background are projections.

Table 2. Nevada Cougar Population and Harvest History by Region (1995-2014).

	Harvest Limit By Region			Known Kill By Region		
	West	East	South	West	East	South
1995	57	99	84	38	109	31
1996	69	130	74	38	123	21
1997	94	127	56	53	150	44
1998	106	144	63	63	100	18
1999	98	132	57	45	96	16
2000	99	133	58	65	118	45
2001	108	146	63	51	111	35
2002	114	155	68	52	87	21
		Prev 10-Year Avg		63	89	29
2003*	114	167	68	67	124	38
2004	114	167	68	47	77	14
2005	114	167	68	52	72	23
2006	114	167	68	63	78	27
2007	114	167	68	90	65	37
		Prev 5-Year Avg		62	94	30
2008	114	167	68	53	75	28
2009	103	143	60	46	101	26
2010	103	143	60	81	88	31
2011	169	232	99	69	75	30
2012	169	232	99	59	134	34
2013	89	124	52	58	79	34
2014	83	113	49	58	79	34

* 1st year of regional harvest limits.

Green background are projections.

Table 3. Nevada Cougar Population and Harvest Demographics.

Year	Female Kill	Male Kill	F/M Ratio	Kit-2 Kill	Adult Kill (3+)	Yng/Ad Ratio
Prev 10-Year Avg			45.5			34.3
2003*	112	117	48.9	65	164	28.4
2004	54	84	39.1	70	68	50.7
2005	60	87	40.8	57	90	38.8
2006	78	90	46.4	49	119	29.2
2007	90	102	46.9	67	125	34.9
Prev 5-Year Avg			45.9			33.4
2008	64	94	40.5	43	115	27.2
2009	83	90	48	67	106	38.7
2010	89	111	44.5	78	122	39
2011	81	93	46.6	72	102	41.4
2012	111	116	48.9	51	176	22.5

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