

**Final, October 2, 2008**

**Black Bear Population Assessment and Harvest Management Matrix, New Mexico Department of Game and Fish. Baseline removal of no more than 5-10% of total estimated population and no more than 40% female<sup>1</sup>, depending upon mast index.**

Zone	GMUs	Est. habitat <sup>2</sup> (km <sup>2</sup> )	Pop est. <sup>3</sup>	2-yr. mast index <sup>4</sup>	Management objectives	Sustainable harvest limit <sup>5</sup>	Female sub-limit	2008 Harvest <sup>6</sup> (Total/fem.)	5 Yr. average mortality (fem.)
1	4-7, 51, 52	Primary-7,295 Secondary-433 Edge-1,640  9,368	1,240	Avg.	Harvest at 7% of the estimated population	87	35	58/21	74 (30)
1*	2 sub limit	Primary -876 Edge-162	149	Avg.	Harvest at 7% of the estimated population	10	4	N/A	No past harvest
2	41-50, 53-59	Primary -13,921 Secondary -370 Edge-3,294  17,585	2,367	Avg.	Harvest at 7% of the estimated population	166	66	158/50	115 (39)
3	9, 10	Primary -1,905 Secondary -145 Edge-730  2,780	251	Avg.	Harvest at 7% of the estimated population	18	7	19/3	15 (5)
4	8, 14	Primary -1,254 Secondary -144 Edge-297  1,695	166	Avg.	Harvest at 7% of the estimated population	12	5	9/1	9 (3)

<sup>1</sup> Assuming a conservative harvest of 7% most years, females less than 50% of the total harvest and protected females with cubs (Miller, S., 1990)

<sup>2</sup> Estimated habitat is broken down into Primary, Secondary and Edge use. Population estimates are based on primary habitat and do not include Secondary or Edge habitat. The bottom number is the total.

<sup>3</sup> Based upon densities measured by Costello et al. (Costello, C. M., D. E. Jones, K. A. Green Hammond, R. M. Inman, K. H. Inman, B. C. Thompson, R. A. Deitner and H. B. Quigley. 2001. A study of black bear ecology in New Mexico with models for population dynamics and habitat suitability. Final Report, Federal Aid in Wildlife Restoration Project W-131-R. 197pp.). Bear Management Zones 1, 2 and 6 use an estimated density of 17 bears greater than 1 yr. old/100 sq. km; Bear Management Zones 3 and 4 use an estimated density of 13.2 bears greater than 1 yr. old/100 sq. km; and Bear Management Zone 5 uses an estimated density of 9.4 bears greater than 1 yr. old/100 sq. km.

<sup>4</sup> Harvest limits will be 5% of the estimated pop. on below average mast years, 7% on average mast years and 10% on above average years.

<sup>5</sup> BMZs will close when a number 10% below the harvest limit or female sub-limit is reached, whichever comes first.

<sup>6</sup> 2008 Harvest information added 02/09/09

5	12,13, 15-18, 20-24, 26, 27	Primary -11,645 Secondary -2,477 Edge-2,929  17,051	1,095	Avg.	Harvest at 7% of the estimated population	77	31	62/14	86 (28)
6	34, 36-38	Primary -3,840 Secondary -240 Edge-745  4,825	653	Avg.	Harvest at 7% of the estimated population	46	18	27/5	45 (17)
6	34 sub limit	Primary - 1843	313	Avg.	Harvest at 7% of the estimated population	22	9	9/4	24(10)
<b>Total</b>		Primary -40,736 Secondary -3,909 Edge-7,167  51,812	5,921	Avg.	Harvest at 7% of the estimated population statewide	408	162	333/94	344 (122)