

Proposed revisions to include in both the Rule and the Strategy

The number of bears available for discretionary mortality in a given year is based on the population estimate inside the DMA from the previous year, the total annual mortality rate (see Table 1), and the non-hunting mortality from the previous year. Total annual mortality numbers are calculated by multiplying the total annual mortality rate by the size for each sex/age cohort. The size of each sex/age cohort varies with population size. Total mortality includes documented known and probable grizzly bear mortalities from all causes including but not limited to: management removals, illegal kills, mistaken identity kills, self-defense kills, vehicle kills, natural mortalities, undetermined-cause mortalities, grizzly bear hunting, and a statistical estimate of the number of unknown/unreported mortalities. The number of non-hunting mortalities for independent females and males from the previous year will then subtracted from the total number of allowable mortalities for the most recent population estimate resulting in the expected number of independent female and male bears available for hunting allocation. Examples of the number of independent female and male bears available for hunting inside the DMA based on the 2015 population estimate of 717 are shown in Table 3 and the 2002–2014 average population estimate of 674 are shown in Table 4. For each population estimate, examples are given for low non-hunting mortality in the previous year and high non-hunting mortality in the previous year.

Table 3. Example calculations of allowable total annual mortality inside the DMA and expected number of independent female and male bears available for hunting inside the DMA at the 2015 estimated population size of 717. These are example calculations under 2 scenarios: (1) low non-hunting mortality in the previous year, as occurred in 2014; and (2) high non-hunting mortality in the previous year, as occurred in 2015.

	Estimated population size of 717			
	Low mortality in preceding year (as occurred in 2014)		High mortality in preceding year (as occurred in 2015)	
	Independent Females	Independent Males	Independent Females	Independent Males
Size of sex/age cohort at this population size	250	250	250	250
Total annual mortality rate	9%	20%	9%	20%
Total annual mortality number	22	50	22	50

Non-hunting mortality for the previous year	20	29	25	32
Bears available for hunting inside the DMA	2	21	0	18

Table 4. Example calculations of allowable total annual mortality inside the DMA and expected number of independent female and male bears available for hunting inside the DMA at the 2002–2014 average population size of 674. These are example calculations under 2 hypothetical scenarios: (1) low non-hunting mortality in the previous year; and (2) high non-hunting mortality in the previous year.

	Estimated population size of 674			
	Low mortality in preceding year		High mortality in preceding year	
	Independent Females	Independent Males	Independent Females	Independent Males
Size of sex/age cohort at this population size	236	236	236	236
Total annual mortality rate	7.6%	15%	7.6%	15%
Total annual mortality number	18	35	18	35
Non-hunting mortality for the previous year	10	15	18	34
Bears available for hunting inside the DMA	8	20	0	1