MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON - QUOTA CHANGE SUPPORTING INFORMATION
Antelope 2025
Adam Grove

Hunting Districts: 380

1. Describe the proposed season - quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).

The proposal is to decrease the number of 380-20 either-sex licenses from 25 to 10 with a new 380-20 license quota range of 5 to 25. The proposal would also eliminate the 380-30 antelope B-license opportunity. License levels have been at quota minimums for the last several years (see Tables 1A-C for past license and harvest information). One item of note is that the 380-31 extra antelope B-license type was eliminated for the 2016 season.(Figure 1) (Figure 2) (Figure 3)

Year	ES Licenses	ES Licenses Portion HD	DF Licenses	DF Licenses 380-31	Total Harvest	Bucks	Does	Fawns
2023	25		25		29	19	10	0
2022	25		25		16	14	2	0
2021	25		25		25	8	17	0
2020	75		150		71	38	33	0
2019	75		150		59	30	29	0
2018*	76		150		90	40	48	2
2017	50		100		87	37	46	3
2016	50		100		86	43	42	2
2015	50		50		42	21	21	0
2014	50		100	25	64	21	41	2
2013	50		100	17	49	25	24	0
2012	50		100	24	84	30	51	3
2011	50		100	21	75	25	49	0
2010	50		101	11	67	32	35	0
2009	75		100	22	99	42	48	9
2008	75		100	25	96	39	48	9
2007	75	35	100	26	133	52	71	9
2006	75	35	100	37	119	56	53	10
2005	75	35	98		109	54	48	7
2004	50	35	50		72	41	27	4
Average '04-'23	56	35	91	23	74	33	37	3
*900-20 licenses undersampled so total harvest likely underestimated								

Figure 1: Table 1A. License and harvest information for antelope HD 380.

Year	Either-Sex License*	Buck Harvest	Doe Harvest	Fawn Harvest	Total Harvest	Total % Success	%Succ. Bucks	% Succ. Does	% Succ. Fawns
2023	25	13	0	0	13	0.520	0.520	0.000	0.000
2022	25	8	0	0	8	0.332	0.332	0.000	0.000
2021	25	4	0	0	4	0.154	0.154	0.000	0.000
2020	75	23	2	0	25	0.329	0.307	0.027	0.000
2019	75	14	2	0	16	0.209	0.187	0.027	0.000
2018	76	35	5	0	40	0.521	0.461	0.066	0.000
2017	50	20	3	2	24	0.484	0.394	0.060	0.030
2016	50	27	6	0	33	0.654	0.538	0.116	0.000
2015	50	16	0	0	16	0.310	0.320	0.000	0.000
2014	50	16	2	0	17	0.344	0.320	0.040	0.000
2013	50	13	0	0	13	0.262	0.262	0.000	0.000
2012	50	20	0	0	20	0.400	0.400	0.000	0.000
2011	50	15	5	0	20	0.392	0.296	0.096	0.000
2010	50	19	0	0	19	0.372	0.372	0.000	0.000
2009	75	28	2	0	30	0.399	0.375	0.024	0.000
2008	75	24	0	0	24	0.316	0.316	0.000	0.000
2007	75	25	7	0	32	0.425	0.336	0.088	0.000
2006	75	33	2	0	35	0.468	0.441	0.025	0.025
2005	75	37	6	2	44	0.584	0.492	0.077	0.020
2004	50	25	1.3	0	26	0.524	0.498	0.026	0.000
Average	56	21	2	0	23	0.524	0.498	0.026	0.000
'04-'23									
Note: %s are expressed in decimal form not as actual percentages									
*380-20 Licenses only									

Figure 2: Table 1B. Either-sex license and harvest information for antelope HD 380.

Year	DF License*	Buck Harvest	Doe Harvest	Fawn Harvest	Total Harvest	Total % Success	% Succ. Bucks	% Succ. Does	% Succ. Fawns
2023	25	0	7	0	7	0.276	0.000	0.276	0.000
2022	25	0	2	0	2	0.084	0.000	0.084	0.000
2021	25	0	8	0	8	0.308	0.000	0.308	0.000
2020	150	2	29	0	31	0.209	0.013	0.193	0.000
2019	150	0	25	0	25	0.168	0.000	0.167	0.000
2018	150	0	44	2	46	0.301	0.000	0.293	0.013
2017	100	4	40	2	46	0.456	0.035	0.404	0.018
2016	100	2	36	2	39	0.393	0.017	0.358	0.017
2015	50	0	19	0	19	0.376	0.000	0.380	0.000
2014	100	0	34	2	36	0.358	0.000	0.340	0.020
2013	100	0	21	0	21	0.210	0.000	0.210	0.000
2012	100	2	39	3	44	0.438	0.016	0.390	0.032
2011	100	3	32	0	35	0.353	0.032	0.321	0.000
2010	101	0	28	0	28	0.283	0.000	0.283	0.000
2009	100	0	27	4	31	0.309	0.000	0.272	0.036
2008	100	0	35	4	39	0.388	0.000	0.347	0.041
2007	100	2	29	9	40	0.401	0.022	0.290	0.089
2006	100	0	36	5	41	0.409	0.000	0.356	0.053
2005	98	1	36	6	42	0.431	0.012	0.362	0.056
2004	50	1	18	3	22	0.434	0.026	0.354	0.054
Average	91	1	27	2	30	0.329	0.009	0.299	0.021
'04-'23									
Note: %s are expressed in decimal form not as actual percentages									
*380-30 Licenses only									

Figure 3: Table 1C. Doe-fawn license and harvest information for antelope HD 380.

2. What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.

The objective of the proposed change is to significantly reduce antelope harvest in the HD to increase overall antelope numbers in the HD. Current antelope numbers in the HD are well below desired levels.

3. How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc.

Annual aerial antelope surveys, either in the form of a complete HD coverage 'census' survey (every 3 years) or production sampling surveys to determine production (fawns per 100 does) and bucks per 100 does ratios, will be used to monitor the status of the district's antelope population. The Department's annual telephone harvest survey will be used to monitor the harvest-success on the either-sex and doe-fawn license types.

4. What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).

A total of only **53** antelope were observed during this year's complete coverage 'census' survey in the district which was a decline of 36% in overall numbers from the last 'census' survey (83 antelope) flown in 2021. The total number observed this year is also approximately 43% below the 93 antelope observed during 2023's production survey. While it's quite possible we may have missed some antelope, numbers are obviously still down dramatically. Subsequent ground observations have not yielded any higher numbers. This year's census total is approximately 76% below the unofficial management point objective of 225 antelope for the HD.

Harvest alone doesn't explain the significant observed drop in antelope numbers in the HD the last few years. Unless our harvest point estimates have been off significantly, we've obviously had other sources of mortality at play in the HD over the last few years, or antelope have moved into one of the adjacent hunting districts. We had observed some winter mortality during the winter of 2019-20 from some unidentified sickness-disease. However, the level of mortality was far more significant than what we initially believed, and the population has continued to decline since then.

While the overall number of bucks was low, this year's bucks per 100 does ratio of 52.0 was up approximately 58% from last year's production survey ratio of 32.8. This year's ratio was approximately 31% above the long-term average of 39.8 bucks per 100 does. The unofficial management objective for the HD is to maintain a ratio of at least 40 bucks per 100 does, so this year's ratio was approximately 30% above that.

While overall fawn numbers were also low, this year's fawns per 100 does ratio of 60.0 is approximately 83% above last year's ratio of 32.8 and is approximately 21% above the long-term average of 49.6. This year's fawns per 100 does ratio broke a four-year string of dismal fawns per 100 does ratios in the HD.(Figure 1)

Year/ Survey Type*	Total	Bucks	Does	Fawns	Bucks: 100 Does	Fawns: 100 Does
2024-TC	**53**	**13**	**25**	**15**	**52.0**	**60.0**
2023-PS	93	19	58	16	32.8	27.6
2022-PS	110	24	71	15	33.8	21.1
2021-TC	**83**	**26**	**46**	**11**	**56.5**	**23.9**
2020-PS	95	38	48	9	79.2	18.8
2019-PS	202	35	104	62	33.7	59.6
2018-TC	**322**	**89**	**168**	**65**	**53.0**	**38.7**
2017-PS	208	43	86	79	50.0	91.9
2016_PS	208	36	119	53	30.3	44.5
2015-TC	**182**	**35**	**99**	**48**	**35.4**	**48.5**
2014-PS	131	36	69	26	52.2	37.7
2013-PS	288	48	160	80	30.0	50.0
2012-TC	**244**	**34**	**125**	**82**	**27.2**	**65.6**
2011-TC	**307**	**74**	**153**	**80**	**48.4**	**52.3**
2010-PS	338	63	188	87	33.5	46.3
2009-PS	335	37	195	103	19.0	52.8
2008-TC	**317**	**74**	**153**	**90**	**48.4**	**58.8**
2007-PS	176	33	96	47	34.4	49.0
2006-PS	331	62	155	114	40.0	73.5
2005-TC	**471**	**98**	**252**	**121**	**38.9**	**48.0**
2004-PS	239	51	135	53	37.8	39.3
2003-PS	285	72	139	76	51.8	54.7
2002-TC	**402**	**82**	**199**	**121**	**41.2**	**60.8**
2001-PS	227	32	119	76	26.9	63.9
2000-PS	259	52	125	82	41.6	65.6
1999-TC	**290**	**56**	**151**	**83**	**37.1**	**55.0**
1998-PS	288	46	158	84	29.1	53.2
1997-PS	274	39	161	73	24.2	45.3
1996-TC	**372**	**106**	**196**	**70**	**54.1**	**35.7**
1995-PS	314	58	166	90	34.9	54.2
1994-PS	235	46	123	66	37.4	53.7
1993-TC	**396**	**85**	**210**	**101**	**40.5**	**48.1**
Average	**339**	**76**	**175**	**87**	**39.8**	**49.6**
'93 - '23, TC only, except ratios						
*** PS is a production survey and TC is a total count survey.**						

Figure 1: Table 2. Antelope survey information for HD 380 (1993-2024).

5. Provide information related to any weather-habitat factors, public or private land use or resident and nonresident hunting opportunity that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature - precipitation information).

The proposed recommendation will decrease both resident and nonresident hunting opportunity. Antelope habitat in the hunting district is a mixture of public land (mostly BLM) and private land. However, most of the antelope in the HD are found on private land, so landowner tolerance is always a concern. Given that most of the antelope are found on private land in the HD, access considerations are also a consideration and access is limited or non-existent in some areas of the hunting district. There are several Block Management areas in the HD where antelope may potentially be found during the hunting season; however, refuge type areas with limited to no hunting access are in close proximity to a couple of them. The south end of the hunting

district is also located in the Townsend Weapons Restriction area, so effectively harvesting antelope in that area is a challenge.

The area is currently in a moderate to severe drought this year with precipitation amounts being far below average through the summer which has significantly negatively impacted rangelands. Juniper encroachment into historically native grassland-sagebrush areas has decreased the amount of potentially available antelope habitat in the district to some extent or at least reduced the quality of that habitat; as areas of thicker juniper establishment may potentially be precluding antelope from moving through those areas to other areas of potential antelope habitat. Although, recent juniper treatment projects in the HD have improved the situation. Winter range for antelope is not believed to be a limiting factor in the south half of the district, if antelope numbers are held in check to some degree. The northern half of the district in the Helena Valley is mostly cropland with very little winter range habitat, unless the areas stay blown free of snow. Antelope numbers in this portion of the district are limited, and antelope move back and forth between HD 380 and HD 388. As mentioned above, the population has suffered a significant level of mortality or populuation loss from causes other than harvest since 2018.

6. Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).

Individuals contacted about the proposal have been supportive of the proposal or at least apparently okay with it. Given that overall antelope numbers have declined significantly in the last couple of years, it is expected that most landowners and sportsmen would at least be okay with or outright in favor of the proposal. We haven't received any landowner complaints about antelope numbers in the HD in a number of years, and fawn production has been very low the last five years. The Townsend area game warden was notified of the proposal and was apparently at least okay with the proposal, since no comments were received on it.

Submitted by: Adam Grove
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