

**MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION**

Species: Deer
Region: 5
Hunting District: 502
Year: 2024

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

CWD was detected in this hunting district and adjacent HD 555 during the 2017 hunting season. Long term CWD management, as described in the Montana CWD Management Plan, is aimed at maintaining low densities of deer and low buck/doe ratios in hunting districts with CWD and adjacent hunting districts.

Despite relatively a low population on the HD 502 trend area we implemented a CWD management strategy in this HD in 2019 by shifting from a general antlered buck mule deer season to an either sex season and increased antlerless B licenses substantially.

Subsequently mule deer populations have declined but buck/doe ratios have remained high. At this time it would be a good strategy to pull back hunting pressure on does and increase pressure on bucks. This can best be accomplished by switching to an antlered buck general season.

This proposal changes the general mule deer season from either sex to antlered buck only.

Change From:

502: General License

- Sep 07 – Oct 20** Either-sex Mule Deer. Archery Season Only
Either-sex White-tailed Deer. Archery Season Only
- Oct 26 – Dec 01** Either-sex Mule Deer
Either-sex White-tailed Deer.
- Dec 14- Dec 22** Antlered Buck Mule Deer. Heritage Muzzleloader Season Only.
Either-sex White-tailed Deer. Heritage Muzzleloader Season Only.

Change To:

502: General License

- Sep 07 – Oct 20** Antlered Buck Mule Deer. Archery Season Only
Either-sex Mule Deer. Archery Season Only. Only youth ages 10-15
Either-sex White-tailed Deer. Archery Season Only
- Oct 26 – Dec 01** Antlered Buck Mule Deer
Either-sex Mule Deer. Only youth ages 10-15
Either-sex White-tailed Deer.
- Dec 14- Dec 22** Antlered Buck Mule Deer. Heritage Muzzleloader Season Only.
Either-sex Mule Deer. Only youth ages 10-15. Heritage Muzzleloader Season Only.
Either-sex White-tailed Deer. Heritage Muzzleloader Season Only.

Table 1. Hunter and harvest statistics for mule deer B license holders for H.D. 502, 2007 – 2023.

Year	Season Type	B License Number	Harvest		B License Harvest
			Bucks	Antlerless	Antlerless
2007	Either Sex	200	551	287	99
2008	Either Sex	300	600	367	172
2009	Either Sex	300	510	386	167
2010	Either Sex	300	425	321	135
2011	Either Sex	300	353	348	140
2012	Either Sex	50	402	212	24
2013	Either Sex	50	306	205	22
2014	Antlered Buck	0	369	3	0
2015	Antlered Buck	0	468	6	0
2016	Antlered Buck	25	518	40	7
2017	Antlered Buck	25	515	18	8
2018	Antlered Buck	150	387	63	47
2019	Either Sex	150	435	170	52
2020	Either Sex	150	416	182	67
2021	Either Sex	150	350	127	37
2022	Either Sex	150	NA	NA	NA
2023	Either Sex	150	NA	NA	NA

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.

This season change proposal reflects continued response to the presence of CWD in HD 502 and follows the guidelines established in the **Montana CWD Management Plan**. Further this season proposal recognizes the continued decline in mule deer numbers by initiating a restrictive season type in accordance with the guidelines of the **Mule Deer AHM Plan**. The objective for this season proposal is to increase antlered mule deer harvest and correspondingly reduce post season buck/doe ratios to 10/100. At the same time hunting pressure will be reduced on the antlerless segment allowing the population to stabilize or even increase modestly.

3. 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 two-fold objective is to reduce the post season mule deer buck/doe ratio to 10/100 and to stabilize the recruitment population at around 400 deer.

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

Deer numbers and buck/doe ratios on the Dry Creek trend area will be monitored through annual post season and spring helicopter surveys.

5. 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).

Currently the mule deer population on the Dry Creek trend area is 60% below the long term average. Over the last 5 years the recruitment of fawns has averaged just 21 fawns/100 adults, which is 40% below average. Both of these figures dictate that mule deer be managed under a restrictive season type as defined by the **Mule Deer AHM Plan**. The 2021 mule deer buck harvest of 350 was 31% below the long term average further emphasizing the need for a restrictive season type. On the other hand the post season buck/doe ratio in 2022 was 21/100, which was 49% above average and well above the threshold of 10 bucks/100 does suggested by the **Montana CWD Management Plan**.

Table 2. Post season classification of mule deer on the Dry Creek trend area in hunting district 502, 1982 to 2022.

Month/ Year	Bucks		Does	Adults	Fawns	Total	Fawns/ 100 Does		Incre- ment	Bucks/ 100 Does	
	1	2+					100	Ad.		100	Does
Postseason (Late Dec.-Jan.)											
1985	7	1	186	194	80	274	43	41	29	5	
1986	6	1	148	155	70	225	47	45	31	3	
1987	4	2	232	238	125	363	54	53	34	3	
1988	14	4	246	264	167	431	68	63	39	7	
1989	4	3	128	135	79	214	62	59	37	5	
1990	17	3	167	187	114	301	68	61	38	12	
1991	5	11	144	160	84	244	58	52	34	11	
1992	17	2	162	181	71	252	44	39	28	12	
1993	9	3	123	135	56	191	46	41	29	10	
1994	8	10	212	230	70	300	33	30	23	8	
1995	3	1	125	129	53	182	42	41	29	3	
1996	4	2	106	112	29	141	27	26	20	6	
1997	16	9	233	258	79	337	34	31	23	11	
1998	17	8	212	237	93	330	44	39	28	12	
1999	35	17	297	349	206	555	69	59	37	18	
2000	20	11	250	281	168	449	67	60	37	12	
2001	35	13	354	402	219	621	62	54	35	14	
2002	27	33	274	334	136	470	50	41	29	22	
2003	13	22	302	337	105	442	35	31	24	12	
2004	8	28	282	318	86	404	30	27	21	13	
2005	19	8	219	246	120	366	55	49	33	12	
2006	26	14	219	259	72	331	33	28	22	18	
2007	30	61	422	513	145	658	34	28	22	22	
2008	17	38	293	348	96	444	33	28	22	19	
2009	28	61	385	474	62	536	16	13	12	23	
2010	4	39	256	299	70	369	27	23	19	17	
2011	12	31	287	330	94	424	33	28	22	15	
2012	18	18	142	178	40	218	28	22	18	25	
2013	12	30	233	275	91	366	39	33	25	18	
2014	20	11	176	207	76	283	43	37	27	18	
2015	20	11	174	205	61	266	35	29	23	18	
2016	19	31	181	231	54	285	30	23	19	27	
2017	19	23	156	198	64	262	41	32	24	27	
2018	10	28	205	243	45	288	22	19	16	19	
2019	19	20	217	256	76	332	35	30	23	18	
2020	9	18	168	195	40	235	25	21	17	17	
2021	9	26	168	203	55	258	33	27	21	21	
2022	7	15	103	125	31	156	30	25	20	21	

Table 3. Counts and classification of mule deer on the Dry Creek-Bear Creek trend area, hunting district 502, 1982 to 2022.

Date	Ad.	Fawns	Unc.	Total	Fawns/ 100 Ad	Incre- ment	Remarks
3/22/82	86	58	-	144	67	40	Fixed-wing
4/08/83	151	91	-	242	60	38	Helicopter
4/17/84	275	155	-	430	56	36	Helicopter
4/11/85	514	249	53	816	48	33	Helicopter
4/03/86	455	208	-	663	46	31	Helicopter
4/07/87	452	243	-	695	54	35	Helicopter
4/08/88	263	162	-	425	61	38	Partial Helicopter
4/10/89	217	128	324	669	59	37	Helicopter
4/17/90	246	109	263	618	44	31	Helicopter
4/03/91	491	249	153	893	51	33	Helicopter ¹
4/15/92	191	90	616	897	47	32	Helicopter ²
4/25/93	378	152	175	705	40	29	Helicopter
4/11/94	417	132	86	635	32	24	Helicopter
4/12/95	412	98	73	583	23	19	Helicopter
4/22/96	558	130	-	688	23	19	Helicopter
4/18/97	371	65	-	436	18	15	Helicopter
4/10/98	467	159	8	634	34	25	Helicopter
3/24/99	362	178	-	540	49	33	Helicopter
3/27/00	482	269	22	773	56	36	Helicopter
4/03/01	473	243	--	716	51	34	Helicopter
4/25/02	434	187	15	636	43	29	Helicopter
4/24/03	328	90	--	418	27	22	Helicopter
3/23/04	497	132	--	629	27	21	Helicopter
4/02/05	479	159	33	671	33	25	Helicopter
4/07/06	658	195	3	856	30	23	Helicopter
4/08/06				690			Helicopter
4/11/06				613			Helicopter
3/26/07	627	116	--	743	18	16	Helicopter
4/03/08	765	159	--	924	21	17	Helicopter
4/27/09	470	82	--	552	17	15	Helicopter
3/24/10	550	77	--	627	14	12	Helicopter
4/16/11	557	76	--	633	14	12	Helicopter
3/29/12	296	90	5	391	30	23	Helicopter
3/28/13	269	82	--	351	30	23	Helicopter
4/24/14	215	50	--	265	23	18	Helicopter
3/19/15	198	64	--	262	32	24	Helicopter
3/20/16	217	75	--	292	35	26	Helicopter
3/22/17	190	62	--	252	33	25	Helicopter
4/16/18	364	52	--	416	14	12	Helicopter
4/04/19	236	45	--	281	19	16	Helicopter
Spring/2020				370			<i>Estimate</i> ³
4/28/21	121	27	--	148 ⁴	22	18	Helicopter
4/03/22	185	43		228	23	19	Helicopter

¹ Approximately 6% of fawns died after this date.

² Approximately 9 sq.mi. not flown.

³ Estimate based on average change between post-season and spring counts

⁴ Poor count. Too late in spring with some deer already migrating.

Table 4. Species and sex composition of Total Region 5 deer harvest as determined by the hunter questionnaire survey, 1986-2022.

HD 502											
Year	Mule Deer Harvest					Whitetail Harvest					
	Males	Antless	Unk	Total	% Antless	Males	Antless	Unk	Total	% Antless	%WT
1986	448	124	-	572	22	178	172	-	350	49	38
1987	528	254	-	780	33	152	83	-	235	35	23
1988	652	502	4	1157	43	134	47	-	181	26	14
1989	616	517	11	1144	45	150	66	-	216	31	16
1990	684	582	-	1266	46	149	92	-	242	38	16
1991	669	605	-	1274	47	140	172	-	312	55	20
1992	738	583	-	1321	44	203	177	-	380	47	22
1993	621	565	4	1190	47	262	204	-	466	44	28
1994	546	401	-	947	42	202	179	-	380	47	29
1995	496	341	-	837	41	255	189	-	444	43	35
1996	328	280	-	608	46	248	296	-	544	54	47
1997	356	185	-	541	34	241	215	-	456	47	46
1998	413	12	-	425	3	222	261	-	483	54	53
1999	512	30	-	542	6	254	207	-	461	45	46
2000	590	376	3	969	39	379	314	-	693	45	42
2001	560	350	-	910	38	174	169	6	349	48	28
2002	512	375	-	887	42	237	146	-	384	38	30
2003	597	258	-	854	30	262	291	-	553	53	39
2004	531	293	-	824	36	230	216	-	446	48	35
2005	562	294	-	856	34	287	268	-	555	48	39
2006	512	231	-	743	31	306	338	6	650	52	47
2007	551	287	-	838	34	247	258	-	505	51	38
2008	600	367	-	967	38	243	223	-	466	48	33
2009	510	386	-	896	43	238	350	-	588	60	40
2010	425	321	-	746	43	217	243	-	460	53	38
2011	353	348	-	701	50	118	175	-	293	60	29
2012	402	212	-	614	35	186	192	-	378	51	38
2013	306	205	-	511	40	144	159	-	303	52	37
2014	369	3	-	372	1	113	36	-	150	24	29
2015	468	6	-	474	1	175	68	-	243	28	34
2016	518	40	-	558	7	230	128	-	358	36	39
2017	515	18	-	533	3	180	123	-	303	41	36
2018	387	63	-	450	14	182	71	-	253	28	36
2019	435	163	7	605	28	202	129	-	331	39	35
2020	416	183	-	599	31	141	133	-	274	49	31
2021	350	127	-	477	27	124	154	-	278	55	37
2022	NA										

6. Provide information related to any weather/habitat factors that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).

- 1) Utilization transect information: None
- 2) Snow condition survey information: Five of the last six winters have been more severe than average with March and April being especially problematic for deer survival. The severe drought in 2021 resulted in extremely poor range conditions further complicating mule deer survival.
- 3) Describe access problems related to change, etc.
No access problems are anticipated as a result of this season change.

- 4) Overwinter survival information (i.e. bad winter lost what % of population)

In recent years the number of fawns entering the winter has been quite low indicating a significant fawn loss during summer and fall. Over winter fawn loss typically takes another 30% or more. In addition, loss of radio collared does in the immediate area suggests an annual mortality of about 25% each of the last two years.

7. Provide information relative to impacts to resident hunters, nonresident hunters and public & private land use.

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).

- 1) List specific sports groups or landowners:
This proposal has not been discussed with local landowners.

- 2) Indicate if proposal was recommended by public - is it in response to a concern by sportspersons: The proposal follows the guidelines for hunting season recommendations provided in the **Mule Deer AHM Plan** in conjunction with the **Montana CWD Management Plan**. It also recognizes the input of local sportspersons who have voiced alarm at the low numbers of mule deer in Carbon and Stillwater Counties.

Submitted by: Shawn T. Stewart

Date: 10/15/2018

Approved: _____
Regional Supervisor / Date

Disapproved / Modified by: _____
Name / Date

Reason for Modification:

**MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION**

Species: Mule Deer
Region: 5
Hunting District: 515
Year: 2024

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

This proposal is to change the general license mule deer season from either-sex to antlered buck.

Change From:

515: General License
 Archery Season: Either-sex Mule Deer. Archery Season Only
 Either-sex White-tailed Deer. Archery Season Only
 General Rifle: Either-sex Mule Deer
 Either-sex White-tailed Deer.
 Muzzleloader: Either-sex Mule Deer. Heritage Muzzleloader Season Only.
 Either-sex White-tailed Deer. Heritage Muzzleloader Season Only.

Change To:

515: General License
 Archery Season: **Antlered Buck Mule Deer.** Archery Season Only
 Either-sex White-tailed Deer. Archery Season Only
 General Rifle: **Antlered Buck Mule Deer.**
 Either-sex White-tailed Deer.
 Muzzleloader: **Antlered Buck Mule Deer.** Heritage Muzzleloader Season Only.
 Either-sex White-tailed Deer. Heritage Muzzleloader Season Only.

Table 1. History of Season Types and B License numbers for Mule Deer in HD 515.

Year	General Season Structure	# of Mule Deer B Licenses
2010	Either Sex	450
2011	Either Sex	450
2012	Antlered Buck	300
2013	Antlered Buck	300
2014	Antlered Buck	0
2015	Antlered Buck	0
2016	Either Sex	225
2017	Either Sex	425
2018	Either Sex	440
2019	Either Sex	440
2020	Either Sex	240
2021	Either Sex	240
2022	Either Sex	100
2023	Either Sex	100
2024	Antlered Buck (proposed)	NA

2. Why is the proposed change necessary?

This season proposal recognizes the continued decline in mule deer numbers by initiating a restrictive season type in accordance with the guidelines of the **Mule Deer AHM Plan**. The objective for this season proposal is to reduce hunting pressure on the antlerless segment of the population in an effort to slow the population decline.

The Mule Deer Adaptive Harvest Management Plan (AHM) states “A Restrictive Hunting Regulation may be recommended if both trigger 1 **AND** trigger 2 (a **OR** b) are met. If aerial surveys are not conducted in a HD, recruitment data from nearby HDs where surveys are flown should be used for assessing trigger 1.

1. *Recruitment is less than 30 fawns:100 adults.*

AND

2. a) *Total number of deer counted on the survey area is at least 30% below the LTA.*

OR

b) *In the absence of long-term survey data: Buck harvest is at least 25% below the LTA. Adjacent, representative hunting district survey data may be used in addition to buck harvest data.”*

See section 5 below for population information. Fawn recruitment on two of the three trend areas in HD 515 is well below the AHM trigger point of 30 fawns:100 adults. Total deer numbers on two of the three trend areas are far lower than the AHM trigger point of 30% below long-term average. For all trend areas combined, total deer numbers are at the AHM trigger point for switching to an antlered buck season. Finally, mule deer buck harvest is 35% below average, surpassing the AHM trigger point of 25% below average. Following the commission approved AHM plan, all triggers have been met to change this district from an either-sex season to an antlered buck season.

3. **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 reduce antlerless harvest to stabilize this declining population near its long-term average. From 2019-2021 antlerless harvest on the general deer license in this district has averaged 216 mule deer annually (range 208-228). This proposed reduction in antlerless harvest will increase female survival, thus increasing fawn production in coming years.

4. **How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc.** Success will be measured using annual recruitment and post season aerial surveys to determine population level and population trend across the district. Limited numbers of antlerless B licenses will be maintained as a tool to address localized game damage concerns if those situations should arise. At this time, game damage complaints from mule deer are very low across the district.

5. **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).** Mule deer are managed according to AHM guidelines in a Prairie Breaks population management unit with the goal of keeping the population near its long-term average and avoiding large increases and declines above or below population average. Table 2 shows current population status and spring recruitment for the three mule deer trend areas in HD 515. Total mule deer numbers are 4.5% above average on the Big Coulee trend area, 30.1% below average on the Cherry Creek trend area, and 64.6% below average on the Yellowstone Breaks trend area. Because average deer numbers vary considerably between trend areas, caution must be used when analyzing data for the trend areas combined. Large deer numbers on one trend area

can mask declines on other trend areas that average lower deer numbers overall. Therefore, averaging the three trends; +4.5%, -30.1% and -64.6% indicated that deer numbers in the district overall are approximately 30.1% below long-term average. In 2022, the Big Coulee trend area had 47 fawns/100 adults. While the Cherry Creek trend area had only 21 fawns:100 adults and Yellowstone Breaks trend area had 25 fawns:100 adults.

Table 2. HD 515 Mule Deer Trend Areas Data 1986-2022.

Big Coulee

Recruitment Survey Data

Year	Adult	Fawns	Uncl	Total	Incr	Fawns/ 100 Ad
1986-87	195	64		260	25	33
1987-88	378	215		593	36	57
1988-89	134	69		203	34	51
1989-90	399	239		638	37	60
1990-91	478	272		750	36	57
1991-92	406	186		592	31	46
1992-93	450	144		594	24	32
1993-94	357	134		491	27	38
1994-95	409	162		571	28	40
1995-96	348	93		441	21	27
1996-97	519	96		615	16	19
1997-98	556	180		736	24	32
1998-99	565	280		845	33	50
1999-00	682	291		973	30	43
2000-01	983	254		1237	21	26
2001-02	763	214		977	22	28
2002-03	619	177		796	22	28
2003-04	349	40		389	10	11
2004-05	281	51		332	15	18
2005-06	482	250		732	34	52
2006-07	339	127		466	27	37
2007-08	365	122		487	25	33
2008-09	343	116		397	25	33
2009-10	243	55		377	18	23
2010-11	351	107		458	23	30
2011-12	562	236		798	30	42
2012-13	676	164		840	20	24
2013-14	531	236		767	31	44
2014-15	912	474		1386	34	52
2015-16	909	569		1478	39	63
2016-17	1282	582		1897	31	45
2017-18	996	517		1513	34	52
2018-19	729	385		1114	35	53
2019-20						
2020-21	735	324		1059	31	44
2021-22	618	293		911	32	47
2022-23						
Avg. 1998 to 20-21	619.7	250.0		871.9	26.7	37.5
% Dev. from Avg.	-0.3	17.2		4.5	19.9	25.3
% Dev. from prev.	-15.9	-9.6		-14.0	3.2	6.8

Table 2 cont. HD 515 Mule Deer Trend Areas Data 1986-2022.

Cherry Creek/Hanson Breaks					F/100 Ad
Spring Survey Data					Trend Area
Year	Adult	Fawns	Uncl	Total	
1986-87	130	50			38
1987-88	41	26			63
1988-89	76	43			57
1989-90	138	62			45
1990-91	178	93			52
1991-92	154	80			52
1992-93	118	52			44
1993-94	150	67			45
1994-95	112	55			49
1995-96	206	56			27
1996-97	153	33			22
1997-98	187	68	11	266	36
1998-99	63	40	234	337	63
1999-00	210	119	76	405	57
2000-01	351	145	44	540	41
2001-02	329	98		427	30
2002-03	234	87	25	346	37
2003-04	252	39		291	15
2004-05	203	38		241	19
2005-06	159	64	44	267	40
2006-07	212	87	0	299	41
2007-08	304	77	25	406.0	25.3
2008-09	174	52	43	269.0	29.9
2009-10	254	79	51	384	31.1
2010-11	167	26	11	204.0	15.6
2011-12	252	98	41	391.0	38.9
2012-13	186	88	14	288.0	47.3
2013-14	275	45		320.0	16.4
2014-15	369	125	12	506	33.9
2015-16	380	180	0	560	47.4
2016-17	327	120	24	471	36.7
2017-18	355	58	24	437	16.3
2018-19	344	54	0	398	15.7
2019-20				NS	NS
2020-21	348	99	0	447	28.4
2021-22	211	44		255	20.9
2022-23					
Average	217.2	72.8	35.7	364.8	36.5
% Dev. From Average	-2.9	-39.5	100.0	-30.1	-42.7

Table 2 cont. HD 515 Mule Deer Trend Areas Data 1986-2022.

Yellowstone Breaks

Spring Survey Data					Recruitment - F/100 Ad
Year	Adults	Fawns	Uncl	Total	Trend Area
1986-87	55	28			51
1987-88	90	53			59
1988-89	91	36			40
1989-90	97	49			51
1990-91	198	112			57
1991-92	89	47			53
1992-93	140	35			25
1993-94	85	38			45
1994-95	147	70			48
1995-96	175	49			28
1996-97	203	46			23
1997-98	305	99	150	554	32
1998-99	230	154	176	560	67
1999-00	351	153	213	717	44
2000-01	217	101	282	600	47
2001-02	272	100	203	575	37
2002-03	222	110	36	368	50
2003-04	255	58	9	322	23
2004-05	76	29		105	38
2005-06	92	39		131	42
2006-07	308	123	34	465	39.9
2007-08	191	88	63	342.0	46.1
2008-09	176	62	63	301.0	35.2
2009-10	259	83	70	412	32
2010-11	138	15	56	209.0	10.9
2011-12	127	54	31	212	42.5
2012-13	99	61	27	187.0	62.0
2013-14	218	41	22	281.0	18.8
2014-15	211	85	23	319.0	40.3
2015-16	176	71	87	334.0	40.3
2016-17	176	80	29	285.0	45.4
2017-18	255	41	61	357.0	16.1
2018-19	112	18	37	167.0	16.1
2019-20				NS	NS
2020-21	113	20	11	144.0	17.7
2021-22	95	24		119.0	25.3
2022-23					
Average	172.7	64.9	80.1	336.1	38.5
% Dev. From Average	-45.0	-63.0	-100.0	-64.6	-34.3

Table 2 cont. HD 515 Mule Deer Trend Areas Data 1986-2022.

HD515

Trend areas combined

Spring Survey Data

Year	Adults	Fawns	Uncl	Total	HD515 F:100 Ad
1986-87	380	142		522	37
1987-88	509	294		803	58
1988-89	301	148		449	49
1989-90	634	350		984	55
1990-91	854	477		1331	56
1991-92	649	313		962	48
1992-93	708	231		939	33
1993-94	592	239		831	40
1994-95	668	287		955	43
1995-96	729	198		927	27
1996-97	875	175		1050	20
1997-98	1048	347	161	1556	33
1998-99	858	474	410	1742	55
1999-00	1243	563	289	2095	45
2000-01	1551	500	326	2377	32
2001-02	1364	412	203	1979	30
2002-03	1075	374	61	1510	35
2003-04	856	137	9	1002	16
2004-05	560	118	0	678	21
2005-06	733	353	44	1130	48
2006-07	859	337	34	1230	39
2007-08	860	287	88	1235	33
2008-09	693	230	106	1029	33
2009-10	756	217	121	1094	29
2010-11	656	148	67	871	23
2011-12	941	388	72	1401	41
2012-13	961	313	41	1315	33
2013-14	1024	322	22	1368	31
2014-15	1492	684	35	2211	46
2015-16	1465	820	87	2372	56
2016-17	1785	782	53	2620	44
2017-18	1606	616	85	2307	38
2018-19	1185	457	37	1679	39
2019-20	0	0	0	0	
2020-21	1196	443	11	1650	37
2021-22	924	361	0	1285	39
2022-23					
1997-98 to 20-21 Average	1032.0	388.4	98.4	1518.8	36.4
2021-22 % Deviation from Avg	-10.5	-7.1	100.0	-15.4	7.2
2021-22 % Deviation from Prev Yr	-22.7	-18.5	100.0	-22.1	5.5

Buck harvest is a reliable indicator of population status and trend. Buck harvest has declined each year since 2017 (Table 3). 2021 buck harvest was 35% below the long-term average. Buck harvest declined 25% between the 2020 and 2021 hunting seasons. Total harvest in the district is 37% below long-term average. Currently 30% of harvest is antlerless, this is 11% above average. Given the declining population observed in aerial surveys and buck harvest data, a reduction in harvest on the female segment of the population is necessary.

Table 3. HD 515 Mule Deer Harvest 1986-2022.

Year	Buck Harvest	Antlerless Harvest	Unk Harvest	Total Harvest	Percent Antlerless
1986	845	150		995	15
1987	957	203		1160	18
1988	1305	513	8	1826	28
1989	1515	990	48	2552	39
1990	1720	1140		2860	40
1991	1713	1348		3066	44
1992	2003	1449	10	3461	42
1993	1612	1405	11	3027	46
1994	1646	1184		2830	42
1995	1322	756		2082	36
1996	1108	459		1567	29
1997	914	429		1346	32
1998	986	36		1025	4
1999	1270	202		1472	14
2000	1313	718		2033	35
2001	1484	735		2219	33
2002	1373	892		2265	39
2003	1252	810		2064	39
2004	1050	592		1644	36
2005	868	132		1000	13
2006	896	166		1066	16
2007	1055	275		1330	21
2008	914	458		1369	33
2009	986	346		1332	26
2010	695	324		1019	32
2011	812	414		1226	34
2012	992	209		1201	17
2013	825	172		997	17
2014	866	3		869	0
2015	1127	15		1141	1
2016	1212	306		1518	20
2017	1321	428		1750	24
2018	1050	406		1456	28
2019	1018	379		1397	27
2020	1000	325		1325	25
2021	749	314		1063	30
2022	NA	NA		NA	NA
Average	1160	519		1682	27
2021 % Dev. From Avg	-35%	-39%		-37%	+11%

6. How will this proposal influence this population status?

Refer to sections two, three, and four, listed above.

7. Provide information related to any weather/habitat factors that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).

Snow condition survey information: see below

Describe access problems related to change, etc.

The district is mostly private land with some accessible state and BLM parcels. Some BMA's provide quality deer hunting opportunities scattered across the district. Access to non-BMA private lands is moderate across this district. No access problems or changes are anticipated as a result of this season structure change.

Overwinter survival information (i.e. bad winter lost what % of population)

No Snotel weather monitoring stations exist in district 515. However, a winter severity index created from a Snotel Station in Sweet Grass County, just south of 515, provides some insight into winter severity that may be applicable to district 515. Summer precipitation is also extremely important. Higher summer precipitation increases overwinter survival of all age classes of deer.

Summer precipitation (June, July, August) has been below average for the past three summers. Winter severity (precipitation and temperature) has been more severe than average for the last 6 winters. The current winter is on track to be more extreme than average. Based on current winter weather conditions, we anticipate a continued decline in total deer numbers and recruitment in the spring of 2023.

8. Provide information relative to impacts to resident hunters, nonresident hunters and public & private land use.

No significant changes in overall deer hunter numbers within the district are anticipated. No impacts to public or private land use or access are anticipated from this proposal.

9. 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).

Sportsmen and landowners are growing increasingly concerned about declining mule deer populations. An apparent decline in buck numbers and older age class bucks has also sparked concern among sportsmen. Most comments received by FWP at check stations, public meetings, and informal conversations support a more conservative mule deer season structure that reduces antlerless harvest. Therefore, this proposal should be well supported by landowners and sportsmen. No conflicts with landowners, sportsmen or other members of the public are anticipated with this proposal.

Submitted by: Justin Paugh & Ashley Taylor

Date: 4-11-2023

Approved: _____
Regional Supervisor / Date

Disapproved / Modified by: _____
Name / Date

Reason for Modification:

**MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION**

**Species: Mule Deer
Region: 5
Hunting District: 535
Year: 2024**

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

This proposal is to remove the general license mule deer antlerless opportunity and change the mule deer buck 535-50 quota from 850 to 500 .

Change From:

535: General License

Archery Season: Antlerless Mule Deer. Archery Season Only
Either-sex White-tailed Deer. Archery Season Only

General Rifle: Antlerless Mule Deer
Either-sex White-tailed Deer.

Muzzleloader: Antlerless Mule Deer. Heritage Muzzleloader Season Only.
Either-sex White-tailed Deer. Heritage Muzzleloader Season Only.

535-50 mule deer buck permit 850

Change To:

535: General License

Archery Season: **No general license Mule Deer.** Archery Season Only
Either-sex White-tailed Deer. Archery Season Only

General Rifle: **No general license Mule Deer.**
Either-sex White-tailed Deer.

Muzzleloader: **No general license Mule Deer.** Heritage Muzzleloader Season Only.
Either-sex White-tailed Deer. Heritage Muzzleloader Season Only.

535-50 mule deer buck permit 500

Table 1. History of Season Types and B License numbers for Mule Deer in HD 535.

Year	General Season Structure	# of Mule Deer B Licenses
2010	Antlerless	425
2011	Antlerless	200
2012	Antlerless	200
2013	Antlerless	60
2014	No General License	0
2015	No General License	0
2016	No General License	20
2017	No General License	210
2018	Antlerless	210
2019	Antlerless	210
2020	Antlerless	210
2021	Antlerless	210
2022	Antlerless	100
2023	Antlerless	100
2024	No General License (proposed)	100

2. Why is the proposed change necessary?

This season proposal recognizes the continued decline in mule deer numbers by initiating a restrictive season type in accordance with the guidelines of the **Mule Deer AHM Plan**. The objective for this season proposal is to reduce hunting pressure on the antlerless segment of the population to slow the population decline.

The Mule Deer Adaptive Harvest Management Plan (AHM) states “A Restrictive Hunting Regulation may be recommended if both trigger 1 **AND** trigger 2 (a **OR** b) are met. If aerial surveys are not conducted in a HD, recruitment data from nearby HDs where surveys are flown should be used for assessing trigger 1.

1. *Recruitment is less than 30 fawns:100 adults.*
AND
2. a) *Total number of deer counted on the survey area is at least 30% below the LTA.*
OR
b) *In the absence of long-term survey data: Buck harvest is at least 25% below the LTA. Adjacent, representative hunting district survey data may be used in addition to buck harvest data.”*

See section 5 below for population information. Fawn recruitment on the trend areas in HD 535 is trending toward the AHM trigger point of 30 fawns:100 adults. Total deer numbers on the trend and census areas are far lower than the AHM trigger point of 30% below long-term average. For all trend areas combined, total deer numbers are at the AHM trigger point for switching to restrictive season type. Finally, mule deer buck harvest is 52% below average, surpassing the AHM trigger point of 25% below average. Following the commission approved AHM plan, most triggers have been met to change this district from an antlerless season to No General License opportunity for mule deer. Mule deer bucks are managed with the 535-50 mule deer buck permit and we are proposing to decrease the quota from 850 to 500 buck permits to respond to low mule deer buck harvest and survey data.

3. 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 reduce antlerless harvest to stabilize this declining population near its long-term average. From 2019-2022 antlerless harvest on the general deer license in this district has averaged 176 mule deer annually (range 95-242). This proposed reduction in antlerless harvest will increase female survival, thus increasing fawn production in coming years. Decreasing the mule deer buck permit 535-50 quota will increase male survival.

4. How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints, etc. Success will be measured using annual recruitment and post season aerial surveys to determine population level and population trend across the district. Limited numbers of antlerless B licenses will be maintained as a tool to address localized game damage concerns if those situations should arise. Currently, game damage complaints from mule deer are very low across the district.

5. 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). Mule deer are managed according to AHM guidelines in a Prairie Breaks population management unit with the goal of keeping the population near its long-term average and avoiding large increases and declines above or below population average. Table 2 shows current population status and spring recruitment for the mule deer trend areas in HD 535. Total mule deer numbers are 52% below average on the Census area, 20% below average on the Deadmans trend area, and 65% below average on the Big Snowy trend area. Because average deer numbers vary considerably between trend areas, caution must be used when analyzing data for the trend areas combined. Large deer numbers on one trend area can mask declines on other trend areas that average lower deer numbers overall. Therefore, averaging the three trends; -52%, -20%, and -63%

indicated that deer numbers in the district overall are approximately 45% below long-term average. In 2023, the Subunits had 39 fawns/100 adults. While the Deadmans trend area had 40 fawns:100 adults and the Big Snowy trend area count had 38 fawns:100 adults. All the trend areas and subunits show a declining trend in fawn:doe ratios.

Table 2. HD 535 Mule Deer Trend Areas Data 1986-2023.

Deadsmans Trend Area
Spring Survey Data

Year	Adult	Fawns	Uncl	Total	Fawns/ 100 Ad
1989-90	40	21	160	221	53
1990-91		NA	NA	NA	
1991-92	63	30	70	163	48
1992-93	42	16	115	173	38
1993-94	41	18	135	194	44
1994-95	83	43	160	286	52
1995-96	72	40	102	214	56
1996-97	123	32	102	257	26
1997-98	89	33	32	154	37
1998-99	92	53	46	191	58
1999-00	133	86	118	337	65
2000-01	157	70	40	267	45
2001-02	138	69	44	251	50
2002-03	141	74	28	243	52
2003-04	64	21	25	110	33
2004-05	93	29	0	122	31
2005-06	64	22	31	117	34
2006-07	130	65	22	217	50
2007-08	146	29	16	191	20
2008-09	91	40	0	131	44
2009-10	113	39	0	152	35
2010-11	106	31	0	137	29
2011-12	65	31	16	112	48
2012-13	51	27	0	78	53
2013-14	66	37	0	103	56
2014-15	74	44	0	118	59
2015-16	128	79	0	207	62
2016-17	127	81	0	208	64
2017-18	135	64	0	199	47
2018-19	144	93	0	237	65
2019-20	NA	NA	NA	NA	NA
2020-21	125	70	0	195	56
2021-22	87	42	0	129	48
2022-23	105	42	0	147	40
Avg. 1989-90 to 21-22	97.5	46.1		184.3	47.0
% Dev. from Avg.	7.7	-8.9		-20.2	-14.8
% Dev. from prev. yr	20.7	0.0		14.0	-17.1

Table 2 cont. HD 535 Mule Deer Trend Areas Data 1986-2023.

**Big Snowy
Spring Survey Data**

Year	Adult	Fawns	Uncl	Total	Fawn/100 Adult
1989-90	219	87	370	676	40
1990-91		NA			
1991-92	175	64	433	672	37
1992-93	74	30	339	443	41
1993-94	132	44	467	643	33
1994-95	124	50	289	463	40
1995-96	167	63	378	608	38
1996-97	247	59	648	954	24
1997-98	159	61	260	480	38
1998-99	104	63	860	1067	61
1999-00	263	97	602	962	37
2000-01	348	141	688	1177	41
2001-02	287	97	384	713	34
2002-03		NA			
2003-04	455	161	573	1189	35
2004-05	240	84	1110	1556	35
2005-06	209	75	874	1158	36
2006-07	190	57	412	659	30
2007-08	NA	NA	NA		NA
2008-09	NA	NA	NA		NA
2009-10	115	42	370	527	37
2010-11	186	41	12	239	22
2011-12	236	121	17	374	51
2012-13	121	68	161	350	56
2013-14 ⁴	154	58	0	212	38
2014-15	201	110	29	340	55
2015-16	265	156	16	421	59
2016-17	222	87	16	325	39
2017-18	208	115	0	323	55
2018-19 ⁵	NA	NA	NA	NA	NA
2019-20	NA	NA	NA	NA	NA
2020-21	NA	NA	NA	NA	NA
2021-22	198	95	21	314	48
2022-23	88	33	0	121	38
10 year Average				326	50
% Dev. From Average				-63	-25

Table 2 cont. HD 535 Mule Deer Trend Areas Data 1981-2023.

HD530 Subunits					Recruitment
Spring Survey Data					- F/100 Ad
Year	Adults	Fawns	Uncl	Total	
1980-81	125	111	-	236	88
1981-82	45	25	-	70	55
1982-83	367	223	-	590	61
1983-84	21	10	-	31	48
1984-85	733	228	-	961	31
1985-86	408	79	-	487	19
1986-87	225	122	-	347	54
1987-88	279	158	-	437	57
1988-89 ³	719	365	1986	1084	51
1989-90 ³	1555	808	1215	2363	52
1990-91	574	297	0	871	52
1991-92	552	224	110	776	41
1992-93	513	174	393	687	34
1993-94 ³	1481	574	1288	2055	39
1994-95	691	267	38	958	39
1995-96	504	155	36	659	36
1996-97 ³	1493	368	253	1861	25
1997-98	393	148	21	541	38
1998-99	485	252	0	737	52
1999-00	519	288	0	807	55
2000-01	758	266	136	1024	35
2001-02	737	219	0	956	30
2002-03	467	203	0	670	43
2003-04	433	116	17	549	27
2004-05	266	89	35	355	33
2005-06	374	201	33	575	54
2006-07	420	168	0	588	40
2007-08	347	131	0	478	38
2008-09	419	138	0	557	33
2009-10	418	101	0	519	24
2010-11	433	124	0	557	29
2011-12	494	209	0	703	42
2012-13	402	156	0	558	40
2013-14	354	186	0	540	52
2014-15	324	186	0	510	57
2015-16	400	261	0	661	65
2016-17	586	276	0	862	47
2017-18	575	245	0	820	43
2018-19	474	204	7	678	43
2019-20	NA	NA	NA	NA	NA
2020-21	556	147	0	703	26
2021-22	386	158	0	544	41
2022-23	267	105	0	372	39
Average	519.6	211.2		730.9	43.1
% Dev. From Average	-48.6	-50.3		-49.1	-9.6

Table 2 cont. HD 535 Mule Deer Trend Areas Data 1990-2023.

HD530 Census Area

Spring Survey Data

Year	Adults	Fawns	Uncl	Total
1989-90 ³	171	96	72	339
1990-91	NA	NA	NA	NA
1991-92	NA	NA	NA	394
1992-93	93	37	194	324
1993-94 ³	139	53	61	253
1994-95	155	65	38	258
1995-96	145	60	36	241
1996-97 ³	127	27	8	162
1997-98	97	37	21	155
1998-99	169	90	0	252
1999-00	164	100	15	299
2000-01	218	83	0	273
2001-02	175	34	0	210
2002-03	182	79	0	261
2003-04	138	32	17	187
2004-05	91	28	0	164
2005-06	89	43	33	187
2006-07	178	64	20	252
2007-08	150	36	32	212
2008-09	171	59	68	298
2009-10	177	38	93	246
2010-11	197	36	0	203
2011-12	110	59	0	220
2012-13	106	41	0	141
2013-14	99	45	0	144
2014-15	85	35	0	119
2015-16	145	94	0	239
2016-17	259	95	0	354
2017-18	229	119	0	315
2018-19	231	54	7	292
2019-20	NA	NA	NA	
2020-21	99	51	0	150
2021-22	NA	NA	NA	
2022-23	77	37	0	114
Average				238
% Dev. From Average				-52%

Table 2 cont. HD 535 Mule Deer Trend Areas Data 1986-20232.

HD535

Trend areas combined

Spring Survey Data

Year	Adults	Fawns	Total	Unclassified.	HD535 Fawns:100 Ad
1989-90	1814	916	2893	2112	50
1990-91					
1991-92	790	318	1611	613	40
1992-93	629	220	1303	847	35
1993-94	1654	636	2892	1890	38
1994-95	898	360	1707	487	40
1995-96	743	258	1481	516	35
1996-97	1863	459	3072	1003	25
1997-98	641	242	1175	313	38
1998-99	681	368	1995	906	54
1999-00	915	471	2106	720	51
2000-01	1263	477	2468	864	38
2001-02	1162	385	1920	428	33
2002-03	608	277	913	28	46
2003-04	952	298	1848	615	31
2004-05	599	202	2033	1145	34
2005-06	647	298	1850	938	46
2006-07	740	290	1464	434	39
2007-08	493	160	669	16	32
2008-09	510	178	688	0	35
2009-10	646	182	1198	370	28
2010-11	725	196	933	12	27
2011-12	795	361	1189	33	45
2012-13	574	251	986	161	44
2013-14	574	281	855	0	49
2014-15	599	340	968	29	57
2015-16	793	496	1289	16	63
2016-17	935	444	1395	16	47
2017-18	918	424	1342	0	46
2018-19	618	297	915	7	48
2019-20	0	0	0	0	
2020-21	681	217	898	0	32
2021-22	671	295	987	21	44
2022-23	460	180	640	0	39
1989-90 to 21-22 Average	816.6	331.2	1470		41.0
2022-23 % Deviation from Avg	-44	-46	-57		-5

Buck harvest is a reliable indicator of population status and trend. Buck harvest in 2022 was 52% below the long-term average (Table 3). Buck harvest declined 28% between the 2021 and 2022 hunting seasons. Total harvest in the district is 60% below long-term average. Currently 24% of harvest is antlerless, this is -24% below average. Given the declining population observed in aerial surveys and buck harvest data, a reduction in harvest on the female segment of the population is necessary. Decreasing the 535-50 buck permit quota we will also allow for increased male survival.

Table 3. HD 535 Mule Deer Harvest 1986-2022.

Year	Buck Harvest	Antlerless Harvest	Total Harvest	Percent Antlerless
1986	678	145	823	18%
1987	477	193	670	29%
1988	678	531	1209	44%
1989	717	715	1432	50%
1990	811	849	1660	51%
1991	848	675	1523	44%
1992	876	765	1641	47%
1993	861	603	1464	41%
1994	846	493	1339	37%
1995	849	758	1607	47%
1996	643	401	1044	38%
1997	514	228	742	31%
1998	512	18	530	3%
1999	548	111	659	17%
2000	633	420	1053	40%
2001	698	519	1217	43%
2002	644	608	1252	49%
2003	739	502	1241	40%
2004	593	415	1008	41%
2005	600	303	903	34%
2006	597	246	843	29%
2007	689	558	1247	45%
2008	671	490	1161	42%
2009	596	297	893	33%
2010	415	228	643	35%
2011	410	161	571	28%
2012	428	165	593	28%
2013	429	113	542	21%
2014	437	6	443	1%
2015	549	19	568	3%
2016	539	61	600	10%
2017	623	159	782	20%
2018	490	179	669	27%
2019	595	167	762	22%
2020	604	242	846	29%
2021	410	199	609	33%
2022	296	95	391	24%
Average	618	348	966	32%
2022 % Dev. From Avg	-52%	-73	-60	-24%

6. How will this proposal influence this population status?

Refer to sections two, three, and four, listed above.

7. Provide information related to any weather/habitat factors that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).

Describe access problems related to change, etc.

The district is private land with accessible State, USFS, and BLM parcels scattered throughout. Some BMA's provide quality deer hunting opportunities scattered across the district. Access to non-BMA private lands is limited to fair for mule deer across this district due to landowner concerns about mule deer numbers. No access problems or changes are anticipated as a result of this season structure change.

Overwinter survival information (i.e. bad winter lost what % of population)

In addition to other April snowstorms this spring, a late April snowstorm dropped 20+ inches of snow in the foothills of the Big and Little Snowy Mountains with two days of 30 to 50mph winds. This storm led to severe winter conditions late in the season when deer were already using reserves to survive until green up. This storm created an ice crust a couple inches thick across most of the foothill grasses and vegetation extending all the way to the southern boundary of the district and east past Hwy 87. In addition to the ice crust on the flat terrain, snow drifts of 3 to 6 feet were common and many drifts were deeper in coulees or timbered areas. This snowstorm likely caused some mule deer mortality in the district and especially on the Big Snowy Mountains trend area. No Snotel weather monitoring stations exist in district 535.

Summer precipitation is also extremely important. Higher summer precipitation increases overwinter survival of all age classes of deer. Summer precipitation (June, July, August) has been below average for the past three summers. Winter severity (precipitation and temperature) has been more severe in recent winters. The current winter and spring is on track to be more extreme than average. Based on current winter and spring weather conditions, we anticipate a continued decline in total deer numbers and recruitment in the spring of 2023.

8. Provide information relative to impacts to resident hunters, nonresident hunters and public & private land use.

No significant changes in overall deer hunter numbers within the district are anticipated. No impacts to public or private land use or access are anticipated from this proposal.

9. 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).

Sportsmen and landowners are growing increasingly concerned about declining mule deer populations. An apparent decline in buck numbers has also sparked concern among sportsmen. Most comments received by FWP at check stations, public meetings, and informal conversations support a more conservative mule deer season structure that reduces antlerless harvest. Therefore, this proposal should be well supported by landowners and sportsmen. No conflicts with landowners, sportsmen, or other members of the public are anticipated with this proposal.

**MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION**

Species: Mule Deer
Region: 5
Hunting District: 555
Year: 2024

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

CWD was detected in this hunting district during the 2017 hunting season. Long term CWD management, as described in the Montana CWD Management Plan, is aimed at maintaining low densities of deer and low buck/doe ratios in hunting districts where CWD has been detected. The following season proposal is designed to meet these two broad objectives for HD 555.

This proposal changes the general mule deer season from either sex to antlered buck only.

Change From:

555: General License

Sep 07 – Oct 20 Either-sex Mule Deer. Archery Season Only
Either-sex White-tailed Deer. Archery Season Only

Oct 26 – Dec 01 Either-sex Mule Deer
Either-sex White-tailed Deer.

Dec 14- Dec 22 Antlered Buck Mule Deer. Heritage Muzzleloader Season Only.
Either-sex White-tailed Deer. Heritage Muzzleloader Season Only.

Change To:

555: General License

Sep 07 – Oct 20 Antlered Buck Mule Deer. Archery Season Only
Either-sex Mule Deer. Archery Season Only. Only youth ages 10-15
Either-sex White-tailed Deer. Archery Season Only

Oct 26 – Dec 01 Antlered Buck Mule Deer
Either-sex Mule Deer. Only youth ages 10-15
Either-sex White-tailed Deer.

Dec 14- Dec 22 Antlered Buck Mule Deer. Heritage Muzzleloader Season Only.
Either-sex Mule Deer. Only youth ages 10-15. Heritage Muzzleloader
Season Only.
Either-sex White-tailed Deer. Heritage Muzzleloader Season Only.

Table 1. Hunter and harvest statistics for mule deer B license holders for H.D. 510, 2007 – 2021 and HD 555 2022-2023.

Year	Season Type	B License Number	Harvest		B License Harvest
			Bucks	Antlerless	Antlerless
2007	Unl. Antlered Buck Permit	150	223	91	91
2008	Unl. Antlered Buck Permit	150	166	71	71
2009	Unl. Antlered Buck Permit	150	141	97	97
2010	Unl. Antlered Buck Permit	150	135	53	53
2011	Unl. Antlered Buck Permit	150	125	57	57
2012	Unl. Antlered Buck Permit	150	172	57	57
2013	Unl. Antlered Buck Permit	150	147	65	65
2014	Unl. Antlered Buck Permit	0	170	3	3
2015	Unl. Antlered Buck Permit	0	212	2	2
2016	Unl. Antlered Buck Permit	75	169	30	30
2017	Unl. Antlered Buck Permit	75	141	26	26
2018	Unl. Antlered Buck Permit	150	134	51	42
2019	Either-sex	150	100	34	14
2020	Either-sex	150	107	47	37
2021	Either-sex	150	66	40	14
2022	Either-sex	150	NA	NA	NA
2023	Either-sex	150	NA	NA	NA

2. Why is the proposed change necessary?

This season change proposal is in direct response to the ongoing presence of CWD in this hunting district since it was discovered in 2017 and follows the guidelines established in the **Montana CWD Management Plan**. In response to CWD the mule deer general season type was changed from unlimited antlered buck permits to a general either sex season in 2019. That change was designed reduce the number of older age bucks and to stabilize or slightly reduce the mule deer population especially in the area close to the CWD endemic area. That change appears to have resulted in an overall reduction in mule deer numbers with the 2022 post-season count on the Sykes Ridge trend area being 24% below the average count observed since 2010. However, buck numbers remained above 20 bucks/100 does and were 20% above the long term average in the 2022 post-season. The proposed season change should stabilize mule deer numbers in the short term and shift a larger proportion of the harvest to the buck segment.

3. 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 primary objective of the season change is to increase the harvest of mule deer bucks with the goal of reducing post-season buck/doe ratios to less than 10 bucks/100 does in accordance with the **Montana CWD Management Plan**.

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

Mule deer harvest will be monitored through the statewide harvest questionnaire survey. Deer numbers and sex ratios on the Sykes Ridge trend area will be monitored through annual post season helicopter surveys.

5. 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).

As of early January 2023 the mule deer population on the Sykes Ridge trend area was 24% below the 2010-2021 average with a fawn/doe ratio near average and the post-season buck/doe ratio 20% above average (Table 2). Spring recruitment surveys are not conducted in this hunting district.

Table 2. Counts and classification of mule deer on the Sykes Ridge trend area, hunting district 510, 1984 to 2017.

Year	Bucks		Does	Total Adults	Fawns	Total	Fawns/ 100 Does	Fawns/ 100 Ad.	Increment	Bucks/ 100 Does
	Yrlg	2+								
1984	4	17	58	79	33	112	57	42	29	36
1985	6	4	52	62	24	86	46	39	28	19
1986	No Survey									
1987	2		77	79	46	125	60	58	37	3
1988	29	28	339	396	169	565	50	43	30	17
1989	21	33	306	360	131	491	43	36	27	18
1990	22	46	266	334	108	442	41	32	24	26
1991	No Survey									
1992	No Survey									
1993	10	11	240	261	73	334	31	28	22	9
1994	25		240	265	91	356	38	34	26	10
1995	3	5	37	45	26	71	70	58	37	22
1996	4	5	117	126	33	159	28	26	21	8
1997	1		45	46	24	70	53	52	34	2
1998	20	10	133	163	70	233	53	43	30	23
1999	No Survey									
2000	No Survey									
2001	12	11	96	119	55	174	57	48	33	24
2002	No Survey									
2003	3	9	132	144	52	196	39	36	27	8
2004	1	3	70	74	14	88	20	19	17	6
2005	5	10	95	110	30	140	32	27	21	16
2006	No Survey									
2007	12	11	91	114	32	146	35	28	22	25
2008	9	9	119	137	24	161	20	18	15	15
2009		3	62	65	9	74	14	14	12	5
2010	23	22	210	255	94	349	45	37	27	21
2011	5	28	159	192	81	273	51	42	30	21
2012	12	15	115	142	56	198	49	39	28	23
2013	30	24	227	281	105	386	46	37	27	24
2014	28	39	277	344	150	494	54	44	30	24
2015	24	18	157	199	67	266	43	34	25	27
2016	4	10	128	142	50	192	39	35	26	11
2017	16	15	173	204	84	288	49	41	29	18
2018	16	38	176	230	31	261	18	13	12	31
2019	10	12	95	117	33	150	35	28	22	23
2020	No Survey									
2021	No Survey									
2022	12	17	138	167	56	218	41	34	26	21

6. How will this proposal influence this population status?

This proposal will stabilize the population and maintain it somewhat below average in the near term, which is the desired result in the face of the CWD threat. Buck numbers will be reduced, which will be reflected in lower buck/doe ratios.

7. Provide information related to any weather/habitat factors that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).

- 1) Utilization transect information: None
- 2) Snow condition survey information: None
- 3) Describe access problems related to change, etc.

This is primarily a public land HD with the majority of the land controlled by the Forest Service or the BLM. No access problems will develop due to this proposal.

- 4) Overwinter survival information (i.e. bad winter lost what % of population)

The trend area in this hunting district is only flown in early winter so over winter mortality cannot be calculated.

8. Provide information relative to impacts to resident hunters, nonresident hunters and public & private land use.

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).

- 1) List specific sports groups or landowners:
This specific proposal has not been discussed with landowners or public groups. The season proposal is consistent with the CWD Management Plan which was adopted following a public process.
- 2) Indicate if proposal was recommended by public - is it in response to a concern by sportspersons: The proposal is in response to the hunting season recommendations provided in the CWD management plan.

Submitted by: Shawn T. Stewart

Date:

Approved: _____
Regional Supervisor / Date

Disapproved / Modified by: _____
Name / Date

Reason for Modification:

**MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION**

Species: Mule Deer
Region: 5
Hunting District: 590
Year: 2024

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

This proposal is to change the general license mule deer season from either-sex to antlered buck.

Change From:

590: General License
 Archery Season: Either-sex Mule Deer. Archery Season Only
 Either-sex White-tailed Deer. Archery Season Only
 General Rifle: Either-sex Mule Deer
 Either-sex White-tailed Deer.
 Muzzleloader: Either-sex Mule Deer. Heritage Muzzleloader Season Only.
 Either-sex White-tailed Deer. Heritage Muzzleloader Season Only.

Change To:

590: General License
 Archery Season: **Antlered Buck Mule Deer.** Archery Season Only
 Either-sex White-tailed Deer. Archery Season Only
 General Rifle: **Antlered Buck Mule Deer.**
 Either-sex White-tailed Deer.
 Muzzleloader: **Antlered Buck Mule Deer.** Heritage Muzzleloader Season Only.
 Either-sex White-tailed Deer. Heritage Muzzleloader Season Only.

Table 1. History of Season Types and B License numbers for Mule Deer in HD 590.

Year	General Season Structure	# of Mule Deer B Licenses
2010	Either Sex	350
2011	Either Sex	350
2012	Either Sex	350
2013	Either Sex	350
2014	Antlered Buck	95
2015	Antlered Buck	95
2016	Either Sex	100
2017	Either Sex	100
2018	Either Sex	100
2019	Either Sex	100
2020	Either Sex	100
2021	Either Sex	100
2022	Either Sex	100
2023	Either Sex	100
2024	Antlered Buck (proposed)	100

2. Why is the proposed change necessary?

This season proposal recognizes the continued decline in mule deer fawn-doe ratios and buck harvest by initiating a restrictive season type in accordance with the guidelines of the **Mule Deer AHM Plan**. The objective for this season proposal is to reduce hunting pressure on the antlerless segment of the population in an effort to stabilize and/or increase recruitment.

The Mule Deer Adaptive Harvest Management Plan (AHM) states “A Restrictive Hunting Regulation may be recommended if both trigger 1 **AND** trigger 2 (a **OR** b) are met. If aerial surveys are not conducted in a HD, recruitment data from nearby HDs where surveys are flown should be used for assessing trigger 1.

1. *Recruitment is less than 30 fawns:100 adults.*

AND

2. a) *Total number of deer counted on the survey area is at least 30% below the LTA.*

OR

b) *In the absence of long-term survey data: Buck harvest is at least 25% below the LTA. Adjacent, representative hunting district survey data may be used in addition to buck harvest data.”*

Fawn recruitment in HD 590 is at the AHM trigger point of 30 fawns:100 adults (Table 2). Mule deer buck harvest is 38% below average (Table 3), surpassing the AHM trigger point of 25% below average. Following the commission approved AHM plan, triggers have been met to change this district from an either-sex season to an antlered-buck season.

3. 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 reduce antlerless harvest and stabilize or increase recruitment.

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

Success will be measured using annual recruitment and post season aerial surveys to determine fawn to adult ratios. Limited numbers of antlerless B licenses will be maintained as a tool to address localized game damage concerns, if those situations should arise. Game damage complaints from mule deer are very low across this district.

5. 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).

Mule deer are managed according to AHM guidelines in a Prairie Breaks population management unit with the goal of keeping the population near its long-term average and avoiding large increases and declines above or below population average. Subunits in HD 590 only allow for comparison of ratios (see above explanation for trigger response in part 2) and not population estimates.

Buck harvest is a reliable indicator of population status and trend. Buck harvest has declined each year since 2018. The 2021 buck harvest was 38% below the long-term average and the lowest on record since before 1986. Buck harvest declined 36% between the 2020 and 2021 hunting seasons (Table3).

Table 2. HD 590 Mule Deer Trend Areas Recruitment Data 1986-2022.

Time Period	Adults	Fawns	Total	Fawns per 100 adults
1982-83	202	158	360	78
1984-85	121	45	166	37
1985-86	16	7	23	-
1986-87	-	-	240	52
1987-88	119	65	184	55
1988-89	229	95	324	41
1989-90	443	221	664	50
1990-91	631	325	956	52
1992-93	443	178	621	40
1993-94	468	161	629	34
1994-95	528	250	778	47
1995-96	240	158	543	41
1996-97	390	90	480	23
1997-98	185	39	224	21
1998-99	299	68	367	23
1999-00	607	277	884	46
2000-01	775	214	989	28
2001-02	391	162	553	41
2002-03	444	146	590	33
2003-04	476	122	598	25
2004-05	390	90	480	23
2005-06	431	191	622	44
2006-07	428	130	558	30
2007-08	475	162	637	34
2008-09	488	178	666	36
2009-10	596	182	778	23
2010-11	257	80	337	31
2011-12	717	343	1060	48
2012-13	688	257	945	37
2013-14	645	308	953	52
2014-15	312	186	498	60
2015-16	437	220	657	50
2016-17	399	140	539	35
2017-18	477	132	609	28
2018-19	302	95	397	31
2019-20	-	-	-	-
2020-21	318	121	439	38
2021-22	345	108	453	31

Table 3. Mule Deer Harvest in Hunting District 590, 1986-2021.

Year	Mule Deer Harvest	
	Bucks	Ant-
1986	946	197
1987	1015	190
1988	1402	402
1989	1585	1174
1990	1727	952
1991	1419	992
1992	1430	984
1993	1179	680
1994	1200	551
1995	1279	589
1996 (inaccurate data for this year)	1130	397
1997	792	385
1998	844	52
1999	915	53
2000	1244	183
2001	1153	438
2002	1150	478
2003	946	513
2004	1056	385
2005	1091	201
2006	1262	343
2007	1093	291
2008	1091	414
2009	1231	474
2010	1047	407
2011	1093	447
2012	1263	445
2013	937	415
2014	893	36
2015	1325	36
2016	1370	328
2017	1363	322
2018	1207	296
2019	1287	244
2020	1135	366
2021	728	272
Avg. 1986-20	1174	419
% Dev from Avg.	-38	-35

6. How will this proposal influence this population status?

Refer to sections two, three, and four above.

7. Provide information related to any weather/habitat factors that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).

This district is mostly private land with some accessible state and BLM parcels. Opportunity for the public to hunt private land is very limited. No access problems or changes are anticipated as a result of this season structure change.

No Snotel weather monitoring stations exist in district 590. Annual precipitation for the Billings area, as reported by the National Weather Service was below the average of 13.9 inches in both 2020 and 2021.

8. Provide information relative to impacts to resident hunters, nonresident hunters and public & private land use.

No significant changes in overall deer hunter numbers within the district are anticipated. No impacts to public or private land use or access are anticipated from this proposal.

9. 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).

Sportsmen and landowners are growing increasingly concerned about declining mule deer populations. An apparent decline in buck numbers and older age class bucks has also sparked concern among sportsmen. Most comments received by FWP at check stations, public meetings, and informal conversations support a more conservative mule deer season structure that reduces antlerless harvest. Therefore, this proposal should be well supported by landowners and sportsmen. No conflicts with landowners, sportsmen or other members of the public are anticipated with this proposal.

Submitted by: Megan O'Reilly

Date: 4-19-2023

Approved: _____
Regional Supervisor / Date

Disapproved / Modified by: _____
Name / Date

Reason for Modification: