



**2023-2024 Mule Deer Quota Recommendation Forms
(Accompanies Commission Regulation 23-14)**

Mule Deer Quota Recommendation Form

Unit Group: 011-013

Date Prepared: 3/31/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0	223	55	278	--	--	--	25	38	45	1,000
2021-2022	45	78	29	152	253	70	323	58	37	24	28	35	48	900
2022-2023	82	159	92	333	187	45	232	52	58	38	24	33	45	750

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	23%		0%	69%				53%	0	100%	63%	0%
2021-2022	42%		20%	61%				49%	3	100%	57%	50%
2022-2023	0%		50%	46%				43%	3	67%	60%	50%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	20	2	7	2	65	5	--	--	--	--	0	30	2	4
2022-2023	15	2	7	1	50	3	--	--	--	--	0	30	3	4
2023-2024	15	1	4	1	35	2	--	--	--	--	0	15	2	4
Tag Trend	=	DEC	DEC	=	DEC	DEC	=	=	=	=	=	DEC	DEC	=

Quota Rationale

Deep snow levels and harsh winter conditions are anticipated to have a negative impact on the 011-013 mule deer population. Several years of low fawn recruitment, poor body condition of GPS collared adults, and predation are all contributing to the lower population size of this unit grouping. The reduction of available bucks that survived the tough winter in northern Washoe County will result in a reduction of recommended tags for the 2023 hunt season.

Reporting Biologist: Ewanyk

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 014

Date Prepared: 3/31/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0	21	9	30	--	--	--	43	44	52	470
2021-2022	22	44	22	88	52	9	61	50	50	33	17	42	49	250
2022-2023	33	62	37	132	97	30	127	53	60	39	31	49	57	290

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	10%		50%	55%				18%	0	0	65%	
2021-2022	43%		0%	58%				50%	1	0	63%	
2022-2023	50%		50%	38%				29%	0	n/a	100%	

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	10	2	5	2	15	2	--	--	--	--	0	10	1	3
2022-2023	2	1	2	1	8	1	--	--	--	--	0	2	0	0
2023-2024	2	1	1	1	10	1	--	--	--	--	0	3	1	0
Tag Trend	=	=	DEC	=	INC	=	=	=	=	=	=	INC	INC	=

Quota Rationale

The mule deer population in Unit 014 remains suppressed from what it once was in the early 2000's. Despite the population decline, buck ratios remain high for Unit 014. Hunter success for this unit continues to be stable after the previous reductions in tags. Another year of conservative quota recommendations should help Unit 014 stay within the management objectives of an alternative hunt unit.

Reporting Biologist: Ewanyk

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 015

Date Prepared: 3/31/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0	102	28	130	--	--	--	27	45	51	230
2021-2022				0	215	61	276	--	--	--	28	48	55	190
2022-2023	18	22	18	58	228	120	348	82	82	45	53	51	60	200

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	25%		60%			24%		50%	0	0%	30%	0%
2021-2022	0%		40%			29%		80%	1	100%	44%	0%
2022-2023	33%		20%			9%		50%	0	n/a	50%	

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	5	2	5	2	35	3	--	--	--	--	0	10	2	1
2022-2023	3	2	5	1	15	2	--	--	--	--	0	5	0	0
2023-2024	1	1	1	1	10	1	--	--	--	--	0	3	2	0
Tag Trend	DEC	DEC	DEC	=	DEC	DEC	=	=	=	=	=	DEC	INC	=

Quota Rationale

Unit 015 is managed as a non-standard unit, where success should be between 35-45%. The Any Legal Weapon success rates have been below 35% for the last 3 consecutive years. Historically, there was a large migration of deer from California moving to winter range within Unit 015; however, the lack of severe winters has reduced the immigration of deer into this unit prior to the hunting season. Recommended tag reductions for this unit should help to get hunter success rates within the 35-45% range.

Reporting Biologist: Ewanyk

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 021

Date Prepared: 3/31/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0	524	128	652	--	--	--	24	35	41	450
2021-2022	31	76	53	160	645	231	876	41	70	50	36	35	42	400
2022-2023	28	80	52	160	530	232	762	35	65	48	44	37	50	380

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	7%	--	40%	--	--	79%		55%	0	0%	67%	--
2021-2022	7%	--	60%	--	--	46%		59%	1	0%	46%	--
2022-2023	15%	--	75%	--	--	39%		50%	1	100%	75%	--

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	15	2	5	2	--	--	--	--	40	3	0	15	2	0
2022-2023	15	2	5	1	--	--	--	--	30	2	0	15	2	0
2023-2024	8	1	1	1	--	--	--	--	20	1	0	7	2	0
Tag Trend	DEC	DEC	DEC	=	=	=	=	=	DEC	DEC	=	DEC	=	=

Quota Rationale

The interstate deer herd of Unit 021 has had much of its summer and winter ranges burned by wildfires. As a result of these fires, the population estimate has declined across the past three years. Unit 021 is managed as a non-standard unit and the Any Legal Weapon success has been steadily declining across the past three years. A slight reduction in quotas should help to maintain an ALW success rate that is between 35-45%.

Reporting Biologist: Ewanyk

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 022

Date Prepared: 3/31/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				--	66	17	83	--	--	--	26	34	45	550
2021-2022	14	28	19	61	30	10	40	50	68	45	33	30	42	500
2022-2023	31	66	46	143	143	60	203	47	70	47	42	36	44	500

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	38%	--	20%	52%	--	--		51%		100%	50%	100%
2021-2022	13%	--	60%	49%	--	--		45%	2	50%	64%	100%
2022-2023	40%	--	20%	56%	--	--		35%	1	0%	50%	--

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	15	2	5	2	45	4	--	--	--	--	0	15	2	1
2022-2023	6	2	5	1	35	2	--	--	--	--	0	15	2	0
2023-2024	5	1	3	1	35	2	--	--	--	--	0	15	2	0
Tag Trend	DEC	DEC	DEC	=	DEC	=	=	=	=	=	=	=	=	DEC

Quota Rationale

The mule deer population in Unit 022 has been stable for the past three years, with good fawn recruitment the past two years. Unit 022 has had stable success rates the past three years, along with consecutive years of high buck ratios. Keeping quotas similar to the previous year should keep 022 aligned with management objectives.

Reporting Biologist: Ewanyk

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 031

Date Prepared: 2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	58	230	97	385	728	254	982	25	42	34	35	28	39	2,000
2021-2022	34	106	47	187	638	147	785	32	44	34	23	27	36	1,800
2022-2023	171	611	239	1,021	602	153	755	28	39	31	25	28	38	1,700

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	17%		67%	58%				43%	8	80%	78%	78%
2021-2022	30%		60%	58%				39%	7	63%	70%	64%
2022-2023	25%		75%	66%				34%	3	100%	79%	50%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	20	2	5	2	140	7						65	8	17
2022-2023	15	2	4	1	90	4						35	6	18
2023-2024	9	1	4	1	85	5						30		13
Tag Trend	DEC	DEC	DEC	DEC	DEC	DEC	=	=	=	=	=	DEC	DEC	DEC

Quota Rationale

This unit has seen a slight drop in the population which has been occurring over the last few years. Postseason buck ratios have been stable over the last few years with a slightly higher than normal fawn loss this last winter. Snow conditions were extreme in the upper elevations and have continued throughout the winter. With the dry conditions that we had prior to winter and the higher than average snow fall this winter, we are once again seeing a slight reduction in tag numbers.

Reporting Biologist: Partee

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 032

Date Prepared: 2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	35	127	58	220	272	108	380	28	46	36	40	32	45	900
2021-2022	23	98	44	165	261	74	335	23	45	36	28	31	42	850
2022-2023	28	98	41	167	289	70	359	29	42	33	24	33	42	800

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	3%		14%	21%				22%	16		46%	100%
2021-2022	5%		0%	41%				41%	4		45%	75%
2022-2023	17%		40%	25%				21%	6		65%	100%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	60	6	5	2	85	8						55	0	6
2022-2023	30	3	7	1	70	7						40	3	3
2023-2024	20	2	4	1	40	2						15		7
Tag Trend	DEC	DEC	DEC	DEC	DEC	DEC	=	=	=	=	=	DEC	=	INC

Quota Rationale

This unit has seen another drop in the population this year. Surveys were average over the last few years with both stable buck and fawn ratios. Spring surveys indicated a higher-than-average fawn loss due to the extreme winter conditions. This unit will see another reduction in tag numbers this year.

Reporting Biologist: Partee

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 033

Date Prepared: 3/31/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0			0	--	--	--	--	37	45	400
2021-2022	34	44	30	108	35	13	48	77	68	38	37	34	48	320
2022-2023	50	96	73	219	25	5	30	52	76	50	20	33	45	300

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	33%		0%	61%				52%		0%	60%	--
2021-2022	10%		40%	65%				40%		0%	60%	--
2022-2023	0%		60%	60%				39%		100%	83%	--

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	10	2	5	2	20	2	--	--	--	--	0	15	1	0
2022-2023	5	2	5	1	15	2	--	--	--	--	0	6	1	0
2023-2024	7	1	1	1	15	1	--	--	--	--	0	5	1	0
Tag Trend	INC	DEC	DEC	=	=	DEC	=	=	=	=	=	DEC	=	=

Quota Rationale

Although the mule deer population on the Sheldon remains at low density, the harvest success and percentage of 4 points in the harvest have remained stable the past three years. Keeping quotas similar this year should allow harvest metrics to stay within objective for Unit 033.

Reporting Biologist: Ewanyk

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 034

Date Prepared: 2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	35	127	58	220	272	108	380	28	46	36	40	32	45	230
2021-2022	23	98	44	165	261	74	335	23	45	36	28	31	42	210
2022-2023	29	98	41	168	289	70	359	30	42	32	24	33	42	200

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	0%		66%	26%				43%	0	0%	90%	88%
2021-2022	0%		20%	32%				22%	0	50%	75%	50%
2022-2023	0%		0%	55%				36%	0	50%	50%	90%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	7	2	5	2	30	2						8	2	5
2022-2023	5	2	2	1	20	2						5	2	6
2023-2024	8	1	2	1	20	1						4		9
Tag Trend	INC	DEC	DEC	DEC	DEC	DEC	=	=	=	=	=	DEC	DEC	INC

Quota Rationale

This population has remained stable the last couple of years. Survey numbers across the board have remained consistent including ratios. Like many of our other units, coming off a drought and into a heavy winter has resulted in additional fawn losses. This unit along with unit 032 saw a 30% fawn loss this winter which will have an affect on this population within the next couple of years. For this year, all observation indicate that tag numbers should remain constant this year.

Reporting Biologist: Partee

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 035

Date Prepared: 2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	22	66	28	116	167	59	226	33	42	32	35	22	37	600
2021-2022	17	67	26	110	128	40	168	25	39	31	31	22	35	650
2022-2023	34	115	49	198	71	26	97	30	43	33	37	26	34	600

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	6%		29%	43%				30%	10	67%	61%	33%
2021-2022	7%		29%	39%				26%	3	33%	38%	67%
2022-2023	21%		0%	28%				34%	2	100%	52%	100%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	60	7	7	2	75	5						35	3	3
2022-2023	20	2	3	1	30	2						25	3	2
2023-2024	20	2	2	1	40	2						15		4
Tag Trend	DEC	DEC	DEC	DEC	DEC	DEC	=	=	=	=	=	DEC	DEC	INC

Quota Rationale

The population estimate this year is very similar to what we have seen in the last few years. We had a better than average fall survey and one of the lowest spring surveys on record. With the extreme winter many of the deer dropped real low making it difficult to locate in the valleys. This unit saw an average fawn loss this winter which may be due to the open valleys. This unit once again is targeting the post hunt objective of 30.

Reporting Biologist: Partee

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 041, 042

Date Prepared: April 2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0			0	--	--	--	--			700
2021-2022				0			0	--	--	--	--			650
2022-2023				0			0	--	--	--	--			600

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	7%		25%	48%				30%	5	100%	79%	no tags
2021-2022	15%		18%	18%				30%	0	0%	32%	no tags
2022-2023	7%		42%	67%				53%	1	100%	36%	no tags

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR	RES	RES		
2021-2022	15	2	10	2	25	3						15	2	0
2022-2023	15	2	10	2	8	1						15	2	0
2023-2024	15	2	5	2	8	2						10	2	
Tag Trend	=	=	DEC	=	=	INC	=	=	=	=	=	DEC	=	=

Quota Rationale

This population is not modeled or surveyed. According to NDOW management objectives, this unit group is managed conservatively to achieve a Resident Any Legal Weapon (ALW) Hunt success rate of greater or equal to 45%. Last year's success rate was 80%, with the 3-year average of 48%. A continued reduction in the Resident ALW quota has finally resulted in meeting management objectives. This herds population level is thought to be at a very low density.

Reporting Biologist: Kyle Neill

Supervisor: Cooper Munson

Mule Deer Quota Recommendation Form

Unit Group: 043 044 046

Date Prepared: April 2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0	476	124	600	--	--	--	26	29	39	1,700
2021-2022	62	195	97	354			0	32	50	38	--	29	41	1,500
2022-2023	70	294	136	500			0	24	46	37	--	26	37	1,000

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	16%		26%	46%		48%		24%	12	50%	68%	
2021-2022	6%		33%	38%		32%		34%	11	100%	57%	
2022-2023	11%		50%	39%		56%		36%	9	50%	62%	0%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	60	6	20	2	70	6			30	3		70	4/1	1
2022-2023	70	8	20	2	80	6			35	2		70	3/1	1
2023-2024	50	5	20	1	65	4						25	3	
Tag Trend	DEC	DEC	=	DEC	DEC	DEC	=	=	DEC	DEC	=	DEC		

Quota Rationale

NDOW Harvest Guidelines suggests Units 043 044 046 as a standard management unit for mule deer to be managed for approximately a 30 bucks: 100 does post-season ratio. NEW for 2023 ALW season is now a single season. NEW for 2023 Unit 045 was split out of this unit group due to consistently demonstrating a much higher post-season buck ratio. Overall, this herd has continued to decline since 2013 when the estimated population was 3,500. The 2023 population estimate is 1,000 deer (1,350 deer with Unit 045 added in) and is a 61% decline (includes Unit 045) from the high of 2013. This herd remains on a declining trend.

Reporting Biologist: Kyle Neill

Supervisor: Cooper Munson

Mule Deer Quota Recommendation Form

Unit Group: 045

Date Prepared: April 2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0			0	--	--	--	--			
2021-2022				0			0	--	--	--	--			350
2022-2023				0			0	--	--	--	--			350

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021												
2021-2022												
2022-2023								53%				

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022														
2022-2023														1
2023-2024	15	1	10	2	20	2						10	2	
Tag Trend	INC	INC	INC	INC	INC	INC	=	=	=	=	=	INC	INC	DEC

Quota Rationale

For 2023 and on, this population will not be modelled or surveyed. According to NDOW management objectives, this unit is to be managed conservatively to achieve a Resident Any Legal Weapon Hunt success rate of $\geq 45\%$. Unit 045 was split out of Unit Group 043-046 due to consistently demonstrating a higher post-season buck ratio than adjacent units. 3 year average post-season buck ratio (2017,2019&2021) Unit 045 = 46 bucks: 100 does. 2023 recommended quotas are designed to achieve an overall harvest of 20 - 30 bucks/ year and an ALW Resident Hunt success rate of $\geq 45\%$. Long-term (1997-2022) average buck harvest for Unit 045 is 22 bucks/ year.

Reporting Biologist: Kyle Neill

Supervisor: Cooper Munson

Mule Deer Quota Recommendation Form

Unit Group: 051

Date Prepared: 2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	51	114	54	219	613	289	902	45	47	33	47	28	40	2100
2021-2022	68	175	68	311	535	182	717	39	39	28	34	28	39	2000
2022-2023	40	168	87	295	420	134	554	24	52	42	32	29	40	1,900

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	12%		24%	41%				51%	19	57%	59%	93%
2021-2022	30%		40%	45%				42%	8	67%	48%	61%
2022-2023	17%		24%	53%				49%	24	88%	63%	82%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	55	6	15	2	170	15					25	70	7	16
2022-2023	25	3	20	2	160	8					25	65	9	21
2023-2024	30	3	15	1	140	9					0	50		18
Tag Trend	DEC	DEC	=	DEC	DEC	DEC	=	=	=	=	DEC	DEC	DEC	INC

Quota Rationale

Survey numbers were slightly down from last year but on average. The population levels have remained close the last few years with stable post season buck ratios. Fawn loss over winter was high for this unit at 29%. This will influence this population within the next couple of years. Success this last year was good with the four-point class remaining stable. Buck ratios during survey have dropped from previous years resulting in a reduction in tag this year. This population may take a slight drop due to fawn recruitment. The Martin Fire rehab continues to improve range conditions and with the winter this year, it should only benefit this area.

Reporting Biologist: Partee

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 061, 062, 064, 066-068

Date Prepared: 4/7/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	372	1,208	834	2,414	2,728	1,166	3,894	31	69	53	43	34	49	7,300
2021-2022	378	1,004	668	2,050	3,410	1,250	4,660	38	67	48	37	38	50	8,600
2022-2023	558	1,754	941	3,253	3,047	1,050	4,097	32	54	41	34	35	47	7,900

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	14%	n/a	38%	34%	n/a	45%		45%	254	49%	60%	80%
2021-2022	20%	n/a	34%	43%	n/a	63%		38%	165	71%	66%	50%
2022-2023	22%	n/a	38%	42%	n/a	61%		38%	289	59%	59%	60%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	270	30	70	8	800	50	n/a	n/a	95	5	240	320	40,5	4
2022-2023	330	35	110	8	1,150	65	n/a	n/a	140	9	540	480	34,4	4
2023-2024	210	20	50	6	800	40			90	3	140	340	37,5	5
Tag Trend	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	INC	INC

Quota Rationale

Decrease in antlerless harvest recommendation in response to above average overwinter conditions leading to anticipated decreased overwinter survival of both fawns and adults. The proposed antlerless harvest of 2% reported doe harvest would result in 3% population growth. Antlered harvest recommendations target a post season buck ratio of 33:100.

Reporting Biologist: Allen

Supervisor: Donham

Mule Deer Quota Recommendation Form

Unit Group: 065 Alternative Unit

Date Prepared: 4/7/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	n/a	n/a	n/a	0			0	n/a	n/a	n/a	--	n/a	n/a	650
2021-2022	n/a	n/a	n/a	0			0	n/a	n/a	n/a	--	n/a	n/a	650
2022-2023	n/a	n/a	n/a	0			0	n/a	n/a	n/a	--	n/a	n/a	500

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	44%		20%	61%				38%	0	50%	83%	n/a
2021-2022	40%		100%	63%				43%	0	67%	85%	n/a
2022-2023	25%		40%	70%				53%	0	67%	87%	50%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	5	2	5	2	45	5						15	3	
2022-2023	10	2	5	2	35	4						15	3	2
2023-2024	5	1	5	2	20	2						10	3	2
Tag Trend	DEC	DEC	=	=	DEC	DEC	=	=	=	=	=	DEC	=	=

Quota Rationale

As of early October 2022, 19 of 20 collars remained on deer in Unit 065. Between October 2022 and March 2023, a total of 8 collared deer perished. The high mortality rate is not unexpected given the well above average snowfall. Between early November 2022 and late March 2023 most of Unit 065 was blanketed under a foot or more of snow. Recommended quota reductions the past few years were directed at improving the declining percentage of bucks harvested supporting 4-points or better. While the percentage of harvested bucks supporting 4-points or better again improved last year, it is still on the low end of our objective of 50-75%. Many of the improvements in shown in recent harvest metrics were likely lost this winter. The mortality experienced this winter is a setback to an already struggling deer herd and will likely impact this herd for several years to come.

Reporting Biologist: Jeffress

Supervisor: Donham

Mule Deer Quota Recommendation Form

Unit Group: 071-079, 091

Date Prepared: 4/7/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0	1,930	616	2,546	--	--	--	32	35	46	11,100
2021-2022	239	968	478	1,685	2,307	794	3,101	25	49	40	34	32	44	11,000
2022-2023				0	3,301	1,020	4,321	--	--	--	31	31	41	9,400

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	22%	38%	45%	47%		67%		54%	194	76%	72%	100%
2021-2022	21%	41%	45%	57%		70%		40%	185	65%	77%	83%
2022-2023	24%	30%	36%	54%		69%		35%	93	69%	73%	0%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	280,30	30,3	85	7	850	60			200	15	290	380	35,10	
2022-2023	240,30	25,3	80	5	750	40			190	9	105	360	36,9	1
2023-2024	190,20	20,2	40	5	550	25			140	6	50	260	30,7	5
Tag Trend	DEC	DEC	DEC	=	DEC	DEC	=	=	DEC	DEC	DEC	DEC	DEC	INC

Quota Rationale

The drop in population this year is a result of tough winter conditions. Although spring fawn ratios have been close to recent averages, it is likely additional fawns and adult deer will die once they start migrating back to summer range. Observed fall buck ratios from cameras on the highway 93 overpasses indicate the buck ratio has been coming down toward objective. The decrease in antlered mule deer tag recommendations is the result of targeting the post-season buck ratio objective of 30 bucks per 100 does. Hunter success and the number of 4 points in the harvest decreased again in 2022. This is due primarily to reduced fawn recruitment in 2016 - 19 which has resulted in the older age classes of bucks being more under represented in the population than is typical. With the recent increase in fawn recruitment the past few years, the proportion of older age class bucks is expected to begin building back. Doe quotas will remain conservative and the harvest of such a minimal number of animals will have no biological impact on the population.

Reporting Biologist: Huebner

Supervisor: Donham

Mule Deer Quota Recommendation Form

Unit Group: 081

Date Prepared: 4/7/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0			0	--	--	--	--			900
2021-2022				0			0	--	--	--	--			850
2022-2023				0	371	97	468	--	--	--	26			700

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	40%		79%	82%				78%		100%	69%	0%
2021-2022	22%		63%	40%				49%			67%	
2022-2023	40%		69%	50%				86%		0%	80%	

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR	RES	RES		
2021-2022	10	2	20	2	65	4						35	3	
2022-2023	5	2	15	2	40	2						20	3	
2023-2024	3,3	1,1	8	2	30	1						15	3	4
Tag Trend	INC	INC	DEC	=	DEC	DEC	=	=	=	=	=	DEC	=	INC

Quota Rationale

This is an alternative mule deer herd management unit and harvest metrics are used to determine quota recommendations. The three year average hunter success and percentage of 4 points are both within the objectives. A small sample of teeth were aged from harvested bucks this year. The average age was 4 years old. Although the hunt metrics show that tags could remain similar to last year, the loss of habitat due to fire followed by the extreme winter conditions resulted in a reduction in tag recommendations.

Reporting Biologist: Huebner

Supervisor: Donham

Mule Deer Quota Recommendation Form

Unit Group: 101-109

Date Prepared: 4/12/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	536	1,629	868	3,033	4,259	1,482	5,741	33	53	40	35	35	48	13,000
2021-2022				0	4,616	1,596	6,212	--	--	--	35	36	48	13,500
2022-2023	1,084	3,309	1,934	6,327	5,015	1,185	6,200	33	58	44	24	36	38	10,800

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	13%	32%	31%	20%	21%	51%		36%	160	57%	49%	53%
2021-2022	13%	25%	15%	28%	30%	59%		32%	156	49%	48	78%
2021-2023	10%	20%	26%	25%	27%	43%		26%	111	64%	51	93%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	500, 20	50, 2	80	9	850	65	850	65	150	10	160	490	25,27,6	32
2022-2023	690, 30	70, 3	220	16	1,050	75	1,050	65	180	10	50	600	28,35,6	19
2023-2024	460, 45	50, 2	75	8	450	25	450	7	100	4	15	400	41,38,6	
Tag Trend	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	DEC	INC	DEC

Quota Rationale

The winter of 2022-2023 was exceptional in duration, low average temp, and snowpack. The winter resulted in over 50% fawn loss, as well as significant adult loss. From January 1st-April 10th, 26% of the collared adult female deer died. The full effects of this winter have not been fully realized, so the proposed quotas are building in moderate conservatism. At winters conclusion, if the winterkill is less than projected it can easily be addressed with future quota recs. Five of the 6 lowest total antlered deer harvests since 1976 have all taken place in the last 6 years, including 2022. The current proposed antlered deer quotas are targeting a post-season ratio of 32 bucks:100 does.

Reporting Biologist: Roberts

Supervisor: Donham

Mule Deer Quota Recommendation Form

Unit Group: 111-113

Date Prepared: 4/7/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	255	983	452	1,690	1,210	380	1,590	26	46	37	31	28	41	3,600
2021-2022				0	1,535	298	1,833	--	--	--	19	33	40	3,100
2022-2023	314	952	471	1,737	1,531	401	1,932	33	49	37	26	34	42	2,600

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	25%	NA	50%	46%	NA	70%		29%	28	44%	65%	NA
2021-2022	41%	NA	46%	43%	NA	63%		23%	39	57%	77%	NA
2022-2023	19%	NA	58%	53%	NA	58%		32%	19	40%	60%	NA

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	30	3	15	2	270	20	0	0	25	2	0	120	11,1	0
2022-2023	30	3	10	2	200	13	0	0	20	2	0	90	12,1	0
2023-2024	25	3	6	1	170	10	0	0	20	1	0	55	9,1	0
Tag Trend	DEC	=	DEC	DEC	DEC	DEC	=	=	=	DEC	=	DEC	INC	=

Quota Rationale

This population continues to decline due to poor fawn recruitment in 4 of the last 5 years, severe drought, and the severe winters of 2018-19 and 2022-23. Quota reductions have been occurring since 2018. Hunter success and %4-pt in harvest improved during the 2022 deer season. The observed post-season buck and fawn ratios in the fall of 2022 were good at 33 bucks:100 does:49 fawns. There were signs of slight improvement in this population until the 2022-23 winter occurred. The 2022-23 winter continued population decline in this herd. Recommended quotas are based on a post-season buck ratio of 33 bucks:100 does.

Reporting Biologist: Menghini

Supervisor: Donham

Mule Deer Quota Recommendation Form

Unit Group: 114-115

Date Prepared: 4/7/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0	298	84	382	--	--	--	28	30	40	1,100
2021-2022				0	465	74	539	--	--	--	16	31	36	1,000
2022-2023				0	283	105	388	--	--	--	37	25	39	1,000

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	13%	NA	58%	58%	NA	80%		53%	29	100%	62%	83%
2021-2022	11%	NA	47%	48%	NA	80%		59%	21	100%	58%	100%
2022-2023	17%	NA	71%	56%	NA	57%		59%	3	40%	64%	50%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	70	7	20	2	60	6	0	0	5	2	40, 10	30	2,1	6
2022-2023	70	7	20	2	60	6	0	0	5	2	0	30	3,1	6
2023-2024	70	7	25	2	65	6	0	0	5	2	0	35	3,1	3
Tag Trend	=	=	INC	=	INC	=	=	=	=	=	=	INC	=	DEC

Quota Rationale

This unit group is managed as an alternative hunt and current management guideline direction is to manage for a post-season buck ratio of 35 bucks:100 does, hunter success rate between 40-55%, and percent 4-point or greater at 50-75% for all harvested bucks. Post-season surveys in this unit group result in low sample sizes and statistically unreliable data, therefore the post-season buck ratio is not considered in quota development. The 3-year average hunter success for the early ALW hunt is 55% and the 3-year average percent 4-point or greater is 57%. Success rates have been increasing while maintaining the percent 4-point or greater in harvest. A slight quota increase of 5 tags in each of the following seasons; ALW Early, Muzzleloader, and Junior hunts.

Reporting Biologist: Menghini

Supervisor: Donham

Mule Deer Quota Recommendation Form

Unit Group: 121

Date Prepared: 4/7/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	76	505	254	835	710	257	967	15	50	44	36	24	38	2,100
2021-2022	77	421	162	660	805	202	1,007	18	38	33	25	24	34	1,700
2022-2023				0	907	270	1,177	--	--	--	30	29	40	1,600

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	20%	33%	46%	46%		77%		28%	11	50%	68%	67%
2021-2022	30%	33%	60%	51%		38%		36%	7	57%	90%	50%
2022-2023	33%	0%	75%	59%		71%		38%	0	50%	73%	100%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	15,3	2,2	7	2	85	2			8	2		45	7,1	5
2022-2023	4,2	2,2	3	2	40	2			5	2		15	3,1	3
2023-2024	9,1	5,1	2	1	45	3			5	2		15	2,1	5
Tag Trend	INC	INC	DEC	DEC	INC	INC	=	=	=	=	=	=	DEC	INC

Quota Rationale

The last two post-season survey observed buck ratios were 15 and 18 bucks per 100 does, respectively. Population estimate adjustments have occurred to reflect the depressed buck ratio and declining population more accurately. Quotas were drastically reduced in 2021 and 2022. The 2022-23 winter was severe. Most of this population seems to have fared better this winter than neighboring areas, and the population decline appears to be less severe than expected. A slight increase in quotas is recommended in response to an improving buck ratio due to quota reductions in the previous two years. Quota recommendations are still below historic quotas and are being based off a post-season buck ratio of 35 bucks:100 does.

Reporting Biologist: Menghini

Supervisor: Donham

Mule Deer Quota Recommendation Form

Unit Group: 131-134

Date Prepared: 3/29/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0	482	121	603	--	--	--	25	40	48	4,300
2021-2022	31	157	59	247	373	96	469	20	38	31	26	21	32	2,200
2022-2023	36	173	135	344	394	122	516	21	78	65	31	26	37	1,400

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	52%	0%	51%	32%	0%	38%		32%	20	57%	60%	64%
2021-2022	27%	0%	30%	29%	0%	31%		27%	32	60%	58%	30%
2022-2023	50%	0%	20%	56%	0%	25%		43%	2	55%	56%	0%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	60	6	35	4	300	20	0	0	30	2	0	170	14,2	8
2022-2023	6	2	5	2	45	2	0	0	4	2	0	20	13,2	4
2023-2024	4	1	3	1	25	2	0	0	3	1	0	8	6,2	5
Tag Trend	DEC	DEC	DEC	DEC	DEC	=	=	=	DEC	DEC	=	DEC	INC	INC

Quota Rationale

Due to severe drought conditions and the resulting impacts to forage quality and availability, as well as continued poor fawn recruitment, quota recommendations again being reduced in order to move back toward the alternative unit post-season management objective of 35 bucks:100 does. It will likely take several years to reach objective depending upon climatic conditions and fawn recruitment moving forward. Population estimate adjustments have been made the past two years to more accurately reflect the reduced observed buck ratio and the declining population. A post-season survey will be prioritized in 2023.

Reporting Biologist: Kirk

Supervisor: Donham

Mule Deer Quota Recommendation Form

Unit Group: 141,142,143,144,145

Date Prepared: 3/29/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0	1,357	377	1,734	--	--	--	28	30	41	3,900
2021-2022	212	681	352	1,245	770	173	943	31	52	39	22	32	43	4,400
2022-2023	164	740	447	1,351	1,800	562	2,362	22	60	49	31	27	39	3,600

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	21%	0%	60%	44%	0%	54%		30%	25	58%	67%	64%
2021-2022	18%	0%	26%	47%	0%	43%		34%	33	80%	66%	46%
2022-2023	20%	0%	56%	45%	0%	50%		31%	22	44%	70%	89%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	200	25	20	2	230	15	0	0	25	2	0	190	11,1	14
2022-2023	220	23	20	2	270	23	0	0	35	3	0	190	10,1	10
2023-2024	140	15	15	1	200	9	0	0	20	1	0	70	12,2	16
Tag Trend	DEC	DEC	DEC	DEC	DEC	DEC	=	=	DEC	DEC	=	DEC	INC	INC

Quota Rationale

Environmental conditions in the area were noticeably better than those in some surrounding units throughout 2022. Above average precipitation and range conditions were seen throughout the spring and early summer, and precipitation events in the fall provided critical green up for deer in preparation for winter. The 2022 post-season deer survey indicated a fawn production ratio of 60 fawns:100 does. The post-season observed buck ratio however, saw a significant drop below the statewide standard management objective and the 5-year average. The 2023 spring deer flight yielded a record sample of 2,300 deer as well as an uptick in the fawn recruitment from previous years. A population estimate adjustment was made this year to more accurately reflect the reduced observed buck ratio. Quota recommendations have been conservatively reduced in order to begin moving back towards the standard unit post-season management objective of 30 bucks:100 does. A post-season survey will be prioritized in 2023.

Reporting Biologist: Kirk

Supervisor: Donham

Mule Deer Quota Recommendation Form

Unit Group: 151-156

Date Prepared: 3/29/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	81	258	148	487	547	162	709	31	57	44	30	36	41	2,000
2021-2022	118	344	211	673	425	181	606	34	61	46	43	36	46	2,500
2022-2023				0	633	199	832	--	--	--	31	38	50	2,500

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	9%		50%	49%		67%		43%	12	100%	78%	100%
2021-2022	33%		75%	39%		73%		38%	3	60%	68%	100%
2022-2023	8%		63%	44%		63%		39%	3	100%	69%	100%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	60	6	9	4	160	15			15	2	0	65	5,1	5
2022-2023	60	7	9	1	200	15			20	1	0	100	8,1	6
2023-2024	110	10	15	1	280	20			30	2	0	90	9,1	6
Tag Trend	INC	INC	INC	=	INC	INC	=	=	INC	INC	=	DEC	INC	=

Quota Rationale

No fall aerial post-season survey was conducted in Area 15 during 2022. An aerial spring survey was conducted in early March 2023, during which biologists were able to classify a size sample of deer equal to the 10-year average. Greater than average snowfall occurred in much of Area 15 during the 2022-2023 winter. Despite the comparatively harsh conditions, deer observed during survey were in better body condition than was seen in many other areas in the Eastern Region, likely due to portions of their winter range remaining accessible at lower elevations and on south-facing slopes. Area 15 continues to experience heavy horse use (close to 500 horses were observed during spring surveys), thus range and spring degradation were observed during our aerial surveys. Despite many challenges, the Area 15 herd appears to be stable at present. Last year, NDOW biologists recommended a conservative quota increase designed to reach a post season buck ratio of 34 bucks: 100 does, which is above objective, but was a step towards the objective of 30 bucks: 100 does. A quota reduction was requested by the CAB, and the Commission approved a partial reduction in tags. Due to that reduction, we are now even further above objective in Area 15, so another, larger increase is necessary to start managing back toward a ratio of 30. To continue our gradual movement toward the objective of 30 bucks:100 does, harvest rates of antlered mule deer for this year's recommendations are designed to target a post-season ratio of 33 bucks:100 does, still above objective, but moving in the right direction.

Reporting Biologist: Hale

Supervisor: Donham

Mule Deer Quota Recommendation Form

Unit Group: 161-164

Date Prepared: 4/3/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0	227	52	279	--	--	--	23	34	43	3,600
2021-2022	31	223	63	317	160	31	191	14	28	25	19	23	31	2,100
2022-2023				0	381	111	492	--	--	--	29	25	36	1,500

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	16%		28%	28%		35%		30%	29	36%	61%	0%
2021-2022	12%		35%	23%		27%		28%	26	43%	53%	80%
2022-2023	17%		7%	32%		30%		22%	1	100%	40%	0%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	140	15	25	3	290	15			35	2		140	19	7
2022-2023	50	6	15	1	110	3			10	2		45	11	2
2023-2024	25	3	7	1	90	5			15	2		30	7	1
Tag Trend	DEC	DEC	DEC	=	DEC	INC	=	=	INC	=	=	DEC	DEC	DEC

Quota Rationale

The Area 16 mule deer herd has seen a drastic decline in the last 5 years. This year's spring survey yielded a higher fawn ratio than years past. Although, the increase in recruitment is promising, 4-point or greater percentage on harvested antlered mule deer is low. The aerial spring survey was exhaustive and yet resulted in a lower sample size. With the historic winter moisture, mule deer should be congregated on winter range and sample sizes should be a significant portion of the population estimate. The survey conditions and subsequent sample sizes indicated a further reduction in the population estimate was warranted. Therefore, the Department recommends slight reductions in the overall quotas.

Reporting Biologist: Burkett

Supervisor: Bennett

Mule Deer Quota Recommendation Form

Unit Group: 171-173

Date Prepared: 4/3/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	120	360	138	618	271	76	347	33	38	29	28	34	45	3,400
2021-2022	86	278	136	500	408	111	519	31	49	37	27	34	44	3,100
2022-2023				0	641	253	894	--	--	--	39	33	46	3,200

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	9%		27%	25%		44%		36%	31	67%	60%	
2021-2022	8%		13%	21%	24%	67%		32%	33	100%	46%	
2022-2023	10%		17%	24%	25%	31%		34%	22	73%	57%	

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	200	20	70	7	280	30	190	15	45	2		175	11	0
2022-2023	240	25	65	6	270	25	180	10	30	2		170	13	0
2023-2024	260	25	60	7	270	20	190	15	30	2		120	18	2
Tag Trend	INC	=	DEC	INC	=	DEC	INC	INC	=	=	=	DEC	INC	INC

Quota Rationale

The Area 17 mule deer population has been on a modest declining trend in recent years. Drought conditions, encroaching pinyon and juniper, and senescent browse have led to poor fawn recruitment. Our most recent spring survey yielded a higher fawn ratio, which can be attributed to substantial monsoonal moisture during the 2022 summer. Success rates, and 4-point or greater percentage of harvested antlered mule deer have remained consistent in Area 17. The quota will remain relatively similar, but slight changes in demand and success in weapon classes has redistributed tags. The junior hunt will have a slightly reduced quota due to the change from an either sex tag to an antlered only tag.

Reporting Biologist: Burkett

Supervisor: Bennett

Mule Deer Quota Recommendation Form

Unit Group: 181-184

Date Prepared: 3/23/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0	65	20	85	--	--	--	31	30	42	1,200
2021-2022				0	105	33	138	--	--	--	31	30	42	1,200
2022-2023				0	59	17	76	--	--	--	29	27	42	1,100

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	22%			29%				43%			54	
2021-2022	4%			33%				49%			52	
2022-2023	15%		53%	40%				44%			48	

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	55	6	15	2	135	9						65	6	
2022-2023	60	6	15	1	150	8						70	6	
2023-2024	35	4	9	1	130	8						40	6	
Tag Trend	DEC	DEC	DEC	=	DEC	=	=	=	=	=	=	DEC	=	=

Quota Rationale

Used a post hunt buck ratio of 27 bucks /100 does. Last year's success of 40% is within the long term average for this unit group. 44% of the bucks harvested were 4 point or better and is above the statewide average of 38%. Tag quotas are similar to what was recommended last year.

Reporting Biologist: Salisbury

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 192

Date Prepared: 4/1/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	22	50	28	100	204	68	272	44	56	39	33	38	45	550
2021-2022	16	86	28	130			0	19	33	27	--	42	50	520
2022-2023				0	88	25	113	--	--	--	28	50	51	500

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	24%	32%	19%	57%				31%	1	NA	71%	NA
2021-2022	27%	28%	43%	62%				47%	1	100%	47%	NA
2022-2023	20%	56%	0%	56%				27%	1	100%	55%	NA

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late Archery Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	15	2	10	2	55	4			20	2		25	2	0
2022-2023	15	2	10	1	55	4			20	3		25	2	0
2023-2024	15	1	15	2	55	4			15	1		25	2	
Tag Trend	=	DEC	INC	=	=	=	=	=	DEC	DEC	=	=	=	=

Quota Rationale

Although the metrics indicate a stable population, anecdotal reports are that point class has declined. This is true when comparing the last three years to the previous five years. A reduction in tags would be warranted but Demand/Success is driving the numbers upward. Cells highlighted in yellow indicate no survey completed so numbers are derived from previous 3yr avg.

Reporting Biologist: Lackey

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 194-196

Date Prepared: 4/1/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	31	124	40	195	425	74	499	25	32	26	17	34	44	850
2021-2022	15	76	16	107			0	20	21	18	--	31	41	750
2022-2023				0	417	81		--	--	--	19	40	40	750

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	25%	62%	40%	86%				61%	0	100%	80%	NA
2021-2022	50%	53%	60%	89%				63%	0	100%	79%	NA
2022-2023	33%	38%	100%	85%				65%	1	NA	90%	NA

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late Archery Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	15	2	5	2	60	3			18	2		15	3	0
2022-2023	6	2	5	1	35	2			9	2		20	2	
2023-2024	4	1	1	1	35	2			15	1		20	2	
Tag Trend	DEC	DEC	DEC	DEC	DEC	DEC	=	=	DEC	DEC	=	INC	DEC	=

Quota Rationale

This population continues to slowly decline. Looking at 10yr averages in buck and fawn ratios, there has been a noticeable decline in both metrics since 2012 compared to the previous 10yr period. Fires and urban swelling have taken their toll. Success rates and point class remain strong in this unit.

Reporting Biologist: Lackey

Supervisor: Munson

Mule Deer Quota Recommendation Form

195

Date Prepared: 4/1/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0			0	--	--	--	--			500
2021-2022				0			0	--	--	--	--			500
2022-2023														250

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	50%		64%	49%				18%	0	NA	59%	NA
2021-2022	25%		0%	74%				48%	0	100%	38%	NA
2022-2023	20%		25%	25%				41%	1	100%	67%	NA

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	5	2	5	2	25	2						10	1	0
2022-2023	5	2	5	1	25	2						10		0
2023-2024	3	1	3	1	15	2						7		
Tag Trend	DEC	DEC	DEC	DEC	DEC	=	=	=	=	=	=	DEC	DEC	=

Quota Rationale

There has been much variation in both point class and success rates but overall they are mediocre. The BLM now estimates around 4,000 feral horses in the Virginia Range. The substantial increase over the last few years undoubtedly has had an effect on the deer population. The estimate has been reduced accordingly. A slight reduction in tags reflects this but at the same time keeping the success rates in mind.

Reporting Biologist: Lackey

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 201-204

Date Prepared: 3/22/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0			0	--	--	--	--			600
2021-2022				0			0	--	--	--	--			500
2022-2023				0			0	--	--	--	--			550

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	13%	11%	50%	47%				36%			83	
2021-2022	33%	50%	60%	68%				45%			75	
2022-2023	0%	60%	40%	71%				30%			100	

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late Archery Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR	RES	RES		
2021-2022	2	2	2	2	20	2			5	2		6		
2022-2023	5	2	2	1	20	2			5	2		7		
2023-2024	10	1	1	1	20	1			10	1		6		
Tag Trend	INC	DEC	DEC	=	=	DEC	=	=	INC	DEC	=	DEC	=	=

Quota Rationale

Overall hunter success in the any legal weapon hunt is up. The harvest is up but 4 point or better is down. Tag quotas are similar to what was available last year. A post hunt buck ratio of 20 bucks/ 100 does was used for tag quotas.

Reporting Biologist: Salisbury

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 202-208

Date Prepared: 3/23/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0			0	--	--	--	--			
2021-2022				0			0	--	--	--	--			
2022-2023				0			0	--	--	--	--			280

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021		11%	27%	58%				36%				
2021-2022		0%	40%	60%				34%				
2022-2023		0%	60%	69%				23%				

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	7	2	3	2	50	4						25	2	
2022-2023	5	2	5	1	40	2						20	2	
2023-2024	10	1	5	2	40	2						20	2	
Tag Trend	INC	DEC	=	INC	=	=	=	=	=	=	=	=	=	=

Quota Rationale

60% overall hunter success in the any legal weapon hunt. The 4 point or better has decreased to 23%. Tag quotas are similar to what was recommended last year.

Reporting Biologist: Salisbury

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 203

Date Prepared: 3/23/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0			0	--	--	--	--			500
2021-2022				0			0	--	--	--	--			600
2022-2023				0			0	--	--	--	--			500

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	8%	4%		42%				52%			58	
2021-2022	38%	16%		65%				39%			75	
2022-2023	17%	31		62%				56%			56	

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late Archery Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR	RES	RES		
2021-2022	25	3			35	4			15	3		20	2	
2022-2023	15	2			30	2			15	2		20	2	
2023-2024	15	2			25	2			15	2		15	2	
Tag Trend	=	=	=	=	DEC	=	=	=	=	=	=	DEC	=	=

Quota Rationale

Used a post hunt buck ratio of 30 bucks/ 100 does. 62% success in the any legal weapon hunt with 56% being 4 point or better. Recommend a slight decrease in tags compared to last year.

Reporting Biologist: Salisbury

Supervisor: Munson

Mule Deer Quota Recommendation Form

Unit Group: 211-213

Date Prepared: 3/29/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0			0	--	--	--	--			
2021-2022				0			0	--	--	--	--			
2022-2023				0			0	--	--	--	--			

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	15%		50%	64%				46%		100%	75%	
2021-2022	42%		57%	43%				35%	4	50%	95%	
2022-2023	0%		0%	22%				13%		0%	18%	

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	15	2	8	2	50	5						20	3	
2022-2023	10	2	6	2	20	5						15	3	
2023-2024	3	1	3	1	15	2						10	2	
Tag Trend	DEC	DEC	DEC	DEC	DEC	DEC	=	=	=	=	=	DEC	DEC	=

Quota Rationale

The Area 21 mule deer herd does not have any official surveys conducted due to low densities and inconsistent sample sizes. Harvest metrics in Area 21 indicate a reduction in tags is warranted. Large quantities of pinyon pine have succumbed to drought conditions in this Area. Historic springs have gone dry, but the moisture received during the last fall and spring months are promising. The department recommends a reduction in the overall quota.

Reporting Biologist: Burkett

Supervisor: Bennett

Mule Deer Quota Recommendation Form

Unit Group: 221-223

Date Prepared: 3/30/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	120	549	206	875	664	137	801	22	38	31	21	37	46	3,800
2021-2022	87	385	107	579	795	165	960	23	28	23	21	31	40	3,000
2022-2023	81	372	175	628	861	255	1,116	22	47	39	30	25	31	2,200

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	24%		47%	36%	41%	54%		43%	34	47%	60%	25%
2021-2022	14%		54%	31%	22%	65%		39%	12	67%	38%	88%
2022-2023	19%		25%	25%	28%	43%		57%	9	50%	50%	0%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	65	6	15	2	220	15	130	8	20	2		170	18	8
2022-2023	20	2	5	2	90	2	55	2	7	2		60	16	3
2023-2024	15	1	4	1	80	3	45	2	6	2		35	9	4
Tag Trend	DEC	DEC	DEC	DEC	DEC	INC	DEC	=	DEC	=	=	DEC	DEC	INC

Quota Rationale

This mule deer population has undergone a significant decline over the last three years. The decline has been driven by lowered adult and fawn survival, due to severe drought conditions that have affected the area. Success of any-legal-weapon hunters has decreased in recent years over the same timeframe as the population decline. Due to the decrease in the population estimate of mule deer, hunter success, and quality of harvest, the Department recommends a slight decrease in quotas of all hunts within the Area.

Reporting Biologist: Shanks

Supervisor: Bennett

Mule Deer Quota Recommendation Form

Unit Group: 231

Date Prepared: 4/3/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	144	527	200	871	912	173	1,085	27	38	30	19	36	46	3,300
2021-2022	137	674	185	996	935	209	1,144	20	27	23	22	27	38	2,500
2022-2023	151	583	274	1,008	696	220	916	26	47	37	32	30	35	2,100

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	27%		67%	66%				49%	9	17%	79%	54%
2021-2022	18%		47%	63%				50%	8	43%	85%	54%
2022-2023	25%		25%	71%				67%	2	50%	81%	46%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags	
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR					
2021-2022	40	4	20	2	140	6						70	9	65	
2022-2023	8	2	4	2	45	2						20	6	42	
2023-2024	15	1	5	1	60	4						20	3	29	
Tag Trend	INC	DEC	INC	DEC	INC	INC	=	=	=	=	=	=	=	DEC	DEC

Quota Rationale

This mule deer population has undergone a decline over the past 3 years. Severe drought conditions have limited forage and water availability, leading to low fawn recruitment and reduced adult survival. The observed buck ratio has been low relative to the modeled buck ratio and the management objective of 30 bucks:100 does. Hunter success and quality of harvest has remained relatively stable over the period of the decline. The 2023 post season survey saw a higher observed buck ratio. It is important to note that the compensation tag quota has been reduced the last three consecutive years. Survey, modeling, and harvest metrics warrant a slight increase in quotas.

Reporting Biologist: Shanks

Supervisor: Bennett

Mule Deer Quota Recommendation Form

Unit Group: 241-245

Date Prepared: 4/3/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021	53	177	83	313	325	74	399	30	47	36	23	43	52	1,300
2021-2022				0			0	--	--	--	--	37	50	1,200
2022-2023	27	146	81	254			0	18	55	47	--	36	48	1,000

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	50%		75%	61%				75%	0	75%	74%	56%
2021-2022	36%		29%	47%				61%	3	0	64%	40%
2022-2023	25%		67%	48%				76%	1	50	55%	50%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	15	2	7	2	120	6						45	6	27
2022-2023	4	2	3	2	45	2						20	5	12
2023-2024	5	1	3	1	45	2						15	3	10
Tag Trend	INC	DEC	=	DEC	=	=	=	=	=	=	=	DEC	DEC	DEC

Quota Rationale

This mule deer population has undergone a decline over the past 3 years. Recent moisture patterns cause improved fawn recruitment. This decline has been driven by severe drought conditions, which have caused low fawn recruitment and lower adult survival. Tag quotas were substantially cut in 2022 in response to population trends and harvest metrics. The reduced quotas saw the harvest success stabilize and the quality metrics 4-pt or better increase within the metrics for an alternative unit. Harvest metrics and modeled buck ratio warrant a similar quota to last year.

Reporting Biologist: Shanks

Supervisor: Bennett

Mule Deer Quota Recommendation Form

Unit Group: 251-254

Date Prepared: 3/29/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0			0	--	--	--	--			
2021-2022				0			0	--	--	--	--			
2022-2023				0			0	--	--	--	--			

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	33%		40%	27%				80%		0%	50%	
2021-2022	14%		0%	4%				29%	1		46%	
2022-2023	0%		0%	29%				67%	1	0%	50%	

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	8	2	5	2	30	5						20		
2022-2023	5	2	2	2	10	2						5		
2023-2024	5	1	2	1	10	1						5	2	
Tag Trend	=	DEC	=	DEC	=	DEC	=	=	=	=	=	=	INC	=

Quota Rationale

This herd is not modeled due to low and inconsistent sample sizes observed on survey. Any-legal-weapon success rates were higher with the decrease in quota. The 4-point or greater percentage rose to 67%. Because of the metric trends and drought conditions up until 2022, the Department recommends a similar quota to last year.

Reporting Biologist: Burkett

Supervisor: Bennett

Mule Deer Quota Recommendation Form

Unit Group: 261-268

Date Prepared: 4/1/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				-			-	--	--	--	--			
2021-2022				-			-	--	--	--	--			
2022-2023				-			-	--	--	--	--			

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	75%		75%	70%				34%		100%	81%	
2021-2022	38%		50%	47%				28%		100%	45%	
2022-2023	22%		0%	33%				33%		0%	44%	

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	15	2	20	2	75	5						35	3	
2022-2023	10	2	10	2	60	3						30	3	
2023-2024	8	2	8	2	40	3						20	3	
Tag Trend	DEC	=	DEC	=	DEC	=	=	=	=	=	=	DEC	=	=

Quota Rationale

No aerial surveys for mule deer are conducted in Area 26 due to low density and difficulty to survey. Standard survey methods do not yield a sufficient sample size to extrapolate population estimates. All harvest success rates have declined since 2020 and percentage of 4-point or greater remains low. The Department recommends a reduction in quota.

Reporting Biologist: Wood

Supervisor: Bennett

Mule Deer Quota Recommendation Form

Unit Group: 271-272

Date Prepared: 3/30/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0			0	--	--	--	--			
2021-2022				0			0	--	--	--	--			
2022-2023				0			0	--	--	--	--			

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	13%		11%	43%				55%	0	100%	60%	100%
2021-2022	25%		10%	43%				47%	0	100%	56%	100%
2022-2023	13%		33%	25%				73%	0	0%	44%	100%

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	10	2	10	2	25	2						10	1	1
2022-2023	10	2	10	2	25	2						10	1	1
2023-2024	8	1	8	1	15	2						8	1	1
Tag Trend	DEC	DEC	DEC	DEC	DEC	=	=	=	=	=	=	DEC	=	=

Quota Rationale

This mule deer population is managed as a non-standard unit group due to limited deer numbers and low density. The management objective is a 45% success rate. Harvest success was below objective in 2022. Quality of harvest, measured by percentage of harvested bucks with 4 or more points, was higher than average despite the low hunter success. The Department recommends a reduction in quotas.

Reporting Biologist: Shanks

Supervisor: Bennett

Mule Deer Quota Recommendation Form

Unit Group: 291

Date Prepared: 4/1/2023

Herd Results

Year	Fall Survey			Total	Spring Survey		Total	Postseason Ratios (observed)			Spring Ratio (obs)	Modeled Buck Ratio		Pop Est (Sept)
	Buck	Doe	Fawn		Adult	Fawn		Buck	Fawn	F:Ad	F:Ad	Postseas	Preseas	
2020-2021				0			0	--	--	--	--			600
2021-2022				0			0	--	--	--	--			600
2022-2023														850

Harvest Results

Year	Archery Success (%)		Muzzleloader Success (%)	Any-Legal-Weapon Success (%)			Avg. Age	4-Pt or Greater (%)	Total Antlerless Harvest	NR Guided Success (%)	Junior Success (%)	Comp Tag Success (%)
	E	L		E	M	L						
2020-2021	14%		37%	71%				50%	0	100%	78%	NA
2021-2022	36%		80%	78%				50%	1	100%	74%	NA
2022-2023	30%		67%	80%				46%	2	100%	76%	NA

Approved (Previous Year) and Recommended (Current Year) Tag Quota

Year	Archery Hunt		Muzzleloader Hunt		Early ALW Hunt		Mid ALW Hunt		Late ALW Hunt		Antlerless Hunt	Junior Hunt	NR Guided Hunt	Comp Tags
	RES	NR	RES	NR	RES	NR	RES	NR	RES	NR				
2021-2022	15	2	5	2	45	4						20	2	0
2022-2023	15	2	3	1	55	4						25	2	0
2023-2024	15	1	4	1	65	5						25		
Tag Trend	=	DEC	DEC	DEC	INC	INC	=	=	=	=	=	INC	DEC	=

Quota Rationale

Anecdotal reports are that this population has grown slightly since the Bison Fire in 2013. Success rates and point class are also creeping upwards. This population is not surveyed or modeled, but based on several years of increasing tag numbers while maintaining good success rates, the population estimate can now be increased.

Reporting Biologist: Lackey

Supervisor: Munson