

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION
Bighorn Sheep 2022
BHS HD 100 Proposal 2021

Hunting Districts: 100

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 increase the number of bighorn sheep licenses from 4 to 5 in Hunting District 100. Currently, a total of 21 permits are being issued in Region 1.

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

The objective of this proposed change is to increase opportunity in HD 100, where ewe:ram ratios have been high (between 40 and 125 rams per 100 ewes) since 2013. In 2014, we also relocated 32 Wild Horse Island sheep to this district. Since then, there have been a number of complaints involving a few of the recently relocated rams smashing windows in area subdivisions and causing other property damage. These rams have caused damage as much as 15 air miles from the release site. Increasing permit numbers could also help to reduce game damage complaints in this district.

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

To measure the success of this change, I will continue to monitor sex and age ratios, and expect that both ewe:ram and ewe:lamb ratios, as well as hunter effort, should remain close to the long-term averages. I also expect that the average ages of harvested rams should not fall below 6.5 years.

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

Management objectives for the sheep in this area include managing for the long-term stability of a healthy population on public lands, "with emphasis on maintaining some older age class rams" (p. 88, Montana Bighorn Sheep Conservation Strategy). Over the past 15 years of surveys, the population has appeared relatively stable, with consistent numbers of ewes and total numbers (see below). Although the numbers of rams surveyed has varied over the years, the ram component of bighorn populations are notoriously difficult to survey – particularly in habitat as thickly vegetated as HD100. In addition, hunter effort has remained close to the long-term average, and age of harvested rams has remained >6.5 years.

Age and Sex Classifications for Kootenai Falls WMA Sheep in HD100

<u>Year</u>	<u>Ewes</u>	<u>Lambs</u>	<u>Rams</u>	<u>Uncl.</u>	<u>Total</u>	<u>Lambs: 100 Ewes</u>	<u>Rams: 100 Ewes</u>
1981	58	24	34	0	116	41	59
1982	56	15	42	2	115	27	75
1983	69	21	40	0	130	30	58
1984	74	23	21	0	118	31	28
1985	62	17	23	0	102	27	37
1986	59	12	33	9	113	20	56
1987	60	10	39	0	109	17	65
1988	56	9	19	4	88	16	34
1989	42	18	12	0	72	43	29
1990	51	14	26	0	91	27	51
1991	62	10	24	0	96	16	39
1992	45	14	25	0	84	31	56
1993	37	11	27	0	75	30	73
1994	31	7	31	0	69	23	100
1995	22	6	7	0	35	27	32
1996	23	1	19	0	43	4	83
1997	27	4	7	0	38	15	26
1998	24	4	6	0	34	17	25
1999	17	0	7	0	24	0	41
2000	11	2	10	0	23	18	91
2001	24	7	8	1	40	29	33
2002	28	8	10	0	46	29	36
2003	25	4	4	4	37	16	16
2004	25	5	17	0	47	20	68
2005	27	10	8	0	45	37	30
2006	22	8	9	0	39	36	41
2007	21	10	20	0	51	48	95
2008	40	8	31	0	79	20	78
2009	No Survey						
2010	No Survey						
2011	40	10	10	0	60	25	25
2012	34	10	5	0	49	29	15
2013	No Survey						
2014	16	10	20	4	50	63	125
2015	39	10	28	4	81	26	72
2016	38	6	22	10	76	16	40
2017	33	6	23	2	64	21	73
2018	43	18	17	1	79	42	40
2019	46	10	26	0	84	22	56
2020	No Survey						
2021	33	23	15	16	87	69	45

Figure 1: Sex and Age Data.

Bighorn Sheep Harvest for HD100

<u>Year</u>	<u>Permits Ram/Ewe</u>	<u>Hunters</u>	<u>Total Harvest</u>	<u>Percent Success</u>	<u>Rams</u>	<u>Ewes</u>	<u>Hunter Days</u>	<u>Hunter Effort</u>
1986	5,10	14	13	93	5	8	107	8.2
1987	5,10	14	14	100	4	10	82	5.9
1988	5,10	15	12	80	4	8	93	7.8
1989	5,10	15	13	87	5	8	94	7.2
1990	5,10	15	12	80	4	8	62	5.2
1991	5,10	15	12	80	5	7	97	8.1
1992	5,10	14	11	79	6	5	43	3.9
1993	5,5	10	10	100	5	5	57	5.7
1994	5,5	9	8	89	5	3	49	6.1
1995	5,5	9	6	67	4	2	118	19.7
1996	3,0	3	3	100	3	0	21	7
1997	3,0	3	3	100	3	0	33	11
1998	1,0	1	1	100	1	0	6	6
1999	1,0	1	1	100	1	0	6	6
2000								
2001								
2002								
2003								
2004								
2005								
2006	1,0	1	1	100	1	0	12	12
2007	1,0	1	1	100	1	0	n/a	n/a
2008	2,0	2	2	100	2	0	32	16
2009	2,0	2	2	100	2	0	21	10.5
2010	2ES	2	2	100	2	0	13	6.5
2011	2ES	2	2	100	2	0	13	6.5
2012	2ES	2	2	100	2	0	31	15.5
2013	2ES	2	2	100	2	0	29	14.5
2014	2ES	2	2	100	2	0	5	2.5
2015	2ES	2	2	100	2	0	24	12
2016	2ES	2	2	100	2	0	13	6.5
2017	2ES	2	2	100	2	0	19	9.5
2018	4ES	4	4	100	4	0	18	6
2019	4ES	4	4	100	4	0	21	7
2020	4ES	4	4	100	4	0	52	13

Figure 2: Harvest Data.

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

Despite the heavy snowfall during the winter of 2017, ewe:ram and ewe:lamb ratios have remained relatively high, generally near or greater than long term averages. Between 2018 and 2020, winters were mild and likely contributed to an increasing trend in sheep numbers in the area. In addition, more sheep are using the private lands east of the Wildlife Management Area (the release site for all of the sheep relocations that've occurred in HD100) which has led to increasing conflict calls from landowners.

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

Landowners who are upset about conflicts with sheep have understandably supported this proposal, and one landowner who wants more sheep has also supported increasing permit numbers in this HD. I will continue to monitor population numbers and ratios using annual spring surveys and will consider returning to N = 4 permits if I see negative impacts after 3 years of higher permit numbers.

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION
Bighorn Sheep 2022
BHS HD 122 New Opportunity

Hunting Districts: 122

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

HD 122 (Clark Fork Cut-off) has been closed to harvest since 2015. Prior to 2015 this unit had a combination of Either-sex (n=6) and Adult Ewe tags (n =6-8; Figure 1). This proposal would re-establish a single tag for a legal ram in HD 122 with a quota range of 1-5.

BHS Opportunity: Clark Fork Cut-off (HD 122)									
LIC YR	SPECIES NAME	LPT DEF	ACTIVE YN	PREFIX	SUFFIX	QUOTA MAIN	QUOTA MIN	QUOTA MAX	LICENSE NAME
2021	Bighorn Sheep	Either-sex	Y	'122	'20	0			CLOSED
2020	Bighorn Sheep	Either-sex	Y	'122	'20	0			CLOSED
2019	Bighorn Sheep	Either-sex	Y	'122	'20	0			CLOSED
2018	Bighorn Sheep	Either-sex	Y	'122	'20	0			CLOSED
2017	Bighorn Sheep	Either-sex	Y	'122	'20	0			CLOSED
2016	Bighorn Sheep	Either-sex	Y	'122	'20	0			CLOSED
2015	Bighorn Sheep	Either-sex	Y	'122	'20	0			CLOSED
2014	Bighorn Sheep	Either-sex	Y	'122	'20	6	1	10	Limited Bighorn Sheep License
2014	Bighorn Sheep	Adult Ewe	Y	'122	'30	4	1	10	Limited Bighorn Sheep License
2013	Bighorn Sheep	Either-sex	Y	'122	'20	6	1	10	Limited Bighorn Sheep License
2013	Bighorn Sheep	Adult Ewe	Y	'122	'30	4	1	10	Limited Bighorn Sheep License
2012	Bighorn Sheep	Either-sex	Y	'122	'20	6	1	10	Limited Bighorn Sheep License
2012	Bighorn Sheep	Adult Ewe	Y	'122	'30	4	1	10	Limited Bighorn Sheep License
2011	Bighorn Sheep	Either-sex	Y	'122	'20	6	1	10	Limited Bighorn Sheep License
2011	Bighorn Sheep	Adult Ewe	Y	'122	'30	4	1	10	Limited Bighorn Sheep License
2010	Bighorn Sheep	Either-sex	Y	'122	'20	6	6	6	Limited Bighorn Sheep License
2010	Bighorn Sheep	Adult Ewe	Y	'122	'30	8	4	8	Limited Bighorn Sheep License
2009	Bighorn Sheep	Either-sex	Y	'122	'20	6	6	6	Limited Bighorn Sheep License
2009	Bighorn Sheep	Adult Ewe	Y	'122	'30	8	4	8	Limited Bighorn Sheep License

Figure 1: HD 122 Clark Fork Cutoff Opportunity.

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

The objective of this proposal is to allow hunter opportunity in HD122 after 7 years of being closed.

3. 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 though hunter effort, harvest success, and population survey data.

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

Sheep numbers counted in surveys showed a marked decline beginning in 2013 and reaching a low of 18 in 2015 prompting closure of this unit. A sheep augmentation was performed in 2018, with 20 sheep released in Dragonfly creek. After the augmentation, surveys were not conducted for two consecutive years. Survey numbers from the most recent surveys have been stable around 60-70 total (Figure 1). A conservative approach would be to allow a narrow quota range (1-5) and a single tag allowing for harvest of a legal ram from this population (Figure 1).

Local Sportsmen have been reporting sightings of mature rams and several members of the public reported the sheep, including mature rams, down along the road during the winter of 2020-2021. Working with these individuals and members of Montana Department of Transportation who drive the road daily during winter, several photographs of rams from the 2020-2021 season are provided.

Spring Surveys: Clark Fork Cut-off (HD 122)

Survey Year	Total all	Total Ewes	Total Lambs	Total Unc.	Total Class I	Total Class II	Total Class III	Total Rams	Lambs per 100 Ewes	Rams per 100 Ewe
2012	112	66	15	0	13	11	7	31	23	47
2013	87	51	16	0	2	12	6	20	31	39
2014	36	8	4	0	10	10	4	24	50	300
2015	18	6	2	0	3	5	2	10	33	167
2016	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-
2018	60	35	6	0	6	7	6	19	17	54
2019	67	33	12	0	3	11	8	22	36	67
2020	-	-	-	-	-	-	-	-	-	-
2021*	64	33	8	1	9	6	8	23	24	70

** 8 Rams were observed during subsequent ferry over 122 the day after survey that were not counted and are not include in this table (4 Class II and 4 Class III)*

Figure 2: Spring Survey Summary Clark Fork Cut-off HD122.



Figure 3.



Figure 4.



Figure 5.

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

Resident sportsmen would like to see this opportunity to harvest bighorn sheep.

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

Opening this unit to a single legal ram tag with a restrictive quota range of 1-5 has been discussed with numerous members of the public during my interactions/discussions with the public in Sanders County. I have discussed this proposal with several outfitters (e.g. Cody Carr, Dean Haun), houndsmen, and shed hunters that frequent the country and have knowledge of the history of sheep dynamics/opportunity/harvest in this unit. I have also discussed this with local enforcement (Morgan Post), R1 wildlife program manager (Neil Anderson), as well as the previous area biologist (Bruce Sterling). There has been overwhelming support for a single tag in this unit as a conservative approach to re-establishing hunting opportunity for bighorn sheep in BHS HD-122.

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION
Bighorn Sheep 2022
Remove 203-30 adult ewe bighorn sheep license

Hunting Districts: 203

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

Remove 203-30 adult ewe bighorn sheep license

MFWP biologists established the Petty Creek/Graves Creek range bighorn sheep herd with transplants in 1968 and 1984. In 1982 MFWP instituted the first hunting season with 2 either-sex licenses and in 1988 began allowing adult ewe harvest. Since then, the number of adult ewe licenses has ranged from 0-13 and the number of either-sex licenses has varied from 2-5 (See Fig. 1). In 2020 ewe licenses were decreased from 7 to 3 and in 2021 were decreased from 3 to 2 in response to surveys indicating a decreasing population and low recruitment.

HD 203 Bighorn Sheep Licenses Issues and Harvest (data from telephone hunter surveys) 1984 - 2020				
Year	Number Either-Sex Licenses (203-00)	Ram Harvest	Number Ewe Licenses (203-30)	Ewe Harvest
1984	2	2	-	-
1985	2	2	-	-
1986	2	2	-	-
1987	2	2	-	-
1988	2	2	5	5
1989	2	2	5	5
1990	2	2	5	5
1991	2	2	5	5
1992	2	2	5	3
1993	5	5	10	9
1994	5	5	10	9
1995	5	5	10	8
1996	5	5	10	9
1997	5	5	2	2
1998	5	5	2	2
1999	5	5	2	0
2000	2	2	2	2
2001	2	2	2	2
2002	2	2	2	2
2003	2	2	2	1
2004	2	2	2	2
2005	3	3	5	5
2006	3	3	5	5
2007	5	5	10	10
2008	5	5	10	5
2009	5	5	5	4
2010	5	5	4	4
2011	5	5	15	13
2012	5	5	5	5
2013	5	5	5	5
2014	2	2	4	4
2015	5	5	7	7
2016	5	5	7	7
2017	5	5	7	6
2018	5	5	7	7
2019	4	4	7	7
2020	4	4	3	3

Figure 1: HD 203 bighorn sheep harvest, statewide hunter harvest survey data, 1984-2020.

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

The main objective of this proposal is to bring the Petty Creek herd back within population objective and to increase recruitment.

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

MFWP personnel will measure success of the proposed change by annually surveying bighorn sheep. Population levels should be within the objective of 117-143, with lambs:100 ewes > 35.

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

Based upon 2021 spring survey data, the population is below the objective of 117-143, with 109 total sheep observed, 28 lambs:100 ewes and 104 rams:100 ewes (See Figs. 2 & 3). Following the guidelines in the Montana Bighorn Sheep Conservation Strategy (2010) a restrictive regulation package of fewer than 5 ewe licenses, and less than 10% of ewes, is recommended when the total population is more than 10% below 130 and recruitment is < 35 lambs:100 ewes. In this case the population is 16% below 130 and also below the desired lamb:ewe ratio. Multiple ground surveys in summer and fall 2021 are turning up very few lambs (~6) and it is therefore looking to be a record low recruitment year for 2022.

HD 203, PETTY CREEK BIGHORN SHEEP HELICOPTER SURVEYS, 1984-2021														
Year	Date	Total	Ewes	Lambs	Unclass	Rams						% ≥ 3/4 Curl	:100 Ewes	
						Yrlng	I	II	III	IV	Total		Lambs	Rar
1984	April	63	21	10	6	8	8		10		26	38	48	12
1986	April	81	37	28	0	8	5		3		16	19	76	4
1989	April	105	45	21	0	11	8		20		39	51	47	8
1991	April	125	49	22	5	8	16		25		49	51	45	10
1993	April	149	66	26	0	5	18		34		57	60	39	8
1995	April	133	56	33	0	7	9		28		44	64	59	7
1997	April	108	45	9	0	2	24		28		54	52	20	12
1998	April	86	38	14	0	2	10		22		34	65	37	8
1999	April	92	44	14	0	4	9		21		34	62	32	7
2000	April	90	43	19	0	6	7		15		28	54	44	6
2002	April	86	41	18	0	6	6		15		27	56	44	6
2003	April	114	53	22	0	11	10		18		39	46	42	7
2005	April	126	63	19	0	4	15		25		44	57	30	7
2007	April	151	31	12	58 ^a	7	12		31		50	62	- ^d	- ^d
2008	8-May	95	27	9	0	5	18	23	13		59	61	33	21
2009	13-May	134	59	18	0	6	16	15	20		57	61	31	9
2010	5-May	127	58	22	0	9	10	14	14		47	60	38	8
2011	27-Apr	152	71	36	0	14	11	12	8		45	44	51	6
2012	9-Apr	130	57	22	0	15	13	14	9		51	45	39	8
2013	17-Apr	121	48	25	0	5	12	15	11	5	48	33	52	10
2014	28-Apr	128	53	21	0	9	9	13	14	9	54	43	40	10
2015	15-Apr	149	54	25	0	7	9	26	22	6	70	40	46	13
2016	19-Apr	151	69	26	0	4	8	12	24	8	56	57	38	8
2017	10-Apr	134	60	18	4	4	5	20	18	5	56	41	30	9
2018	19-Apr	142	69	16	0	9	21	23	4		57	47	23	8
2019	18-Apr	130	57	19	0	14	20	18	2		54	37	33	9
2020	17-Apr	107	44	8	4	8	18	22	3		51	49	18	11
2021	4/7; 4/29	109	47	13	0	10	25	11	3		49	29	28	10

Figure 2: HD 203 bighorn sheep spring, aerial survey data, 1984-2021.

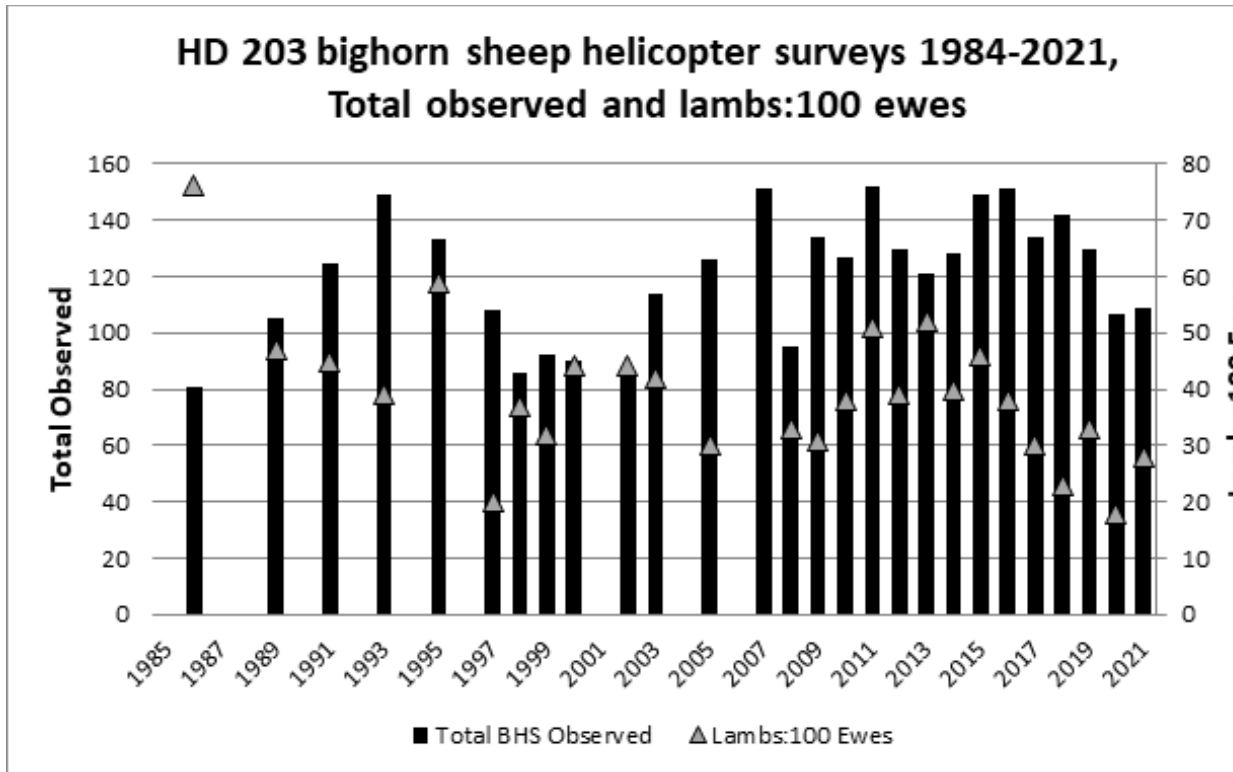


Figure 3: HD 203 bighorn sheep, total sheep observed during spring, aerial surveys, 2007-2021.

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

We suspect the population has declined due to a combination of factors including several years of low recruitment related to weather, interacting effects of predation, and vehicle mortality. Recruitment has been below 35 lambs:100 ewes for the past 5 years and there were two especially low recruitment years in 2018 and 2020 (Fig. 3). We have also suspected mountain lion predation in numerous radio-collared ewes that have died over the past 3 years. In addition, we have documented an increase in vehicle strikes in 2020-21.

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

Region 2 did not make a special effort to contact hunters prior to making this proposal and based its recommendations on survey data only.

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION
Bighorn Sheep 2022
BHS 216 close season

Hunting Districts: 216

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

Close the sheep season in HD 216, in the Upper Clark Fork.
One either-sex license and one ewe license were available in HD 216 in 2020. Two either-sex and variably 10-13 ewe licenses have been available annually from 2016 to 2019.

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

The objective of the change is to communicate that a harvestable surplus of sheep does not exist in this population and to contribute to an increase in sheep numbers.

3. 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 simply by achieving a population survey of more than 100 sheep in the future.

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

The sheep population was partially surveyed by helicopter in spring 2021, which resulted in a count of only 8 ewes. The last complete count in spring 2018 resulted in a count of 105, where 147 were counted in 2016. A pneumonia die-off occurred in 2010, although this population rebounded well after that time. The ram hunter in 2021 estimated a minimum count of 18 sheep, while providing documentation that there might be more sheep than that.

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

The lack of anyone reporting sheep coughing or extraordinary incidences of dead sheep on the landscape seems to cast doubt on pneumonia as a root cause of decline. Wildfires since 2017 have influenced the landscape considerably and landowners suggest lion predation as a factor.

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

This proposal will begin the process of public involvement. We anticipate that while people will feel the loss, no one wants to draw a license to hunt sheep where few-to-no sheep exist at this time. FWP will prioritize flight time and effort to recover this population.

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION
Bighorn Sheep 2022
BHS 212 close season

Hunting Districts: 212

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

Close the sheep season in HD 212, near Garrison.
One either-sex license has been offered annually for HD 212 since 2005.

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

The objective of the change is to communicate that a harvestable surplus of sheep does not exist in this population.

3. 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 simply by issuing no licenses to hunters who expect that an opportunity to harvest exists.

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

Only a few individual sheep are known to exist in the Garrison herd.

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

This pioneering sheep population was decimated by a pneumonia event in 2010 and the remnant population has been gradually declining ever since.

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

This proposal will begin the process of public involvement. We anticipate that while people will feel the loss, no one wants to draw a license to hunt sheep where few-to-no sheep exist at this time.

MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION
Bighorn Sheep 2022
HD250 BHS quota reduction

Hunting Districts: 250

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

Eliminate the 250-60 BHS legal ram permit and reduce the 250-20 either-sex BHS permit from 2 to 1 due to a possible disease outbreak.

These quotas have been in place since before 2014. The 250-60 permit is valid in all of HD250, while the 250-20 permit is valid only in the Painted Rocks area, where most (if not all) of the sheep winter.

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

The objective of this proposed change is primarily to prevent a hunter who draws a 250 BHS tag from having an unsatisfactory hunting experience due to lack of mature rams. Secondly, the objective is to protect BHS rams that may be low in number.

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

The success of this proposal will be measured by the ability of the remaining permit-holder to fill the permit, as well as through annual BHS population surveys.

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

The Painted Rocks bighorn sheep herd is difficult to survey, owing to the timbered, rugged terrain they inhabit. All Bitterroot sheep herds present monitoring challenges; depending on conditions and timing on the day of the aerial survey, few to numerous sheep may be found. The highest count in Painted Rocks in recent years was 88 in 2014, well below the population objective of 120 sheep detailed in Montana's Bighorn Sheep Conservation Strategy.

Monitoring efforts via helicopter capture/collaring initiated in 2018 and continued in 2020, with 11 sheep captured during each event. Disease samples were taken during both captures, revealing that the herd had been exposed to and/or were positive for pneumonia pathogens including *Mycoplasma ovipneumoniae*. No die-offs have ever been recorded, but owing to the difficulty in observing this herd, die-offs could have occurred and/or are regularly occurring. Ground surveys conducted in recent years have not been promising, with sometimes only 20 sheep observed in the "main" herd found up Little Blue Joint Creek.

However, year after year, the 3 hunters holding permits have successfully filled their permits and reported good numbers of rams. In 2020, 2/3 hunters filled their permits with mature rams; the last hunter located a ram but was unable to connect.

In fall 2021, residents living nearby reported seeing a small herd of sheep in which some individuals were coughing. FWP made the decision not to remove symptomatic individuals, however it is prudent to reduce the number of available permits until we are able to conduct a very thorough assessment of this herd, including

repeated ground surveys and another aerial survey. We will also interview each of the 2021 permit-holders to ask about their experiences and the number of sheep they found.

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

The sheep habitat in HD 250 is almost entirely public land, with some wilderness and/or wilderness study area. Snowfall and harsh winter conditions are typically worse in this area than elsewhere in the Bitterroot. HD 250 is rugged, heavily timbered, and supports a high population of predators, including wolves, mountain lions, and black bears.

This herd has tested positive for *Mycoplasma ovipneumoniae* and associated pneumonia pathogens, with individuals observed coughing in fall 2021.

As of fall 2021, six sheep (1 ram, 5 ewes) have GPS collars and will continue to be monitored. Predation has been an important source of mortality in other collared individuals in this herd, however it is unknown how other factors (illness, injury) may have contributed to the deaths.

The Bitterroot National Forest is planning on initiating habitat management work, including weed treatments, prescribed burning, and logging (Mud Creek project) within the next 1-2 years. These activities should benefit the sheep herd. FWP will also be proposing a change to mountain lion harvest regulations in an attempt to increase lion harvest in this area.

**MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION
Bighorn Sheep 2022
HD250 BHS boundary change**

Hunting Districts: 250

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

The existing boundary for HD250 and the southern portion (250-20 permit) followed DEA boundaries that were changed in 2014, but were never changed for BHS. The existing BHS boundary technically allows a 250 permit holder to harvest sheep from the East Fork (HD270) herd, when they occasionally cross Highway 93 and graze between the highway and the East Fork of the Bitterroot River.

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

The objective of this proposed change is to better manage both the 250 and 270 sheep herds, align boundaries across species, and prevent enforcement issues/confusion.

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

The success of this proposal will be measured by reduced phone calls from confused hunters and through mandatory reporting from successful BHS hunters.

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

The HD 250 sheep population is well below population objectives (according to recent surveys, which are challenging and may not be accurate), while the HD 270 sheep herd is faring better although still below objectives. HD 250 rams tend to be much smaller than HD 270 rams.

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

N/A. This is largely a consistency/enforcement issue.

**MONTANA FISH, WILDLIFE & PARKS
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION
Bighorn Sheep 2022
R3-Bighorn Sheep-Structure- HD 380 Boundary Change**

Hunting Districts: 380

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

The proposal is to change the bighorn sheep HD 380 boundary to match the new proposed D/E HD 380 boundary.

New Bighorn Sheep HD 380 legal description:

Those portions of Jefferson, Broadwater, and Lewis and Clark Counties lying within the following-described boundary: Beginning at Boulder, then southerly along Route 69 to Interstate 90, then easterly along said route to its junction with U.S. Hwy 287, then northeasterly along U.S. Hwy 287 to its junction with the Missouri River near Toston, then northerly down the east bank of said river and the east shore of Canyon Ferry Reservoir to Canyon Ferry Dam and Route 284, then southwestly along said route to US Highway 12-287, then westerly along said highway to Route 518 at East Helena, then southerly along said route to the junction with Interstate 15, then southerly along said interstate to Boulder the point of beginning.

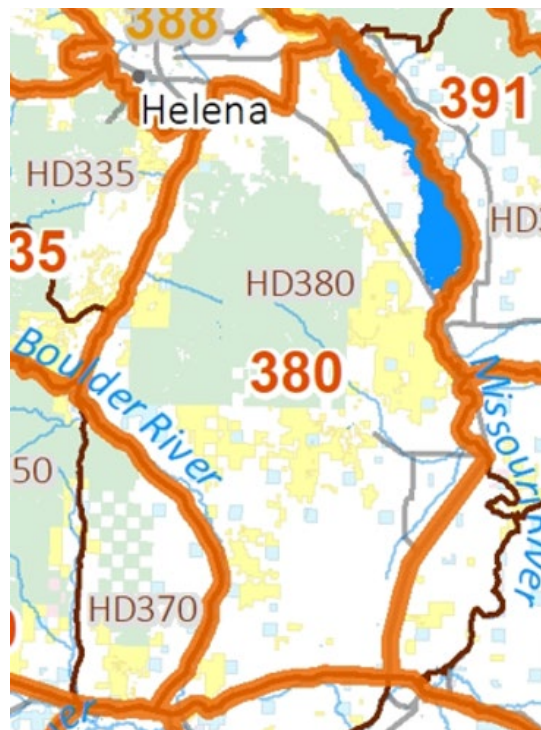


Figure 1: New bighorn sheep HD 380.

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

The objective of the proposed change is regulation simplification to have similar HD boundaries across species where possible.

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

NA

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

Currently, there are no bighorn sheep in the area affected by the boundary change (area between the Missouri River and U.S. Hwy 287), so the change will have no population related impacts etc.

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

The proposed regulation change would not affect resident and nonresident hunting opportunity in the HD, as there are no bighorn sheep currently in the area between the Missouri River and U.S. Hwy 287, which is the area being proposed to be removed from the HD.

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

No public comments were received on the proposal during the initial public comment period.