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MONTANA FISH, WILDLIFE & PARKS REGION 1

BIGHORN SHEEP ANNUAL REPORT

JULY 2015 - JUNE 2018

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THOMPSON FALLS

POPULATIONS:

Region 1 boundaries encompass eight discrete populations of Rocky Mountain bighorn sheep. Presently, five of the herds (Galton Mtn., Kootenai Falls, Bull River, Thompson Falls, and Parma) provide limited hunting opportunities by permits issued through the state's annual drawing process. All hunted populations and the three non-hunted populations in the Ural-Tweed, Cutoff and Wild Horse Island herds were surveyed for distribution and age/sex composition at some point during the report period. Survey composition flights are generally conducted during the "green-up" period in early to mid- April. Survey flights were conducted in the Montana Fish, Wildlife & Park's OH-58 Jet Ranger helicopter.

The total number of bighorn sheep observed in Region 1 varied during the three-year period from 459 to 530 animals (Wild Horse Island on Flathead Lake is not included). Population composition data for the individual herds surveyed between 2016-2018 are shown in Table 2. Helicopter surveys for bighorn sheep occupying the timbered habitats common to northwestern Montana are estimated to be around 75 percent efficient. This observation rate varies seasonally, annually and between herd units but would suggest that a little over 700 bighorn sheep occupy the seven surveyed areas in Region 1. Herd composition surveys have been relatively stable over the past 10 years. The winters of 2016/17 and 2017/18 were severe with heavy snow and cold temperatures lasting into March. Adult and lamb winter survival appeared to be affected by the winter conditions. Table 1 shows the comparison of sheep classification surveys in Region 1 since 1990. Tables 3-11 show historical survey data by individual herds and Wild Horse Island.

TABLE 1. REGION 1 BIGHORN SHEEP SURVEY DATA SINCE 1990.

					RAMS			Lambs:	Rams:
Year	Total	Ewes	Lambs	Yrlg.	Subadults	Adults	Uncl.	100 Ewes	100 Ewes
1990	782	389	139	43	66	135	10	36	63
1991	781	395	134	65	53	99	35	34	55
1992	728	359	142	34	50	143	0	40	63
1993	987	485	188	66	83	130	0	39	58
1994	1066	497	206	101	134	110	18	41	69
1995	865	376	161	87	93	128	20	43	82
1996	833	353	136	70	138	112	24	39	91
1997	738	371	111	43	118	83	12	30	66
1998	666	346	115	46	88	69	2	33	59

1999	600	308	122	41	66	63	0	40	55
2000	560	276	91	62	73	58	0	33	70
2001	653	328	141	45	70	65	4	43	55
2002	693	352	133	76	78	54	0	38	59
2003	843	443	186	50	90	70	4	42	47
2004	754	389	122	87	85	60	11	31	60
2005	645	331	108	40	68	61	10	33	51
2006	511	286	105	40	56	96	28	37	67
2007	742	306	124	79	85	100	48	41	86
2008	838	409	123	73	94	84	55	30	61
2009	456	178	61	49	76	36	29	34	90
2010	537	254	83	45	55	38	8	33	54
2011	565	284	87	28	63	41	56	31	49
2012	572	286	104	26	45	105	6	36	64
2013	536	250	78	18	50	103	37	31	68
2014	353	146	58	24	20	53	52	40	66
2015	291	170	43	20	18	36	4	25	44
2016	475	265	85	38	35	23	29	32	43
2017	530	255	90	44	64	53	24	35	67
2018	459	234	69	29	66	57	4	29	65

TABLE 2. 2016 REGION 1 BIGHORN SHEEP SEX & AGE CLASSIFICATIONS.

Hunting District	Total	Ewes	Lambs	Yrlg.	RAMS Subadults	RAMS Adults	Uncl. Rams	Uncl. Others	Lambs: 100 Ewes	Rams: 100 Ewes
100	76	38	6	7	0	0	15	10	16	58
101	No Survey									
102	No Survey									
121	55	23	11	5	9	7	0	0	48	91
122	No Survey									
123	69	39	12	5	5	4	4	0	31	46
124	275	165	56	21	21	12	0	0	34	33
Totals	475	265	85	38	35	23	19	10	32	43
Wild Horse Island										
	123	64	10		49*		0	0	15	77

* Total rams, not classified to age.

2017 REGION 1 BIGHORN SHEEP SEX & AGE CLASSIFICATIONS.

Hunting District	Total	Ewes	Lambs	Yrlg.	RAMS Subadults	RAMS Adults	Uncl. Rams	Uncl. Others	Lambs: 100 Ewes	Rams: 100 Ewes
100	64	33	7	4	9	9		2	21	67
101	13	10	1				2	0	10	20
102	41	22	8				10	1	36	45
121	53	26	8	7	10	2		0	31	73
122	No Survey									
123	64	35	7	7	12	3		0	20	63

124	295	129	59	26	33	39	9	0	46	83
Totals	530	255	90	44	64	53	21	3	35	67
Wild Horse Island										
	100	49	8		43*			0	16	88

* Total rams, not classified to age.

2018 REGION 1 BIGHORN SHEEP SEX & AGE CLASSIFICATIONS.

Hunting					RAMS			Lambs:	Rams:
District	Total	Ewes	Lambs	Yrlg.	Subadults	Adults	Uncl.	100 Ewes	100 Ewes
100	79	43	18	0	7	10	1	42	40
101**	15	8	4				3	50	38
102	No Survey								
121	40	24	6	4	3	3	0	25	42
122	60	35	6	6	7	6	0	17	54
123	32	15	7	2	4	4	0	47	67
124	233	109	28	17	45	34	0	26	88
Totals	459	234	69	29	66	57	4	29	65
Wild Horse Island									
	134*	65	26	2	6	35	0	40	66

* Survey data provided by CSKT.

** Ground survey.

TABLE 3. AGE & SEX CLASSIFICATION FOR KOOTENAI FALLS BIGHORN SHEEP HUNTING DISTRICT 100.

Year	Ewes	Lambs	Rams	Uncl.	Total	Lambs: 100 Ewes	Rams: 100 Ewes
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	58
2017	33	7	22	2	64	21	67
2018	43	18	16	1	79	42	37

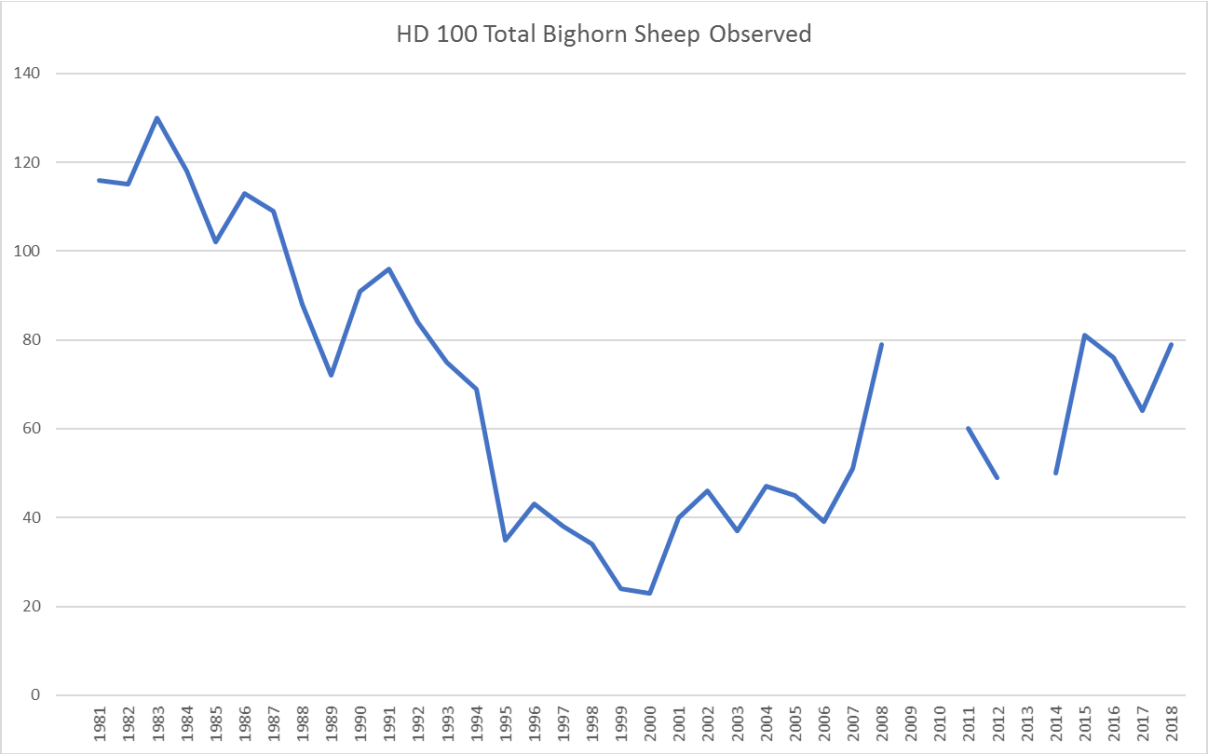


TABLE 4. AGE & SEX CLASSIFICATION FOR URAL-TWEED BIGHORN SHEEP HUNTING DISTRICT 101.

Year	Ewes	Lambs	Rams	Uncl.	Total	Lambs: 100 Ewes	Rams: 100 Ewes
1985	14	9	8	0	31	64	57
1986	17	10	19	1	47	59	112
1987	18	7	16	0	41	39	89
1988	No Survey						
1989	17	14	20	0	51	82	118
1990	29	17	12	0	58	59	41
1991	34	16	18	0	68	47	53
1992	26	3	21	0	50	12	81
1993	36	10	13	0	59	28	36
1994	22	6	14	0	42	27	64
1995	14	4	11	0	29	29	79
1996	2	0	1	0	3	n/a	n/a
1997	17	1	3	0	21	6	18
1998	5	1	1	0	7	20	20
1999	0	0	0	0	0	n/a	n/a
2000	6	1	1	0	8	17	17
2001	8	1	0	0	9	13	n/a
2002*	6	1	0	0	7	17	n/a
2003	10	2	3	0	15	20	30
2004	No Survey						
2005	4	1	4	0	9	25	100
2006-16	No Survey						
2017	10	1	2	0	13	10	20
2018**	8	4	3	0	15	50	38

* Ground Survey

** Ground Survey Conducted on 30 Nov. 2017

TABLE 5. AGE & SEX CLASSIFICATION FOR GALTON MOUNTAIN BIGHORN SHEEP HUNTING DISTRICT 102.

Year	Ewes	Lambs	Rams	Uncl.	Total	Lambs: 100 Ewes	Rams: 100 Ewes
1994	23	4	9	0	36	17	39
1995	No Survey						
1996	28	8	16	0	52	29	57
1997	No Survey						
1998	8	1	0	0	9	13	0
1999	16	6	3	3	28	38	19
2000	18	5	1	0	24	28	6
2001	26	9	5	0	40	35	19
2002	14	3	3	0	20	21	21
2003	17	8	2	0	27	47	12
2004*	23	6	14	0	43	26	61
2005*			18		45		
2005	7	3	9	0	19	43	129
2006	No Survey						
2007	No Survey						
2008	36	13	12	0	61	36	33
2009*	13	7	27	9	56	54	208
2010*					54		
2011*	10	4	6	52	72	40	60
2012	11	3	10	0	24	27	91
2013*	26	5	16	0	47	19	62
2014	20	9	11	0	40	45	55
2015	No Survey						

2016	No Survey						
2017	22	8	10	1	41	36	45
2018	No Survey						

* Ground Survey

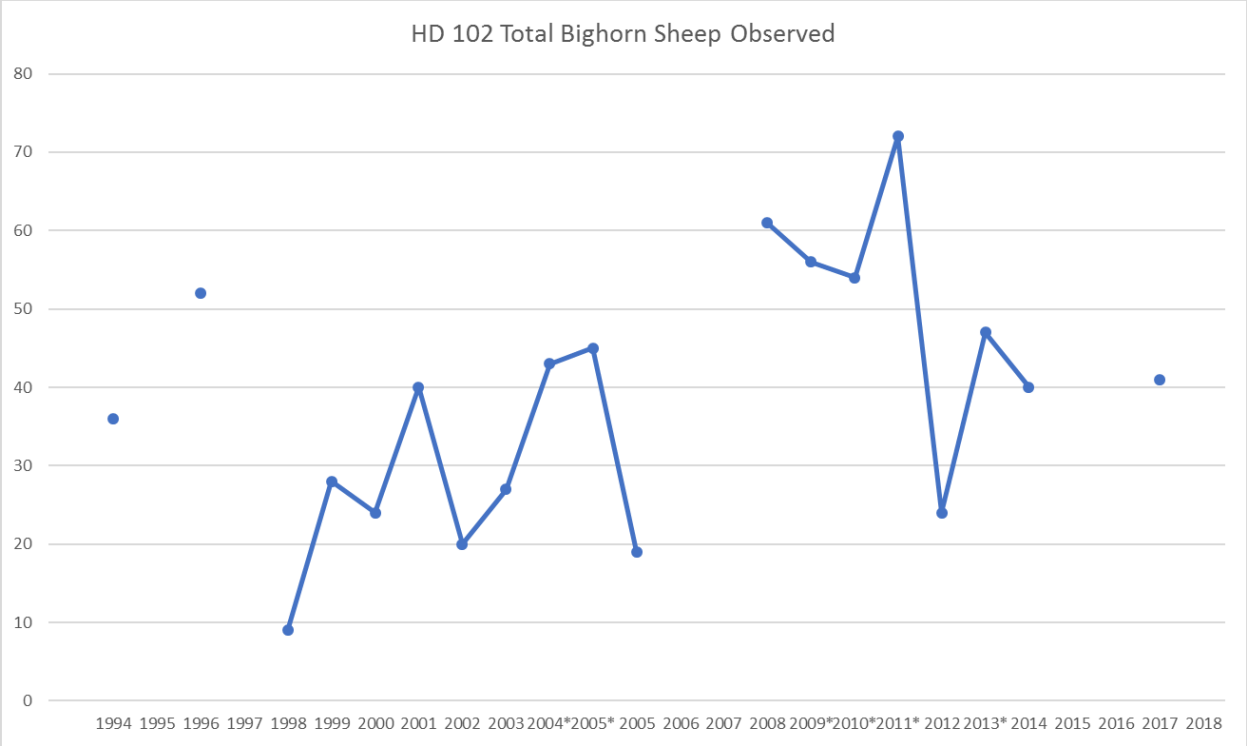


TABLE 6. AGE & SEX CLASSIFICATION FOR THOMPSON FALLS BIGHORN SHEEP HUNTING DISTRICT 121.

Year	Ewes	Lambs	Rams	Uncl.	Total Sheep	Lambs: 100 Ewes	Rams: 100 Ewes
1981	109	55	75	90	329	50	69
1982	155	79	66	61	361	51	43
1983	114	45	60	207	426	39	53
1984	76	57	99	200	432	75	130
1985	106	55	135	47	343	52	127
1986	145	80	105	22	352	55	72

1987	106	63	97	48	314	59	92
1988	91	53	91	35	270	58	100
1989	110	46	70	0	226	42	64
1990	120	48	63	10	241	40	53
1991	85	32	54	35	206	38	64
1992	110	49	30	0	189	45	27
1993	126	50	50	35	261	40	40
1994	141	52	68	0	261	37	48
1995	117	38	55	2	212	32	47
1996	99	44	56	24	223	44	57
1997	107	36	49	12	204	34	46
1998	117	36	55	2	210	31	47
1999	89	34	54	0	177	38	61
2000	75	28	63	0	166	37	84
2001	83	41	56	0	180	49	68
2002	83	40	38	0	161	48	46
2003	110	62	40	0	212	56	36
2004	99	37	42	11	189	37	42
2005	112	41	36	2	191	37	32
2006	83	32	39	25	179	39	47
2007	106	47	63	47	263	44	59
2008	106	31	80	53	270	29	76
2009	84	27	50	8	169	32	60
2010	68	29	28	5	130	43	41
2011	65	21	33	4	123	32	51
2012	29	12	8	0	49	41	28
2013	17	6	9	1	33	35	53
2014	No Survey						
2015	No Survey						

2016	23	11	21	0	55	48	91
2017	26	8	19	0	53	31	73
2018*	24	6	10	0	40	25	42

* Very late survey, 4/24 along with very warm conditions.

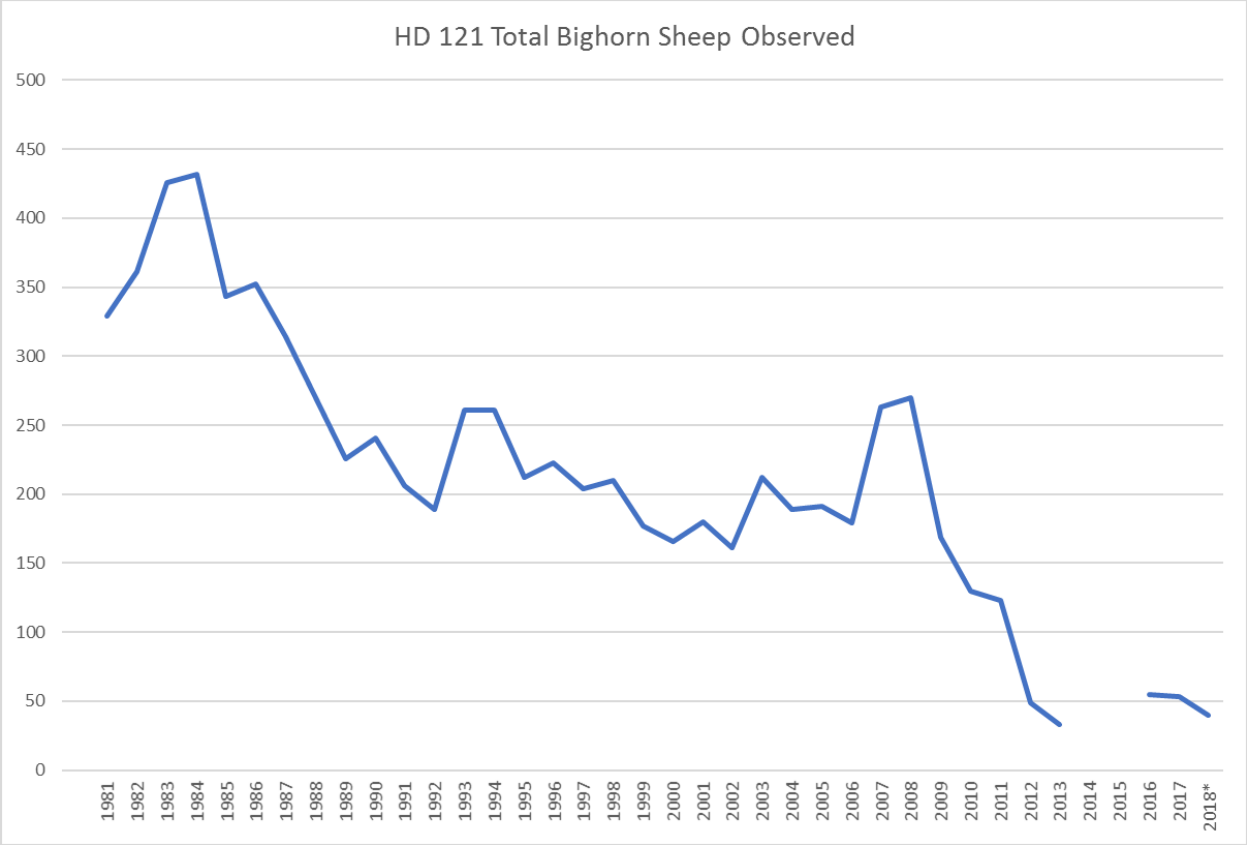


TABLE 7. AGE & SEX CLASSIFICATION FOR ST. REGIS CUT-OFF BIGHORN SHEEP HUNTING DISTRICT 122.

Year	Ewes	Lambs	Rams	Uncl.	Total Sheep	Lambs: 100 Ewes	Rams: 100 Ewes
1981	29	13	13	0	55	45	45
1982	33	14	14	0	61	42	42

1983	32	16	12	15	75	50	38
1984	28	15	18	16	77	54	64
1985	37	11	25	1	74	30	68
1986	41	14	20	0	75	34	49
1987	37	24	29	2	92	65	78
1988	29	19	40	0	88	66	138
1989	32	9	51	0	92	28	159
1990	32	10	31	0	73	31	97
1991	38	10	20	0	68	26	53
1992	29	14	22	0	65	48	76
1993	38	18	35	0	91	47	92
1994	51	21	32	0	104	41	63
1995	52	18	35	0	105	35	67
1996	49	18	33	0	100	37	67
1997	48	15	21	0	84	31	44
1998	41	21	27	0	89	51	66
1999	44	19	36	0	99	43	82
2000	44	20	31	0	95	46	71
2001	41	9	32	0	82	22	78
2002	39	14	29	0	82	36	74
2003	56	21	47	0	124	38	84
2004	34	10	26	0	70	29	76
2005	35	7	17	3	62	20	49
2006	44	23	37	0	104	52	84
2007	35	19	37	1	92	54	106
2008	66	22	53	0	141	33	80
2009	39	13	47	12	111	33	121
2010	67	20	36	0	123	30	54
2011	60	16	37	0	113	27	62
2012	66	15	31	0	112	23	47

2013	51	16	20	0	87	31	39
2014*	8	4	24	0	36	n/a	n/a
2015	6	2	10	0	18	n/a	n/a
2016	No Survey						
2017	No Survey						
2018#	35	6	19	0	60	17	54

* Very poor green-up conditions plus prescribed fire activity.

\# 20 sheep (18 ewes, 2 rams) transplanted on 2/10/18.

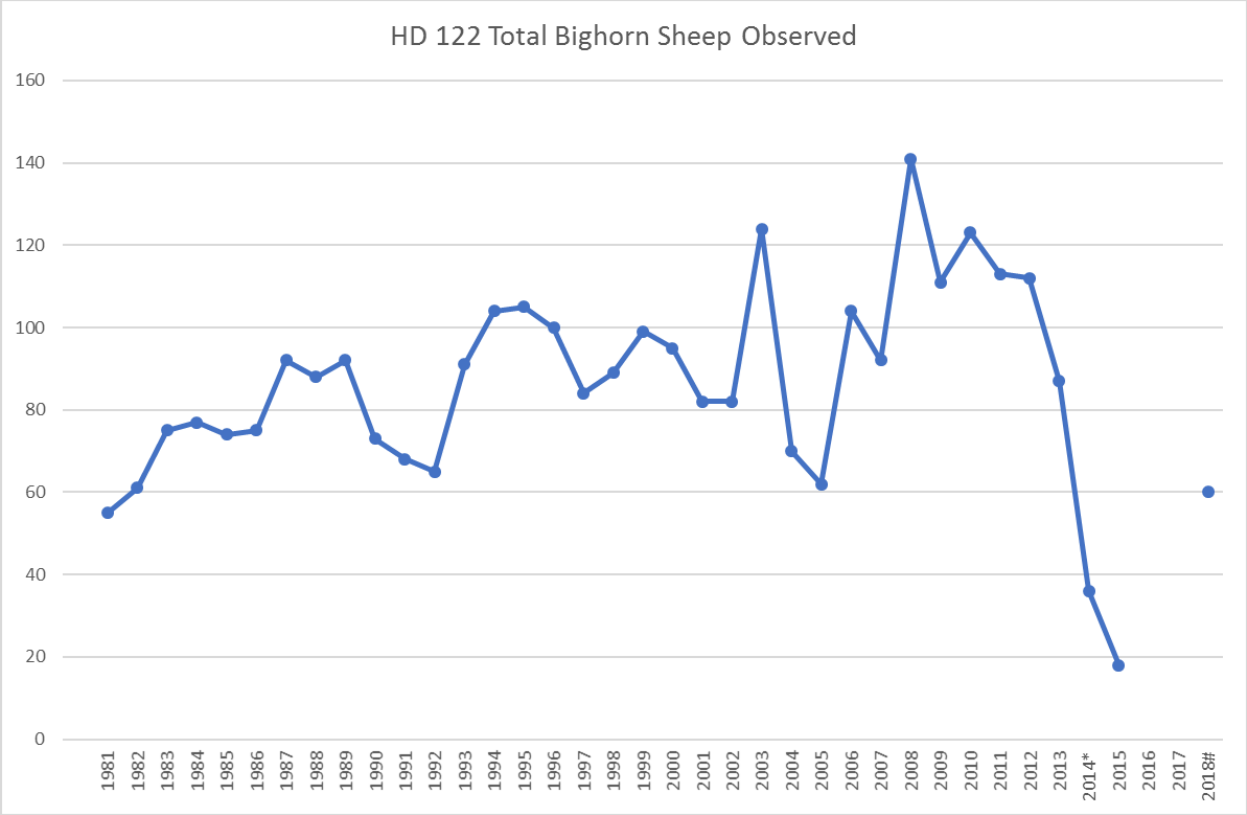


TABLE 8. AGE & SEX CLASSIFICATION FOR BULL RIVER BIGHORN SHEEP HUNTING DISTRICT 123.

Year	Ewes	Lambs	Rams	Uncl.	Total Sheep	Lambs: 100 Ewes	Rams: 100 Ewes
1979	14	8	16	13	51	57	114
1980	No Survey						
1981	40	19	27	0	86	48	68
1982	No Survey						
1983	36	15	21	37	109	42	58
1984	40	21	33	21	115	53	83
1985	45	10	25	0	80	22	56
1986	43	26	24	7	100	60	56
1987	15	7	18	3	43	47	120
1988	45	23	46	3	117	51	102
1989	47	34	31	4	116	72	66
1990	68	26	35	0	129	38	51
1991	49	21	36	0	106	43	73
1992	45	18	39	0	102	40	87
1993	64	25	31	0	120	39	48
1994	51	29	26	2	108	57	51
1995	38	24	40	18	120	63	105
1996	37	12	27	0	76	32	73
1997	68	18	24	0	110	27	35
1998	38	23	23	0	73	32	61
1999	43	25	8	0	76	58	19
2000	15	3	2	0	20	20	13
2001	25	11	13	3	52	44	52
2002	26	10	20	0	56	39	77
2003	38	14	15	0	67	37	40

2004	19	9	15	0	43	47	79
2005	57	24	20	5	106	42	35
2006	44	18	11	0	73	41	25
2007	50	17	19	0	86	34	38
2008	53	15	10	0	78	28	19
2009	No Survey						
2010	41	7	16	3	67	17	39
2011*	26	5	3	0	34	19	12
2012	17	5	19	0	41	29	112
2013**	16	4	0	0	20	25	0
2014	41	10	16	5	72	24	39
2015	38	5	11	0	54	13	29
2016	39	12	18	0	69	31	46
2017	35	7	22	0	64	20	63
2018*	15	7	10	0	32	n/a	67

* Very poor survey conditions with lots of snow and zero green-up.

** Very late survey, 4/26.

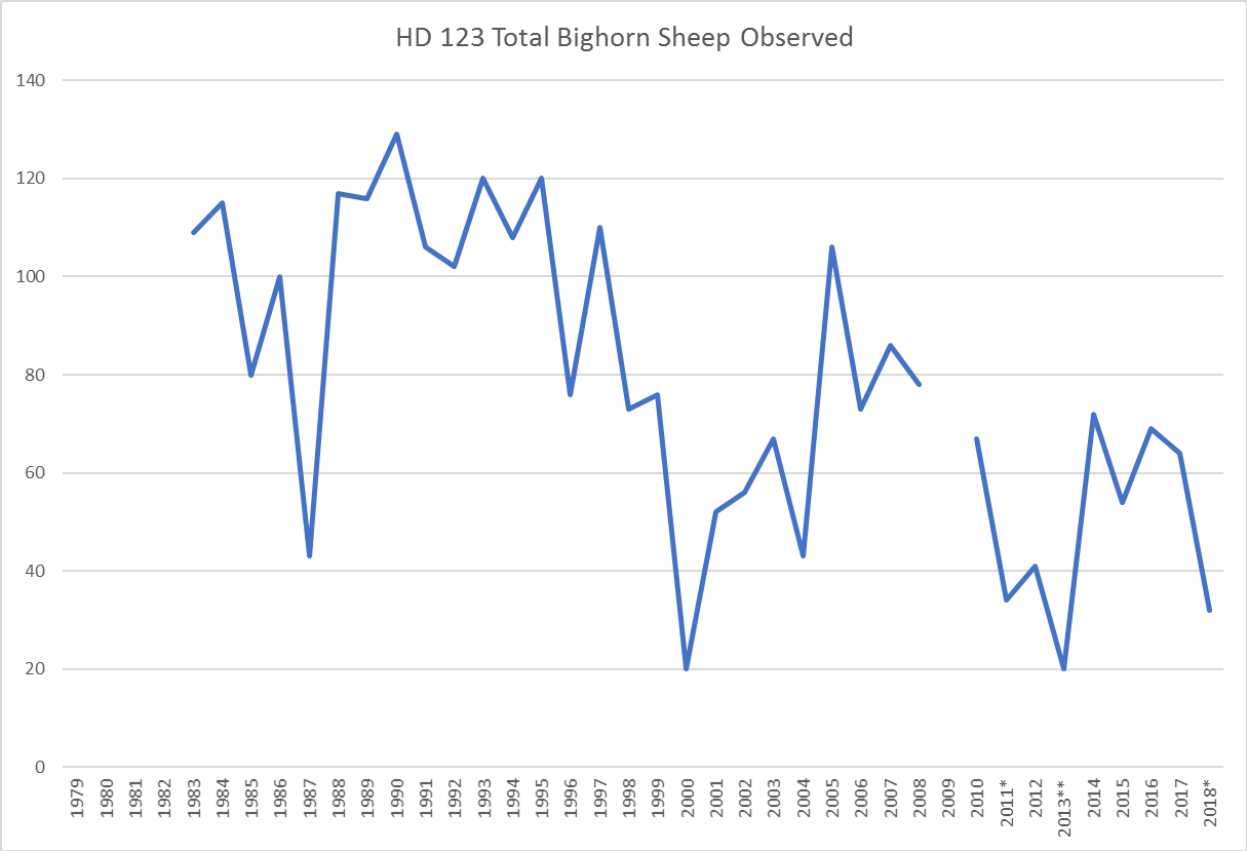


TABLE 9. AGE & SEX CLASSIFICATION FOR THE PERMA BIGHORN SHEEP HERD.

Year	Ewes	Lambs	Rams	Uncl.	Total Sheep	Lambs: 100 Ewes	Rams: 100 Ewes
1988	47	5	35	6	93	11	74
1989	87	28	40	0	155	32	46
1990	89	24	77	0	190	27	87
1991	127	45	65	0	237	35	51
1992	104	44	90	0	238	42	87
1993	184	74	123	0	381	40	67
1994	201	91	174	16	482	45	87
1995	133	71	160	0	364	53	120
1996	117	53	169	0	339	45	144
1997	104	37	139	0	280	36	134

1998	113	40	91	0	244	35	81
1999	102	42	64	0	208	41	63
2000	107	32	85	0	224	30	79
2001	121	63	66	0	250	52	55
2002	156	57	98	0	321	37	69
2003	187	75	99	0	361	40	53
2004	189	55	118	0	362	29	62
2005	245	81	145	0	471	33	59
2006	247	83	168	3	501	34	68
2007	176	69	175	12	432	39	99
2008	149	51	122	2	324	34	82
2009	102	36	140	0	278	35	137
2010	92	32	108	0	232	35	117
2011	113	45	135	0	293	40	120
2012*	81	69	59	0	209	85	73
2013	136	40	104	0	280	30	77
2014	122	49	63	42	276	40	52
2015	153	45	65	0	263	29	43
2016	165	56	53	0	274	34	33
2017	129	59	107	0	295	46	83
2018	109	28	96	0	233	26	88

* Survey data provided by CSKT.

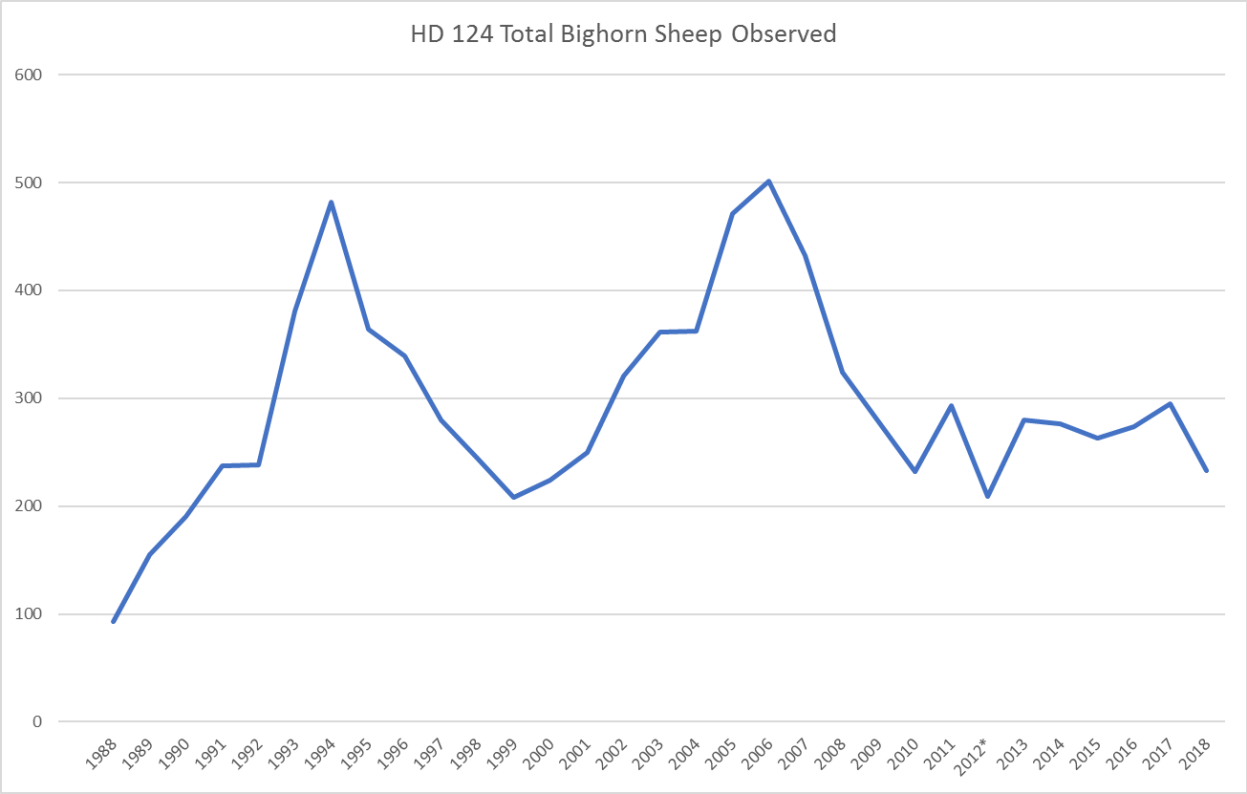


TABLE 10. AGE & SEX CLASSIFICATION FOR KNOWLES-HENRY BIGHORN SHEEP HUNTING DISTRICT 124.

Year	Ewes	Lambs	Rams	Uncl.	Total	Lambs: 100 Ewes	Rams: 100 Ewes
1989	27	10	27	0	64	37	100
1990	47	12	58	0	117	26	123
1991	60	18	48	0	126	30	80
1992	60	29	35	0	124	48	58
1993	86	37	79	0	202	43	92
1994	97	42	119	5	263	43	123
1995	33	22	107	0	162	67	324
1996	73	35	105	0	213	48	144
1997	52	15	90	0	157	29	173
1998	70	25	69	0	164	36	99

1999	62	25	43	0	130	40	69
2000	22	8	58	0	88	36	264
2001	55	31	31	0	117	56	56
2002	34	11	57	0	102	32	168
2003	41	24	44	0	109	59	107
2004	63	17	66	0	146	27	105
2005	96	25	66	0	187	26	69
2006	93	24	96	3	216	26	103
2007	94	31	125	0	250	33	133
2008	108	34	65	2	209	32	60
2009	42	14	64	0	120	33	152
2010	78	27	58	0	163	35	74
2011	83	31	49	0	163	37	59
2012*	28	28	11	0	67	100	39
2013	91	26	41	0	158	29	45
2014	61	25	27	42	155	41	44
2015	87	26	25	0	138	30	29
2016	78	29	20	0	127	37	26
2017	57	29	49	0	135	51	86
2018	28	8	35	0	71	29	125

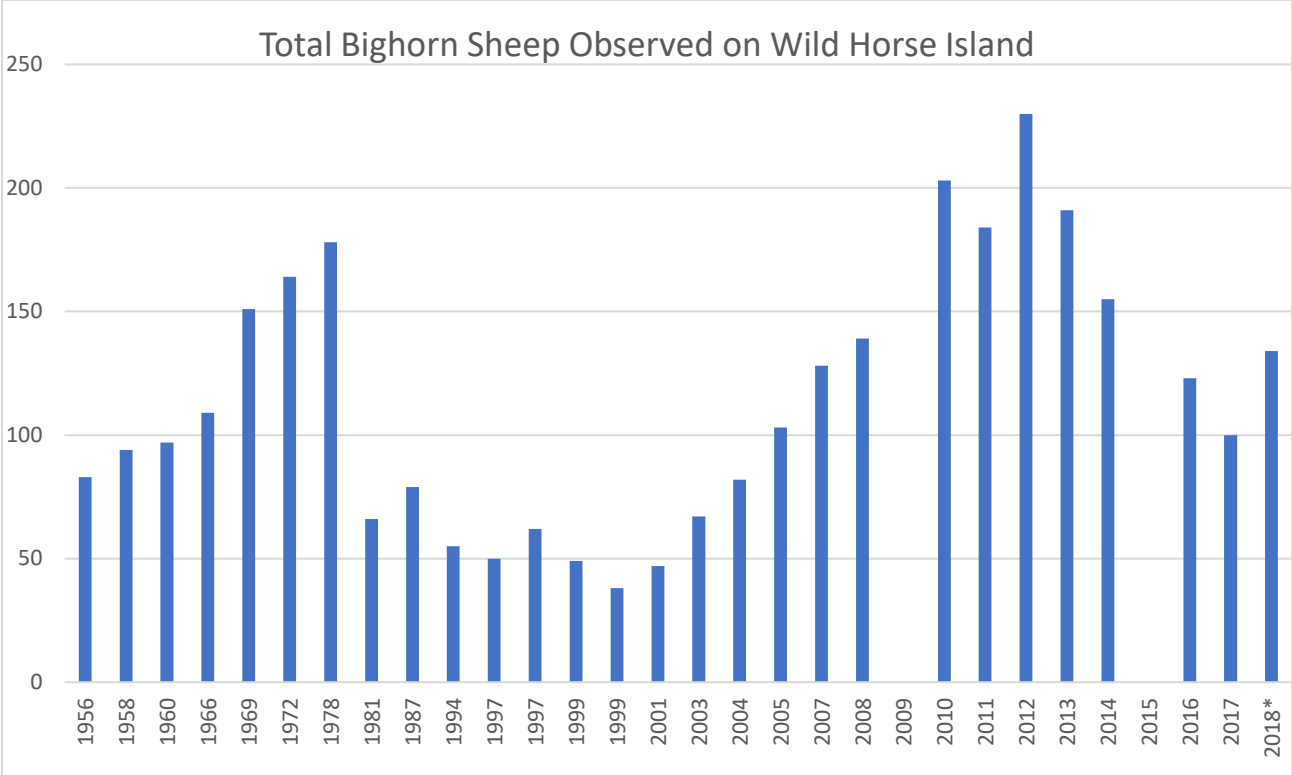
* Survey data provided by CSKT.

TABLE 11. AGE & SEX CLASSIFICATION FOR THE WILD HORSE ISLAND BIGHORN SHEEP HERD.

Year	Ewes	Lambs	Rams	Uncl.	Total	Lambs: 100 Ewes	Rams: 100 Ewes
1956			25	58	83	n/a	n/a
1958	19	12	41	22	94	63	216
1960				97	97	n/a	n/a

1966				109	109	n/a	n/a
1969				151	151	n/a	n/a
1972			49	115	164	n/a	n/a
1978	76	25	77	0	178	33	101
1981	19	13	34	0	66	68	179
1987	39	17	23	0	79	44	59
1994	12	6	37	0	55	50	308
1997	13	5	32	0	50	38	246
1997	11	0	51	0	62	0	464
1999	16	4	29	0	49	25	181
1999	15	4	19	0	38	27	127
2001	14	4	29	0	47	29	207
2003	20	5	26	16	67	25	130
2004	29	13	37	3	82	45	128
2005	57	15	31	0	103	26	54
2007	65	20	43	0	128	31	66
2008	62	19	58	0	139	31	94
2009	No Survey						
2010	139	24	40	0	203	17	29
2011	84	23	77	0	184	27	92
2012	101	31	98	0	230	31	97
2013	49	21	85	36	191	43	173
2014	57	15	80	3	155	26	140
2015	No Survey						
2016	64	10	49	0	123	15	77
2017	49	8	43	0	100	16	88
2018*	65	26	43	0	134	40	66

* Survey data provided by CSKT.


Total Bighorn Sheep Observed on Wild Horse Island
250
200
150
100
50
0
1956
1958
1960
1966
1969
1972
1978
1981
1987
1994
1997
1997
1999
1999
2001
2003
2004
2005
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018*

HARVEST:

Bighorn sheep hunting districts in Region 1 generated an average of 21 sheep licenses consisting of five ewe licenses and 16 either-sex licenses from 2015-2017. This represents a substantial decrease from the previous 10 years. Most of this decrease is attributed to the closure of all sheep hunting in the St. Regis Cutoff Herd, HD 122, because of an all-age die off from a suspected disease event. Table 21 gives a summary of the Region 1 bighorn sheep harvest since 1986. Region 1 hunter success averaged 88 percent for all participating hunters but was higher for ram hunters (100-88 percent) than for ewe hunters (60-75 percent). Hunter success and hunter effort also varied between hunting districts (Table 22). As expected, either-sex hunters expended more effort per harvested ram, averaging 12.9 days/kill than ewe hunters, who averaged 3.7 days/kill. Historic harvest by hunting district, Confederated Salish & Kootenai Tribal harvest and Region 1 harvest are summarized in Tables 13-21.

Under Fish and Wildlife Commission Regulation, all successful ram hunters must submit their trophy to FWP personnel for inspection, aging and placement of a unique identification "plug" in one horn. Table 12 shows the ages of all rams inspected with a range from 4.5-11.5 years with an average age of 8.4, 7.5, and 6.7 in years 2015, 2016, 2017, respectively (Table 23). Table 23 also gives the proportion of rams in each age class since 1990. The largest proportion of harvested rams during the 2015-2017 seasons has been between 6.5 and 7.5 years old. The regional average age of harvested rams is about 7.5 years old and has been consistent the past several years. This age class has led to some very good quality rams, with high Boone and Crockett scores, being taken in Region 1. Table 24 gives horn measurements, ages, and harvest dates for all harvested rams in the region for the 2015-2017 hunting seasons.

Vehicle and train mortality between the towns of Plains and Thompson Falls continue to be a problem for the Thompson Falls Sheep Herd — HD 121 — with a total of 491 sheep killed.

Table 25 gives the history of mortality by sex since 1985.

Augmentation of existing herds is an important management tool to help increase numbers and overall genetics when numbers of sheep, habitat conditions and health status of the receiving population suggest a high likelihood for success. The transplant of 20 sheep (18 ewes and two yearling rams) occurred in February 2018 to provide a boost to the depleted population in the St. Regis Cutoff Herd, HD 122 (Table 26). The source herd for this transplant were sheep from the Larb Hills area of HD 622.

TABLE 12. 2015 AGES OF HARVESTED RAMS FROM REGION 1.

Hunting	--	--	--	--	--		AGE		--	--	--			Permits	
District	<2	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5	12.5	Total	Issued	Harvest
100								1		1			2	2	2
102									1				1	1	1
121							1						1	1	1
123								1	1	2			4	4	4
124					1	1	4	1	1				8	8	8
Total					1	1	5	3	3	3			16	16	16
Percent					6	6	31	19	19	19			100		

Average Age = 8.4

2016 AGES OF HARVESTED RAMS FROM REGION 1.

Hunting	--	--	--	--	--		AGE		--	--	--			Permits	
District	<2	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5	12.5	Total	Issued	Harvest
100							1			1			2	2	2
102									1				1	1	1
121							1						1	1	1
124					3	1	3		1				8	8	8
Total					3	1	5		2	1			12	12	12
Percent					25	8	42		17	8			100		

Average Age = 7.5

2017 AGES OF HARVESTED RAMS FROM REGION 1.

Hunting	--	--	--	--	--		AGE		--	--	--			Permits	
District	<2	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5	12.5	Total	Issued	Harvest
100						1	1						2	2	2
102									1				1	1	1
121				1									1	1	1
123				1		1	1						3	4	3
124															
					2	2	2	1					7	8	7
Total				2	2	4	4	1	1				14	16	14
Percent				14	14	29	29	7	7				100		

Average Age = 6.7

TABLE 13. BIGHORN SHEEP HARVEST FOR HUNTING DISTRICT 100.

Year	Permits Ram/Ewe	Hunters	Total Harvest	Percent Success	Rams	Ewes	Hunter Days	Hunter Effort
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		21	7.0
1997	3,0	3	3	100	3		33	11.0
1998	1,0	1	1	100	1		6	6.0
1999	1,0	1	1	100	1		6	6.0
2000	Closed							
2001	Closed							
2002	Closed							
2003	Closed							
2004	Closed							
2005	Closed							
2006	1,0	1	1	100	1		12	12.0
2007	1,0	1	1	100	1		n/a	n/a
2008	2,0	2	2	100	2		32	16.0
2009	2,0	2	2	100	2		21	10.5
2010	2,0	2	2	100	2		13	6.5
2011	2,0	2	2	100	2		13	6.5
2012	2,0	2	2	100	2		31	15.5
2013	2,0	2	2	100	2		29	14.5
2014	2,0	2	2	100	2		5	2.5
2015	2,0	2	2	100	2		24	12
2016	2,0	2	2	100	2		13	6.5
2017	2,0	2	2	100	2		19	9.5

TABLE 14. BIGHORN SHEEP HARVEST FOR HUNTING DISTRICT 101.

Year	Permits Ram/Ewe	Hunters	Total Harvest	Percent Success	Rams	Ewes	Hunter Days	Hunter Effort
1990	3,0	3	3	100	3		40	13.3
1991	3,0	3	3	100	3		22	7.3

1992	3,0	3	3	100	3		44	14.7
1993	3,0	3	3	100	3		33	11
1994	3,0	3	3	100	3		30	10
1995	3,0	3	3	100	3		60	20
1996	3,0	3	3	100	3		30	10
1997	3,0	3	3	100	3		26	8.7
1998	1,0	1	1	100	1		30	30
1999-2017	Closed							

TABLE 15. BIGHORN SHEEP HARVEST FOR HUNTING DISTRICT 102.

Year	Permits Ram/Ewe	Hunters	Total Harvest	Percent Success	Rams	Ewes	Hunter Days	Hunter Effort
1994	1,0	1	1	100	1		21	21
1995	1,0	1	1	100	1		1	1
1996	1,0	1	1	100	1		14	14
1997	1,0	1	0	0	0		41	0
1998	1,0	1	1	100	1		7	7
1999	1,0	1	0	0	0		9	0
2000	1,0	1	1	100	1		4	4
2001	1,0	1	0	0	0		7	0
2002	1,0	0	0	0	0		0	0
2003	1,0	1	1	100	1		12	12
2004	1,0	1	0	0	0		16	0
2005	1,0	1	1	100	1		9	9
2006	1,0	1	1	100	1		4	4
2007	1,0	1	1	100	1		8	8
2008	1,0	1	1	100	1		15	15
2009	1,0	1	1	100	1		15	15
2010	1,0	1	1	100	1		32	32

2011	1,0	1	1	100	1		8	8
2012	1,0	1	1	100	1		10	10
2013	1,0	1	1	100	1		20	20
2014	1,0	1	1	100	1		8	8
2015	1,0	1	1	100	1		44	44
2016	1,0	1	1	100	1		6	6
2017	1,0	1	1	100	1		7	7

TABLE 16. BIGHORN SHEEP HARVEST FOR HUNTING DISTRICT 121.

Year	Permits Ram,1/2 Curl, Ewe	Hunters	Total Harvest	Percent Success	Rams	1/2 Curl	Ewes	Hunter Days	Hunter Effort
1986	15,15,60	84	74	88	14	14	46	427	5.8
1987	15,15,40	67	55	82	15	11	29	274	5
1988	15,15,20	47	35	74	14	9	12	341	9.7
1989	15,15,20	49	41	84	15	9	17	188	4.6
1990	15,5,20	38	34	89	15	4	15	178	5.2
1991	14,5*	19	19	100	14	*	5	150	7.9
1992	10,8	18	16	89	10		6	102	6.4
1993	13,5	11	11	100	7		4	85	7.7
1994	7,5	27	27	100	7		20	142	5.3
1995	7,20	26	22	85	7		15	108	4.9
1996	8,20	26	24	92	8		16	151	6.3
1997	8,20	23	23	100	8		15	133	5.8
1998	9,15	22	21	95	9		12	124	5.9
1999	9,10	18	17	94	8		9	103	6.1
2000	9,0	9	9	100	9		0	99	11
2001	9,0	9	9	100	9		0	46	5.1
2002	9,0	9	9	100	9		0	122	13.6
2003	9,0	9	9	100	9		0	119	13.2

2004	9,0	9	9	100	9	0	87	9.7
2005	9,0	9	9	100	9	0	94	10.4
2006	10,0	10	10	100	10	0	91	9.1
2007	10,0	10	10	100	10	0	66	6.6
2008	10,4	13	13	100	10	3	77	5.9
2009	10,5	15	15	100	10	5	106	7.1
2010	10,5	15	15	100	10	5	86	5.7
2011	10,1	11	11	100	10	1	112	10.2
2012	4,0	4	2#	100	2#		61	15.2
2013	1,0	1	1	100	1		5	5.0
2014	1,0	1	1	100	1		19	19.0
2015	1,0	1	1	100	1		15	15.0
2016	1,0	1	1	100	1		6	6.0
2017	1,0	1	1	100	1		n/a	n/a

* half-curl ram permits discontinued

Mistake in HD boundary allowed hunters to harvest rams in HD 121 & HD 124. Two rams were harvested in HD 121 & 2 rams in HD 124.

TABLE 17. BIGHORN SHEEP HARVEST FOR HUNTING DISTRICT 122.

Year	Permits Ram/Ewe	Hunters	Total Harvest	Percent Success	Rams	Ewes	Hunter Days	Hunter Effort
1986	1,10	11	8	73	1	7	59	7.4
1987	2,10	12	12	100	2	10	41	3.4
1988	4,10	14	13	93	4	9	56	4.3
1989	5,10	13	9	69	5	4	88	9.8
1990	6,5	11	10	91	6	4	87	8.7
1991	4,1	5	5	100	4	1	33	6.6
1992	4,1	5	5	100	4	1	90	18
1993	4,1	4	4	100	4	0	63	15.8

1994	4,10	13	12	92	4	8	71	5.9
1995	5,10	15	15	100	5	10	66	4.4
1996	5,10	14	13	93	5	8	118	9.1
1997	5,10	15	13	87	5	8	96	7.4
1998	5,10	15	13	87	5	8	103	7.9
1999	5,10	13	10	77	4	6	109	10.9
2000	5,10	15	12	80	5	7	59	4.9
2001	5,5	10	9	90	5	4	71	7.9
2002	5,2	7	7	100	5	2	91	13
2003	6,8	13	11	85	6	5	159	14.5
2004	6,8	12	9	75	6	3	104	11.6
2005	6,4	9	8	89	6	2	102	12.8
2006	6,4	10	7	70	6	1	90	12.9
2007	6,4	6	6	100	6	0	65	10.8
2008	6,7	10	10	100	6	4	55	5.5
2009	6,8	14	12	86	6	6	72	6
2010	6,5	11	11	100	6	5	56	5.1
2011	6,8	14	12	86	6	6	127	10.6
2012	6,9	14	13	93	6	7	95	7.3
2013	6,4	10	9	90	6	3	86	9.6
2014	6,3	9	6	67	5	1	87	14.5
2015	Season Closed							
2016	Closed							
2017	Closed							

TABLE 18. BIGHORN SHEEP HARVEST FOR HUNTING DISTRICT 123.

Year	Permits Ram/Ewe	Hunters	Total Harvest	Percent Success	Rams	Ewes	Hunter Days	Hunter Effort
1977	3,0	3	2	67	2		unk.	n/a
1978	3,0	3	3	100	3		unk.	n/a

1979	3,0	3	2	67	2		unk.	n/a
1980	3,0	3	2	67	2		unk.	n/a
1981	3,0	3	3	100	3		unk.	n/a
1982	2,0	2	2	100	2		unk.	n/a
1983	5,8	10	7	70	4	3	unk.	n/a
1984	5,8	8	7	88	5	2	unk.	n/a
1985	5,10	13	12	92	5	7	unk.	n/a
1986	5,20	25	15	60	4	11	106	7.1
1987	5,5	9	9	100	5	4	58	6.4
1988	5,5	9	9	100	5	4	36	4
1989	8,5*	12	9	75	6	3	117	13
1990	8,10	18	12	67	6	6	99	8.3
1991	8,10	17	12	71	6	6	99	8.3
1992	8,10	18	15	83	8	7	74	4.9
1993	8,10	17	13	76	8	5	100	7.7
1994	8,10	15	14	93	8	6	79	5.6
1995	8,10	14	11	79	7	4	114	10.4
1996	8,10**	16	6	38	4	2	107	17.8
1997	6,10	16	11	69	3	8	210	19.1
1998	4,7	11	4	36	3	1	82	20.5
1999	4,7	9	4	44	3	1	39	9.8
2000	4,1	5	4	80	3	1	40	10.0
2001	4,1	4	3	75	3	0	64	21.3
2002	4,1	5	4	80	3	1	69	17.3
2003	4,1	4	4	100	4	0	41	10.3
2004	4,1	4	3	75	3	0	50	16.7
2005	4,1	5	5	100	4	1	35	7.0
2006	4,0	4	4	100	4		60	15.0
2007	4,1	5	4	80	3	1	87	21.8
2008	4,1	5	3	60	3	0	61	20.3

2009	4,1	5	2	40	2	0	96	48.0
2010	4,1	5	3	60	3	0	101	33.7
2011	4,1	4	4	100	4	0	56	14.0
2012	4,1	4	4	100	4	0	58	14.5
2013	4,1	4	3	75	3	0	41	13.7
2014	4,0	4	4	100	4		68	17.0
2015	4,0	3	3	100	3		38	12.7
2016	4,0	0	0	0	0		n/a	n/a
2017	4,0	4	3	75	3		70	23.3

* wilderness only either-sex permits initiated.

** wilderness only either-sex permits discontinued

TABLE 19. BIGHORN SHEEP HARVEST FOR HUNTING DISTRICT 124.

Year	Permits Ram/Ewe	Hunters	Total Harvest	Percent Success	Rams	Ewes	Hunter Days	Hunter Effort
1992	4,5	8	8	100	4	4	54	6.8
1993	6,30	31	28	90	6	22	197	7.0
1994	12,60	68	58	85	12	46	316	5.4
1995	22,10	31	28	90	21	7	241	8.6
1996	22,10	31	28	90	21	7	184	6.6
1997	22,10	32	29	91	22	7	200	6.9
1998	13,10	22	21	96	13	8	172	8.2
1999	6,2	8	6	75	5	1	60	10.0
2000	6,2	8	8	100	6	2	113	14.1
2001	6,5	11	8	73	6	2	66	8.2
2002	7,5	11	9	82	7	2	67	7.4
2003	7,5	11	10	91	6	4	74	7.4
2004	8,10	17	15	88	8	7	118	7.9
2005	10,20	27	22	81	10	12	193	8.8

2006	10,19	28	27	96	10	17	192	7.1
2007	10,20	25	22	88	10	12	132	6.0
2008	10,20	27	22	81	10	12	130	5.9
2009	8,1	9	9	100	8	1	53	5.9
2010	8,1	8	8	100	8	0	40	5.0
2011	8,1	9	9	100	8	1	83	9.2
2012	8,1	9	11#	100	10#	1	95	10.6
2013	8,5	13	12	92	8	4	108	9.0
2014	8,4	12	10	83	8	2	168	16.8
2015	9,4	12	11	92	8	3	113	10.3
2016	8,5	13	11	85	8	3	55	5.0
2017	8,5	12	10	83	7	3	57	5.7

Two rams were harvested with HD 121 tags per a mistake in the HD boundary.

TABLE 20. CONFEDERATED SALISH & KOOTENAI TRIBAL HARVEST, PERMA BIGHORN SHEEP HERD.

Year	Permits Ram/Ewe	Total Harvest	Rams	Ewes	Avg. Age Rams
1993	5,15	14	5	9	
1994	10,90	38	9	29	
1995	15,60	32	14	18	
1996	25,15	27	23	4	
1997	25,15	17	17	0	
1998	10,8	8	8	0	
1999	8,5	7	5	2	
2000	6,5	4	3	1	
2001	6,5	2	2	0	
2002	6,12	6	5	1	

2003	6,25	11	7	4	
2004	6,45	15	6	9	
2005	9,130	28	10	18	
2006	15,70	43	14	29	
2007	15,80	37	12	25	
2008	15,80	29	11	18	6.4
2009	5,5	4	4	0	
2010	5,5	5	4	1	8.5
2011	8,5	9	8	1	7
2012	5,0	4	4	0	7.3
2013	8,4	8	7	1	
2014	8,4	8	7	1	7.8
2015	8,4	7	7	0	7.6
2016	8,4	10	8	2	6.1
2017	8,4	8	7	1	7.4

TABLE 21. REGION 1 BIGHORN SHEEP HARVEST.

Year	Permits Ram/Ewe	Hunters	Total Harvest	Percent Success	Rams	Ewes	Hunter Days	Hunter Effort
1986	41,100	134	109	81	37	71	699	6.4
1987	42,65	101	90	89	37	53	456	5.1
1988	44,45	85	69	81	35	34	525	7.6
1989	48,45	89	72	81	40	32	488	6.8
1990	42,45	85	70	82	38	32	466	6.7
1991	34,26	59	51	86	32	19	401	7.9
1992	42,26	66	58	88	35	23	407	7.0
1993	33,51	76	69	91	33	36	534	7.7
1994	40,105	135	123	91	40	83	707	5.7
1995	51,55	99	86	87	48	38	707	8.2

1996	50,50	94	78	83	45	33	625	8.0
1997	48,50	94	82	87	45	37	746	9.1
1998	34,42	73	62	85	33	29	526	8.5
1999	26,29	50	38	76	21	17	322	8.5
2000	25,13	38	34	90	24	10	316	9.3
2001	25,11	35	29	83	23	6	249	8.6
2002	26,8	32	29	91	24	5	349	12
2003	27,14	38	35	92	26	9	397	11.3
2004	28,19	43	36	84	26	10	374	10.4
2005	30,25	51	45	88	30	15	433	9.6
2006	32,23	54	50	93	32	18	449	9.0
2007	32,25	48	44	92	31	13	358	8.1
2008	33,32	58	51	88	32	19	398	7.8
2009	31,15	46	41	89	29	12	363	8.9
2010	31,12	42	40	95	30	10	328	8.2
2011	31,11	41	39	95	31	8	399	10.2
2012	25,11	34	33	97	25	8	350	10.6
2013	22,10	31	28	90	21	7	289	10.3
2014	22,7	29	24	83	21	3	355	14.8
2015	16,4	20	18	90	15	3	234	13.0
2016	16,5	17	15	88	12	3	80	5.3
2017	16,5	21	18	86	15	3	153	8.5

TABLE 22. REGION 1 BIGHORN SHEEP HARVEST, 2015.

Hunting District	Permits Issued	Hunters	Harvest	Percent Success	Rams	Ewes	Hunter Days	Days Per Kill
100-00	2	2	2	100	2		24	12.0
102-00	1	1	1	100	1		44	44.0
121-00	1	1	1	100	1		15	15.0

122-00	Season Closed							
123-00	4	4	3	75	3		38	12.7
124-00	8	8	8	100	8		102	12.8
124-30	4	4	3	75		3	11	3.7
Totals	20	20	18	90	15	3	234	13.0

REGION 1 BIGHORN SHEEP HARVEST, 2016

Hunting District	Permits Issued	Hunters	Harvest	Percent Success	Rams	Ewes	Hunter Days	Days Per Kill
100-00	2	2	2	100	2		13	6.5
102-00	1	1	1	100	1		6	6.0
121-00	1	1	1	100	1		6	6.0
123-00	4	0	0	0	0		n/a	n/a
124-00	8	8	8	100	8		46	5.8
124-30	5	5	3	60		3	9	3.0
Totals	21	17	15	88	12	3	80	5.3

REGION 1 BIGHORN SHEEP HARVEST, 2017

Hunting District	Permits Issued	Hunters	Harvest	Percent Success	Rams	Ewes	Hunter Days	Days Per Kill
100-00	2	2	2	100	2		19	9.5
102-00	1	1	1	100	1		7	7.0
121-00	1	1	1	100	1		n/a	n/a
123-00	4	4	4	100	4		70	23.3
124-00	8	8	7	88	7		44	6.3

124-30	5	5	3	60		3	13	4.3
Totals	21	21	18	86	15	3	153	8.5

TABLE 23. PROPORTION OF REGION 1 HARVESTED BIGHORN SHEEP RAMS BY AGE CLASS.

		--	--	--	--	AGE		--	--	--		Sample	Average
Year	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5	12.5	Size	Age
1990	0	3	9	9	15	21	24	9	6	3	0	33	7.5
1991	0	3	10	17	17	17	23	10	3	0	0	30	7.1
1992	0	6	9	6	26	26	20	6	3	0	0	35	7.0
1993	0	0	3	15	35	24	15	3	6	0	0	34	6.8
1994	0	5	5	13	35	20	8	10	3	3	0	40	6.5
1995	0	6	10	17	15	17	23	8	4	0	0	48	7.0
1996	0	4	18	13	20	18	18	9	0	0	0	45	6.7
1997	0	5	17	28	14	14	12	10	0	0	0	42	6.4
1998	0	0	19	28	25	19	3	0	6	0	0	32	6.3
1999	0	0	15	20	35	10	15	5	0	0	0	20	6.6
2000	4	0	0	17	29	38	4	8	0	0	0	24	6.9
2001	0	4	4	21	17	13	29	8	4	0	0	24	7.2
2002	8	0	8	8	30	8	30	8	0	0	0	24	6.8
2003	4	0	12	15	20	15	15	15	4	0	0	26	7.0
2004	0	4	11	11	4	35	8	15	8	4	0	26	7.5
2005	0	7	3	20	10	34	3	13	7	0	3	30	7.3
2006	0	0	13	16	28	25	9	6	3	0	0	32	6.8
2007	0	0	3	17	20	37	20	3	0	0	0	30	7.1
2008	0	9	9	19	22	22	16	3	0	0	0	32	6.5
2009	0	0	7	14	29	39	7	4	0	0	0	28	6.9
2010	0	3	10	14	31	21	14	7	0	0	0	29	6.7

2011	0	3	0	0	13	48	29	7	0	0	0	31	7.7
2012	0	0	4	0	12	40	36	0	8	0	0	25	7.8
2013	0	0	10	15	15	25	10	10	5	0	10	20	7.7
2014	0	0	5	5	20	20	30	10	5	5	0	20	7.9
2015	0	0	0	6	6	31	19	19	19	0	0	16	8.4
2016	0	0	0	25	8	42	0	17	8	0	0	12	7.5
2017	0	0	14	14	29	29	7	7	0	0	0	14	6.7

TABLE 24. REGION 1 HORN MEASUREMENTS, IN INCHES, FROM HARVESTED RAMS IN 2015.

		HORN LENGTH		BASE CIRCUMFERENCE		HARVEST	
HD	**AGE**	**RIGHT**	**LEFT**	**RIGHT**	**LEFT**	**DATE**	**LOCATION**
100	8.5	37 5/8	37 1/4	14 1/2	14 1/2	9/27/2015	China Mtn.
	10.5	41	36 5/8	14 5/8	14 3/4	11/25/2015	Quartz Cr.
Avg.	9.5						
102	9.5	32 1/4	36 3/4	15	15 1/8	11/20/2015	Woods Ranch WMA
121	7.5	36 3/4	37 3/8	15 5/8	15 1/2	11/15/2015	KooKoo Sint
123	8.5	37	37	14	14	11/20/2015	Scotty Peak
	9.5	**41 1/4**	**41 3/8**	**15 1/4**	**15 1/4**	**10/20/2015**	**Mid Fork Bull Riv.**
	10.5	37 3/4	38	14 1/4	14 1/2	11/4/2015	Williams Cr.
	10.5	35 1/4	31 3/8	14	14 3/8	11/16/2015	Mid Fork Bull Riv.
Avg.	9.8						
124	5.5	34 7/8	32 7/8	14	14 1/2	10/31/2015	West of Henry Cr.
	6.5	**38**	**37 1/8**	**15 7/8**	**16**	**11/10/2015**	**Knowles Cr.**
	7.5	35 1/2	35	16	16 3/8	9/15/2015	Henry Cr.
	7.5	34 3/8	33/4 8	15	15	10/2/2015	Knowles Cr.
	7.5	29 3/4	31 3/4	15 1/4	16 1/8	11/3/2015	Knowles Cr.

	7.5	34 3/8	35 5/8	16	16	11/18/2015	Knowles Cr.
	8.5	35 1/4	34	15 1/8	15 1/4	10/10/2015	Knowles Cr.
	9.5	**37 1/4**	**36 3/8**	**16**	**15 7/8**	**10/29/2015**	**Knowles Cr.**
Avg.	7.5						

Bold Type = Estimated Boone & Crockett minimum score of 180 points.

REGION 1 HORN MEASUREMENTS, IN INCHES, FROM HARVESTED RAMS IN 2016.

		HORN LENGTH		BASE CIRCUMFERENCE		HARVEST	
HD	**AGE**	**RIGHT**	**LEFT**	**RIGHT**	**LEFT**	**DATE**	**LOCATION**
100	7.5	35 5/8	35 5/8	15 1/4	15 3/8	11/11/2016	Quartz Creek
	10.5	33 1/4	33 1/2	14 1/2	14 1/2	10/13/2016	Kootenai Mtn.
Avg.	9.0						
102	9.5	n/a	n/a	n/a	n/a	10/30/2016	Woods Ranch WMA
121	7.5	36 1/2	31 1/2	15 1/8	15 1/8	11/4/2016	Roundhorn WMA
124	**5.5**	**39 1/2**	**38**	**16**	**15 3/4**	**9/18/2016**	**Knowles Creek**
	5.5	31 1/4	32 7/8	14	14	10/1/2016	Mclaughlin Creek
	5.5	**37 3/4**	**37**	**16 1/2**	**16 1/2**	**10/28/2016**	**Knowles Creek**
	6.5	**40**	**40 1/2**	**15 3/8**	**15 3/8**	**11/3/2016**	**Knowles Creek**
	7.5	36	35 1/2	15	15	10/29/2016	Knowles Creek
	7.5	37 3/8	36 7/8	15	15	11/11/2016	Henry Creek
	7.5	36 1/8	36 1/8	15	15 3/8	11/21/2016	Knowles Creek
	9.5	**40 1/2**	**41**	**16**	**16**	**10/9/2016**	**Knowles Creek**
Avg.	6.9						

Bold Type = Estimated Boone & Crockett minimum score of 180 points.

REGION 1 HORN MEASUREMENTS, IN INCHES, FROM HARVESTED RAMS IN 2017.

		HORN LENGTH		BASE CIRCUMFERENCE		HARVEST	
HD	AGE	RIGHT	LEFT	RIGHT	LEFT	DATE	LOCATION
100	**7.5**	**38 7/8**	**38 3/4**	**16 3/8**	**16 3/8**	**10/5/2017**	**Bighorn Terrace**
	6.5	36 1/4	35 1/2	15 1/2	15 1/4	10/22/2017	Quartz Creek
Avg.	7.0						
102	9.5	31 5/8	30 5/8	15 1/8	15	11/19/2017	Kootenai Creek
121	4.5	35 1/2	36 1/4	16	16 1/4	11/18/2017	Roundhorn WMA
123	4.5	33 1/2	33 1/2	14 1/4	14 1/4	10/29/2017	Berray Mtn.
	6.5	32 1/4	34 1/4	14 1/2	14 1/2	11/25/2017	Mid. Fk. Bull Riv.
	7.5	35 7/8	34 7/8	15 3/8	15 3/8	10/29/2017	Berray Mtn.
Avg.	6.2						
124	5.5	32 5/8	33 3/4	15	14 7/8	10/7/2017	Knowles Creek
	5.5	34 1/8	34 3/4	16 3/8	16	10/28/2017	Knowles Creek
	6.5	**38 1/8**	**37 1/8**	**15 3/4**	**15 3/4**	**10/29/2017**	**Knowles Creek**
	6.5	35	30	15 7/8	15 7/8	11/3/2017	Paradise Gl.
	7.5	36	35 1/4	15 1/4	15 1/4	10/21/2017	Knowles Creek
	7.5	**36**	**36**	**16 1/8**	**16 1/8**	**11/3/2017**	**Paradise Gl.**
	8.5	35 5/8	35 3/4	14 5/8	14 3/4	11/10/2017	Henry Creek
Avg.	6.8						

Bold Type = Estimated Boone & Crockett minimum score of 180 points.

TABLE 25. DOCUMENTED VEHICLE AND TRAIN MORTALITY OF BIGHORN SHEEP BETWEEN WEEKSVILLE CREEK AND THE THOMPSON RIVER SINCE 1985.

Year	Ewes	Lambs	Rams	Unknown	Total
1985	2	0	2	0	4
1986	0	0	1	0	1

1987	4	1	1	0	6
1988	1	0	0	3	4
1989	4	3	0	4	11
1990	7	1	5	1	14
1991	16	11	7	0	34
1992	14	4	6	1	25
1993	14	2	7	0	23
1994	15	3	6	0	24
1995	6	4	1	0	11
1996	8	3	2	0	13
1997	10	3	5	0	18
1998	16	4	4	0	24
1999	7	7	4	0	18
2000	10	5	5	0	20
2001	3	0	0	1	4
2002	6	2	3	2	13
2003	11	2	2	0	15
2004	6	2	8	4	20
2005	6	1	0	0	7
2006	14	9	4	0	27
2007	9	2	4	0	15
2008	21	7	8	2	38
2009	5	1	7	1	14
2010	12	1	7	3	23
2011	7	3	6	1	17
2012	11	1	5	1	18
2013	4	1	5	0	10
2014	2	0	1	0	3
2015	0	0	2	0	2
2016	6	1	2	0	9

2017	3	0	3	0	6
Total	260	84	123	24	491
Avg.	7.9	2.5	3.7	0.7	14.9

TABLE 26. 2018 TRANSPLANT OF BIGHORN SHEEP FROM LARB HILLS, HD 622, TO THE ST. REGIS CUTOFF, HD 122.

Capture Date	Capture Location	Ear Tag Number	Ear Tag Color	Ear Tag Location	Sex	Age	Weight Pounds	Release Site
2/10/2018	Larb Hills, HD 622	1225	Yellow	Left	F	1.5	111	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1049	Yellow	Left	F	1.5	134	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1215	Red	Left	F	4.5	154	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1031	Yellow	Left	F	2.5	143	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1209	Yellow	Left	F	1.5	125	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1213	Yellow	Left	F	2.5	151	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1219	Red	Left	F	4+	164	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1217	Yellow	Left	F	2.5	151	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1211	Yellow	Left	F	3.5	145	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1212	Yellow	Left	F	1.5	138	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1047	Yellow	Left	F	2.5	144	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1033	Yellow	Left	F	2.5	143	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1210	Yellow	Left	F	2.5	154	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1214	Yellow	Left	F	3.5	168	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1224	Yellow	Left	M	1.5	163	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1032	Yellow	Left	F	2.5	155	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1216	Red	Left	F	4+	173	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1034	Red	Left	F	4.5	146	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1044	Yellow	Left	M	1.5	143	Dragonfly Cr., HD 122
2/10/2018	Larb Hills, HD 622	1035	Yellow	Left	F	2.5	143	Dragonfly Cr., HD 122

MANAGEMENT:

Populations of bighorn sheep are constantly changing. This fluctuation can make the setting of licenses difficult for biologists and confusing to the hunting public. In Region 1, bighorn licenses are based on the number of animals observed during the spring classification surveys. The harvest of rams is based primarily on four criteria. Those criteria consist of where the population is in relation to the overall objective; the number of lambs recruited into the population (lamb:ewe ratio); the number of younger rams in the population; and the number or percent of older rams (generally ¾ curl or better) in the population. Ewe licenses are primarily used to reduce the population and are based on two main criteria: the recruitment rate (lamb:ewe ratio); and the percentage of which the population is over objective.

Several variables such as predation, vehicle mortality, severe weather, and disease can have big influences on bighorn numbers. Many herds in Region 1 have fewer than 100 animals and populations can fluctuate rapidly. For these reasons, it is recommended that bighorn populations be surveyed annually or, at minimum, every other year so declining populations can be identified.

Augmentation from a disease-free source herd may be considered to improve numbers and genetics in areas suitable for augmentation. The decision to augment a population is based on several considerations. Habitat suitability, disease status of the herd, proximity to domestic sheep and current numbers of bighorns in the population are evaluated before augmentation is considered.

Disease is the largest factor affecting bighorn sheep populations. Research has indicated that comingling bighorn sheep with domestic sheep and goats is a significant health risk to wild bighorns and possibly to domestics. Best management practices suggest that keeping bighorn sheep separate from domestic sheep and goats can help limit disease transmission. The Region 1 Citizens Advisory Committee, working with FWP regional wildlife staff, produced an informational brochure on the best management practices for keeping bighorn sheep. That brochure and additional information on diseases in bighorn sheep and domestic sheep and goats is available on the Montana Fish, Wildlife and Parks, Region 1 website (http://fwp.mt.gov/regions/r1/).