

2006 JOB COMPLETION REPORT

SPECIES : Pronghorn
 HERD UNIT : SOUTH ROCK SPRINGS
 HERD UNIT # : 412
 HUNT AREAS : 59,112

PERIOD COVERED : 06/01/2006 - 05/31/2007
 WYOMING PROJECT NO. : W-27-R
 PREPARED BY : GRANT FROST

2002 2003 2004 2005 2006

1. PREHUNT SEX AND AGE RATIO COUNT (per 100 females)

Juveniles	42	43	66	61	63
Males	50	37	34	52	46
Yearling Males	15	12	12	24	20
Mature Males	34	26	22	29	26
Total Sample Size	1,536	1,605	1,807	1,717	1,812
Adequate Sample Size	1,185	996	1,696	1,651	1,712

2. HARVEST

Adult Males	214	214	222	199	234
Yearling Males	0	0	0	0	0
Total Males	214	214	222	199	234
Females	2	6	10	84	123
Juveniles	0	0	0	7	11
Totals	216	220	232	290	368

3. AGE STRUCTURE OF FIELD CHECKED ANIMALS

	#	%	#	%	#	%	#	%	#	%
Juvenile Female	0		0		0		1	3	1	2
Yearling Female	0		1	3	1	2	1	3	0	
Adult Female	1	2	9	25	10	20	6	15	16	35
Juvenile Male	0		0		0		0		1	2
Yearling Male	0		0		3	6	0		1	2
Adult Male	47	98	26	72	37	73	32	80	27	59
Total Sample Size	48		36		51		40		46	

4. POSTHUNT SEX AND AGE RATIO COUNT (per 100 females)

Juveniles	0	0	0	0	0
Males	0	0	0	0	0
Yearling Males	0	0	0	0	0
Mature Males	0	0	0	0	0
Total Sample Size	0	0	0	0	0
Adequate Sample Size	0	0	0	0	0

5. POPULATION TRENDS

Trend Count Dates:	June '03		June '05		
Trend Count:	0	0	0	0	0
Herd Model Pop Est:	4,000	4,100	4,500	4,600	4,700
Line Trans Pop Est:	4,507	0	4,020	0	0*

* Line Transects not flown in 2007

SEX AND AGE COUNT REPORT

SPECIES : Pronghorn

HERD UNIT : SOUTH ROCK SPRINGS

YEAR : 2006

PREPARED BY : GRANT FROST

PREHUNT CLASSIFICATION DATES : August

Hunt Area	----- MALES -----			Females	Juveniles	Total
	Yearlings	Adults	Total			
112	84	87	171	380	242	793
59	92	137	229	487	303	1,019
Total Sample	176	224	400	867	545	1,812
Adequate Sample			374	810	509	1,693
Precision	@ 90 C.L.					

Juveniles / 100 Females : 63 ± 5
Total Males / 100 Females : 46 ± 4
Adult Males / 100 Females : 26
Yearlings / 100 Females : 20

SPECIES : Pronghorn

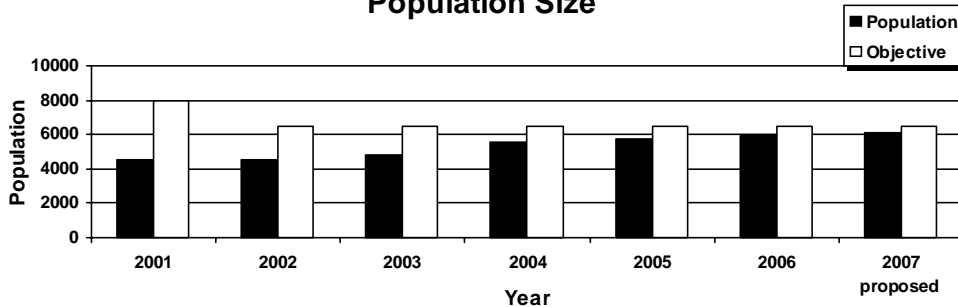
MODEL DATE : 2/2007

HERD UNIT : SOUTH ROCK SPRINGS

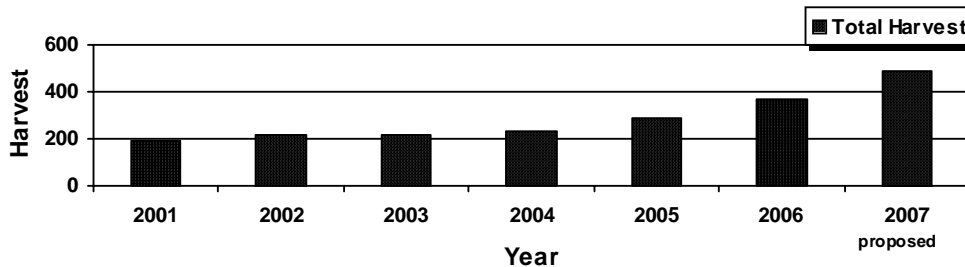
YEAR : 2006

	Averages 2001 - 2005	2006	Proposed 2007	Objective
Population (Est.)	5,020	5,900	6,100	6,500
Harvest	231	368	490	
Hunters	251	358	550	
Hunter Success	91.9%	102.8%	89.1%	
Active Licenses	256	410	550	
Active Licenses Success	90.2%	89.8%	89.1%	
Recreation Days	663	1,085	1,500	
Days/Animal	2.9	2.9	3.1	

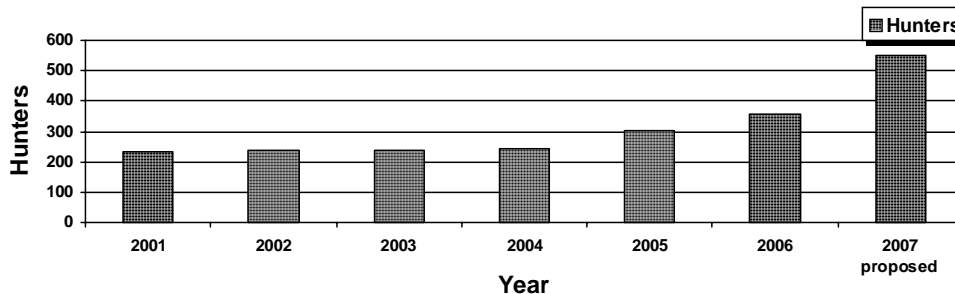
Population Size

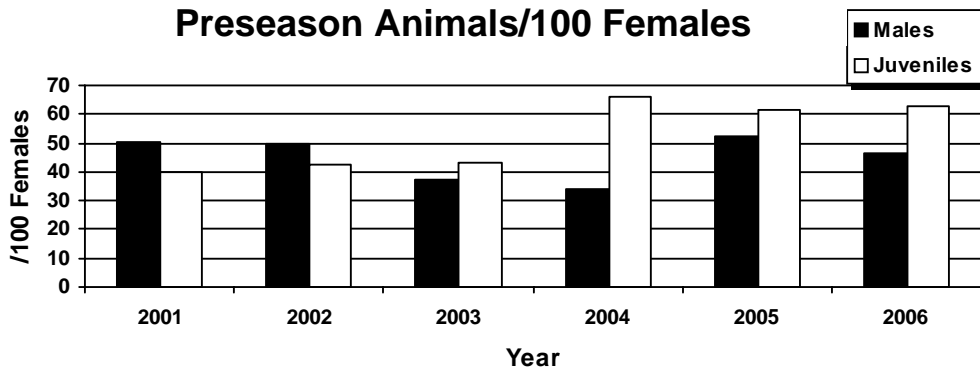
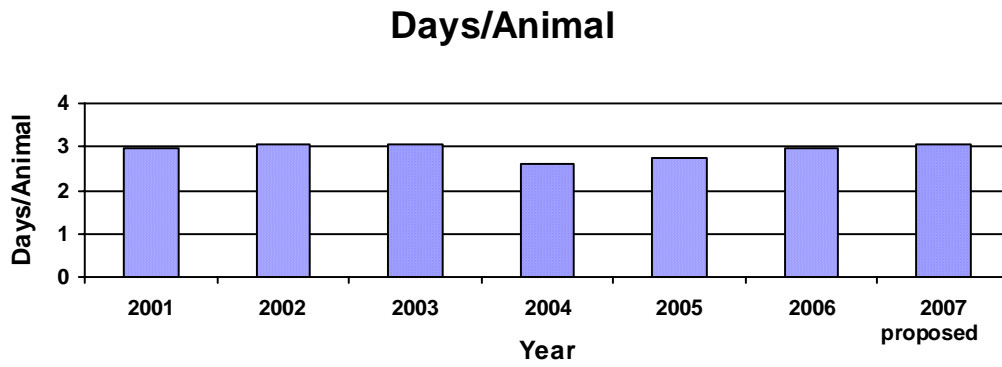
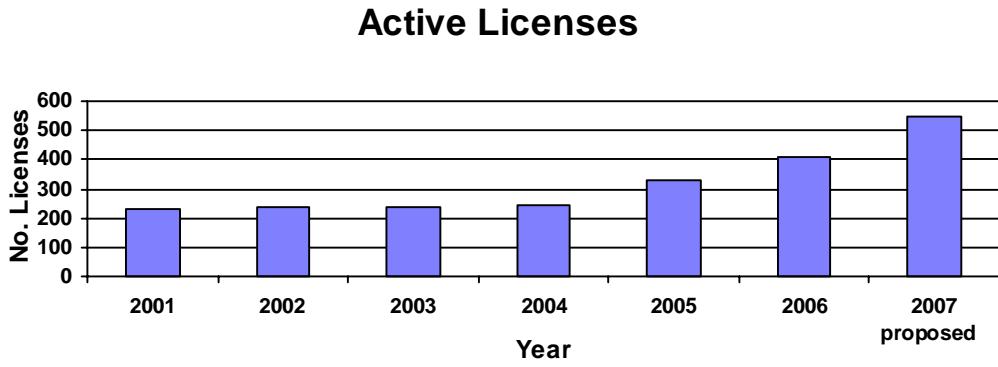
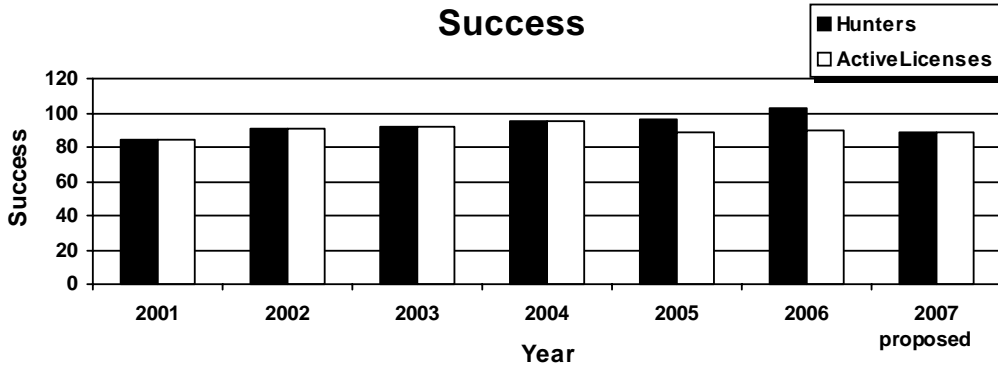


Harvest



of Hunters





2006 HUNTING SEASON

SPECIES : Pronghorn

HERD UNIT : SOUTH ROCK SPRINGS

HUNT

AREA TYPE SEASON DATES

LIMITATIONS

59	1	09/20-10/14	Limited quota; 150 licenses any antelope
	6	09/20-10/14	Limited quota; 100 licenses doe or fawn
112	1	09/20-10/14	Limited quota; 150 licenses any antelope
	6	09/20-10/14	Limited quota; 50 licenses doe or fawn

ARCHERY : 08/15

Refer to Section 3.

March 13, 2006

HARVEST REPORT

SPECIES **PRONGHORN**

HERD UNIT : **SOUTH ROCK SPRINGS**

YEAR : **2006**

PERIOD COVERED :

Prepared By : **GRANT FROST**

Hunt Area	License Type	L.Q. Licenses	No. Hunters		Ylg. Males	Adult Males	Females	Juveniles	Total	Percent Success	Days/Animal Taken
	Resident	0	133		0	97	24	0	121	91.0	3.8
112	Non-Resident	0	33		0	20	17	1	38	115.2	2.9
	Total	0	166	(181)*	0	117	41	1	159	95.8 (87.8)*	3.6
	Resident	0	137		0	90	41	8	139	101.5	2.4
59	Non-Resident	0	58		0	27	41	2	70	120.7	2.7
	Total	0	195	(229)*	0	117	82	10	209	107.2 (91.3)*	2.5
	Resident	0	267		0	187	65	8	260	97.4	3.0
Total	Non-Resident	0	91		0	47	58	3	108	118.7	2.8
	Total	0	358	(410)*	0	234	123	11	368	102.8 (89.8)*	2.9

* Active Licenses

2006 AGE STRUCTURE OF FIELD CHECKED ANIMALS

SPECIES : PRONGHORN
 HERD UNIT : SOUTH ROCK SPRINGS

PREPARED BY : GRANT FROST

Hunt Area	Sex	Young	1+	2+	3+	4+	5+	6+	7+	Older	Unaged Adults *	Total
112	Male	0	0	1	1	7	0	0	0	0	1	10
	Female	1	0	0	0	4	0	0	0	0	1	6
59	Male	1	1	2	1	12	0	0	0	0	2	19
	Female	0	0	3	0	7	0	0	0	0	1	11
Totals :	Male	1	1	3	2	19	0	0	0	0	3	29
	Female	1	0	3	0	11	0	0	0	0	2	17

* Unaged animals older than yearlings

Total Aged : 46

2007 HUNTING SEASON

SPECIES : Pronghorn

HERD UNIT : SOUTH ROCK SPRINGS

HUNT AREA	TYPE	SEASON DATES	LIMITATIONS
59	1	09/20-10/14	Limited quota; 175 licenses any antelope
	6	09/20-10/14	Limited quota; 125 licenses doe or fawn
112	1	09/20-10/14	Limited quota; 175 licenses any antelope
	6	09/20-10/14	Limited quota; 75 licenses doe or fawn

ARCHERY : 08/15

Refer to Section 3.

The proposed season this year will include 25 more Type 1 and Type 6 licenses in both hunt areas. This should result in a harvest of about 300 bucks, 170 does, and 20 fawns. The objective for this herd is 6500, and the proposed season should result in a population just over 6000.

In contrast to other pronghorn herds in the area, this herd had fairly good fawn survival in 2006 at 63:100 does, and buck ratios were stable. A stable population at the low end of objective will allow for good hunting opportunities and improved habitat conditions over time.

Line transects for population estimation were not flown in 2007, but are scheduled for 2008. A change in equipment and technique forced the delay. Other data and information helps to suggest that the model showing a slowly increasing population is reliable enough to allow for increased hunting opportunities in 2007.

LITERATURE CITED (No known studies):

Thomas, L., Laake, J.L., Strindberg, S., Marques, F.F.C., Buckland, S.T., Borchers, D.L., Anderson, D.R., Burnham, K.P., Hedley, S.L., Pollard, J.H., Bishop, J.R.B. and Marques, T.A. 2006. Distance 5.0. Release "x"¹. Research Unit for Wildlife Population Assessment, University of St. Andrews, UK. <http://www.ruwpa.st-and.ac.uk/distance/>

South Rock Springs Antelope 15 age classes
Data from 1984 to 2008

Simulation from 2003 to 2008

Age Class	Init Pop. Prop.		Presn		Mort%		Postsn Mort%		Effort Set 1		Effort Set 2	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
0	350.0	350.0	55.0	50.0	45.0	45.0	0.10	0.10	1.00	1.00		
1	50.0	60.0	3.0	2.0	7.0	5.0	0.20	1.00	1.00	1.00		
2	38.0	54.0	2.0	2.0	5.0	5.0	1.00	1.00	1.00	1.00		
3	26.0	42.0	2.0	2.0	5.0	5.0	1.00	1.00	1.00	1.00		
4	14.0	32.0	2.0	2.0	5.0	5.0	1.00	1.00	1.00	1.00		
5	8.0	24.0	2.0	2.0	5.0	5.0	1.00	1.00	1.00	1.00		
6	6.0	18.0	2.0	2.0	10.0	10.0	1.00	1.00	1.00	1.00		
7	4.0	14.0	2.0	2.0	20.0	15.0	1.00	1.00	1.00	1.00		
8	2.0	10.0	2.0	2.0	30.0	20.0	1.00	1.00	1.00	1.00		
9	0.0	6.0	2.0	2.0	50.0	25.0	1.00	1.00	1.00	1.00		
10	0.0	4.0	2.0	2.0	75.0	30.0	1.00	1.00	1.00	1.00		
11	0.0	2.0	2.0	2.0	100.0	40.0	1.00	1.00	1.00	1.00		
12	0.0	1.0	2.0	2.0	100.0	60.0	1.00	1.00	1.00	1.00		
13	0.0	0.0	2.0	2.0	100.0	80.0	1.00	1.00	1.00	1.00		
14	0.0	0.0	2.0	2.0	100.0	100.0	1.00	1.00	1.00	1.00		

Sum = 1115.0			Estimated Sum = 10400				Subadults: Ages 0 to 0					

Bio-Year	Preseason MSI	MSI Function is Linear			Postseason MSI	Effort & Wound Set Used
		Harvest Subadults#	Des. Pop Size in NA Males#	Females#		
1984	1.00	44	580	361	1.00	1
1985	1.00	25	375	169	1.40	1
1986	1.00	47	459	443	0.80	1
1987	1.00	63	463	370	1.00	1
1988	1.00	14	384	427	1.20	1
1989	1.00	40	512	673	0.70	1
1990	1.00	46	584	697	0.80	1
1991	1.00	57	539	436	1.10	1
1992	1.00	49	544	481	1.90	1
1993	1.00	53	333	454	0.80	1
1994	1.00	0	124	8	1.30	1
1995	1.00	2	119	0	1.00	1
1996	1.17	1	120	5	1.20	1
1997	1.54	0	134	0	1.00	1
1998	1.48	0	129	0	0.80	1
1999	1.67	0	168	4	0.70	1
2000	1.73	0	211	0	1.10	1
2001	1.62	0	196	0	1.00	1
2002	1.61	0	214	2	0.70	1
2003	1.60	0	214	6	0.85	1
2004	1.10	0	222	10	0.90	1
2005	1.13	7	199	84	1.00	1
2006	1.12	11	234	123	1.00	1
2007	1.10	20	300	170	1.00	1
2008	1.10	20	300	170	1.00	1

Set 1	Wounding Loss	10.0%	10.0%	10.0%	Yearling Male	10.0%
Set 2	Wounding Loss	10.0%	10.0%	10.0%	Yearling Male	10.0%

Bio- Year	Young/100 Fems Age 1 - 1	Young/100 Fems Age 2 - 14	Young/100 Fems Disabled	Sex Ratio: 50 : 50
1985	0.0	180.0	0.0	
1986	0.0	180.0	0.0	
1987	0.0	180.0	0.0	
1988	0.0	180.0	0.0	
1989	0.0	180.0	0.0	
1990	0.0	180.0	0.0	
1991	0.0	180.0	0.0	
1992	0.0	180.0	0.0	
1993	0.0	180.0	0.0	
1994	0.0	180.0	0.0	
1995	0.0	180.0	0.0	
1996	0.0	180.0	0.0	
1997	0.0	180.0	0.0	
1998	0.0	180.0	0.0	
1999	0.0	180.0	0.0	
2000	0.0	180.0	0.0	
2001	0.0	180.0	0.0	
2002	0.0	180.0	0.0	
2003	0.0	180.0	0.0	
2004	0.0	180.0	0.0	
2005	0.0	180.0	0.0	
2006	0.0	180.0	0.0	
2007	0.0	180.0	0.0	
2008	0.0	180.0	0.0	
2009	0.0	180.0	0.0	

Table 1. Population Size During Bio-Year for A412_2007_alt.GN1 02/27/2007 08:30 pm

Bio-Year	Start	Pre-Season	Post Season	End	%Growth
2003	10400	4784	4542	3923	-23.4
2004	7967	5543	5287	4342	8.5
2005	8641	5987	5668	4561	5.5
2006	9119	6332	5927	4743	3.0
2007	9395	6599	6060	4822	1.2
2008	9511	6691	6152	4888	1.2

Table 3. Harvest Mortality for A412_2007_alt.GN1 02/27/2007 08:30 pm

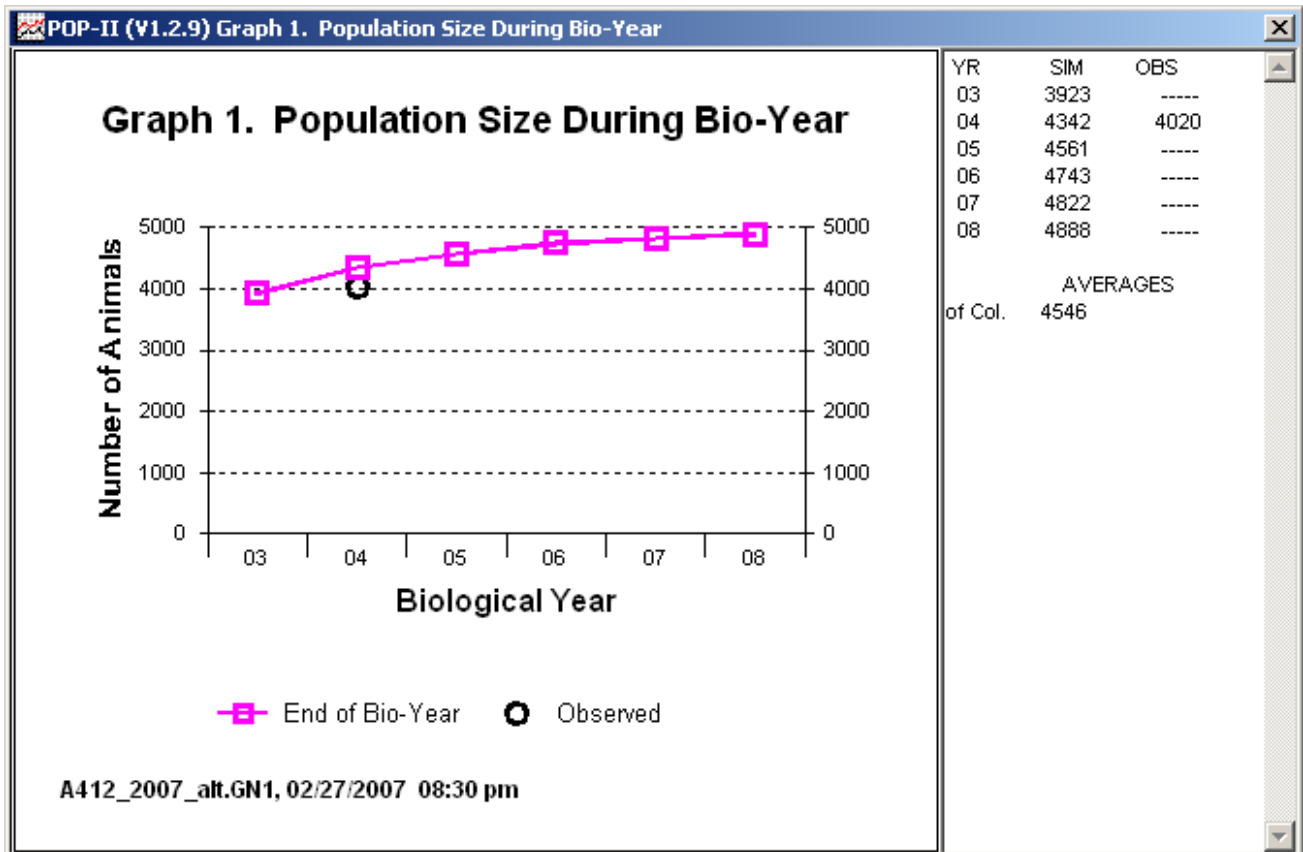
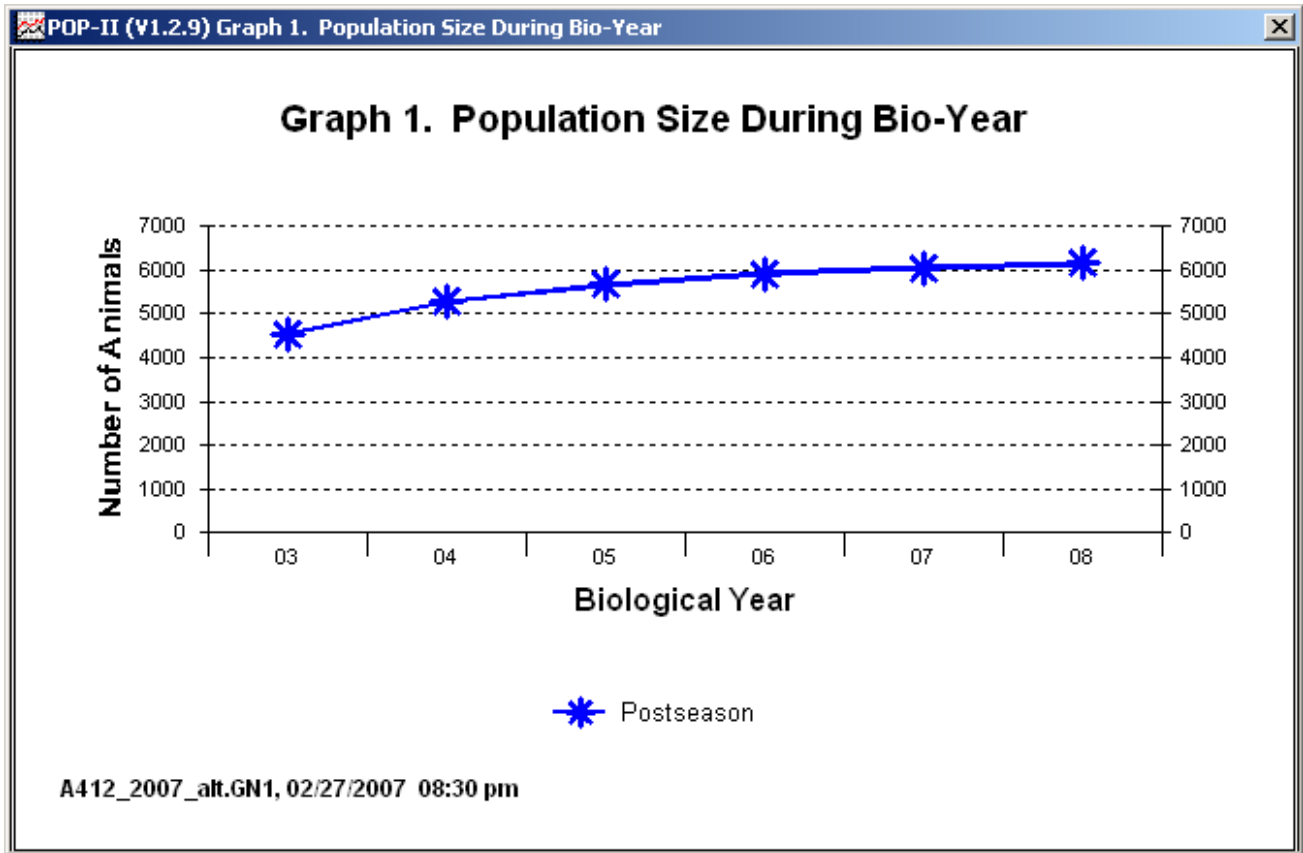
Bio-Year	Sub-Adults	Adult Males	Adult Females	Total	% of Pop
2003	0	214	6	220	4.6
2004	0	222	10	232	4.2
2005	7	199	84	290	4.8
2006	11	234	123	368	5.8
2007	20	300	170	490	7.4
2008	20	300	170	490	7.3

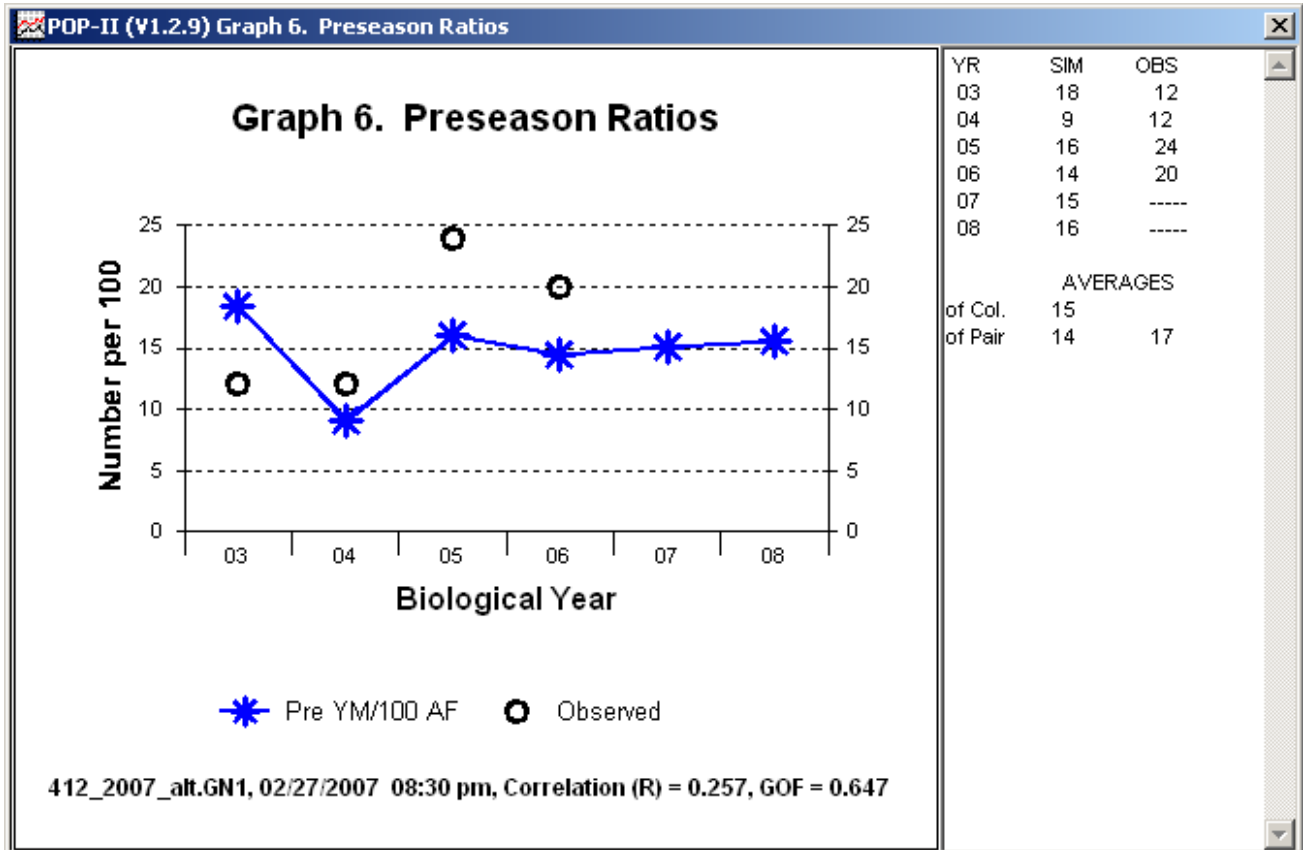
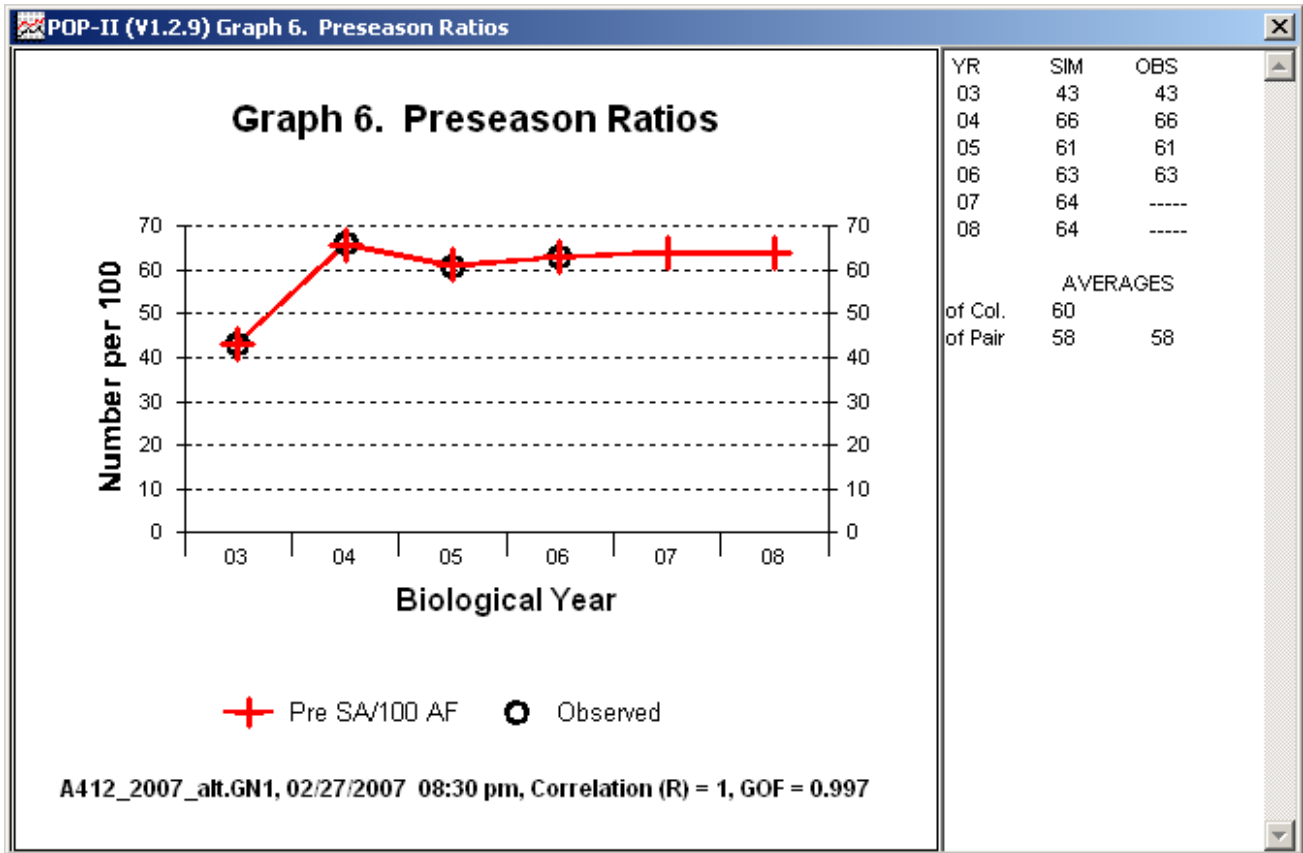
Table 4. Harvest Percentages for A412_2007_alt.GN1 02/27/2007 08:30 pm

Bio-Year	Sub-Adults	Adult Males	Adult Females	Total	Yearling Males
2003	0.0	16.1	0.2	4.60	9.1
2004	0.0	17.9	0.4	4.19	4.4
2005	0.4	14.5	2.9	4.84	9.1
2006	0.6	15.8	4.1	5.81	7.6
2007	1.0	19.1	5.5	7.43	7.7
2008	1.0	18.7	5.5	7.32	7.9

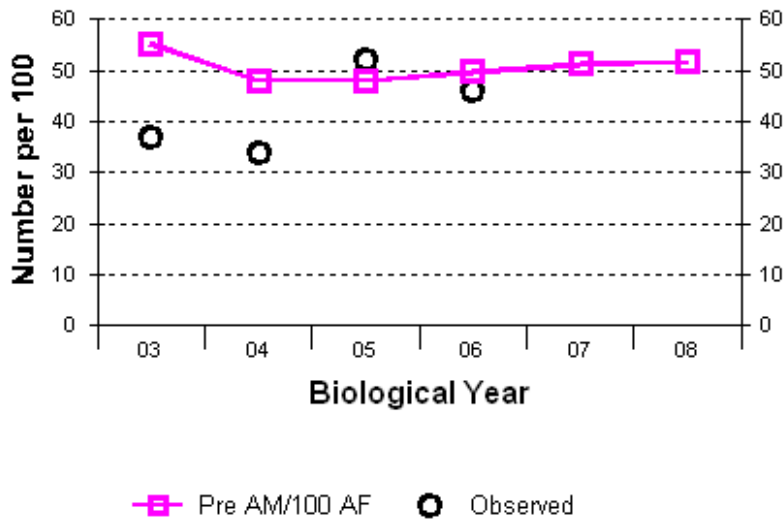
Table 6. Preseason Ratios for A412_2007_alt.GN1 02/27/2007 08:30 pm

Bio-Year	Subadults /100 1+F	2+ Males /100 1+F	Yr. Males /100 1+F	Ad Males /100 1+F
2003	43.3	36.7	18.4	55.1
2004	65.9	38.9	9.0	48.0
2005	61.1	32.0	16.0	48.0
2006	63.1	35.2	14.5	49.7
2007	64.2	36.1	15.1	51.2
2008	63.8	36.1	15.6	51.7





Graph 6. Preseason Ratios



YR	SIM	OBS
03	55	37
04	48	34
05	48	52
06	50	46
07	51	----
08	52	----
AVERAGES		
of Col.	51	
of Pair	50	42

I12_2007_alt.GN1, 02/27/2007 08:30 pm, Correlation (R) = -0.365, GOF = 0.722

Pronghorn - South Rock Springs
Herd Unit - 412
Hunt Areas 59, 112
Revised 7/1999

