2011 - JCR Evaluation Form

SPECIES: Pronghorn | PERIOD: 6/1/2011 - 5/31/2012

HERD: PR740 - CHEYENNE RIVER

HUNT AREAS: 4-9, 27, 29 | PREPARED BY: JOE SANDRINI

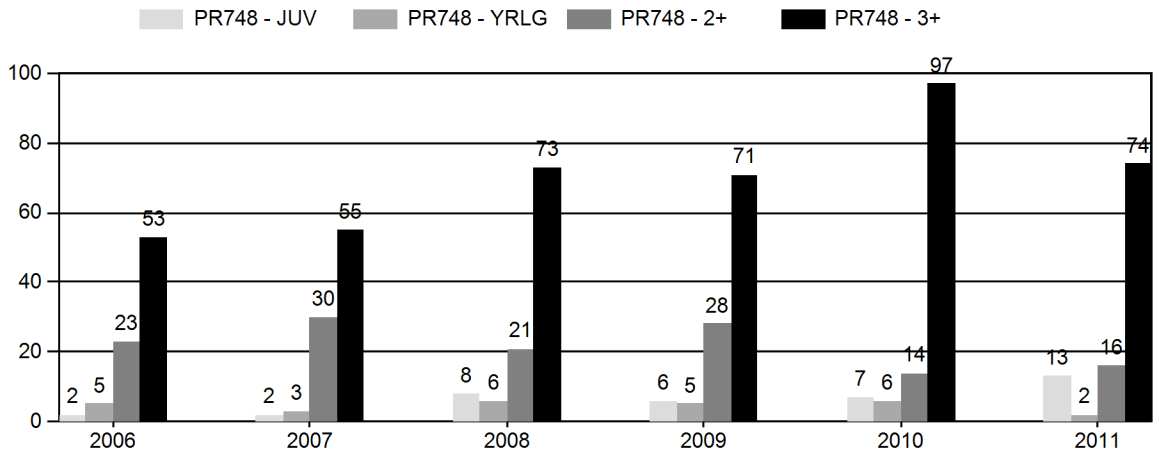
	2006 - 2010 Average	2011	2012 Proposed
Population:	47,996	34,253	33,078
Harvest:	6,085	5,268	4,335
Hunters:	6,265	5,722	4,650
Hunter Success:	97%	92%	93 %
Active Licenses:	6,909	6,248	5,115
Active License Percent:	88%	84%	85 %
Recreation Days:	21,191	19,045	15,600
Days Per Animal:	3.5	3.6	3.6
Males per 100 Females	59	50	
Juveniles per 100 Females	62	70	

Population Objective:	38,000
Management Strategy:	Recreational
Percent population is above (+) or below (-) objective:	-9.9%
Number of years population has been + or - objective in recent trend:	1
Model Date:	04/25/2012

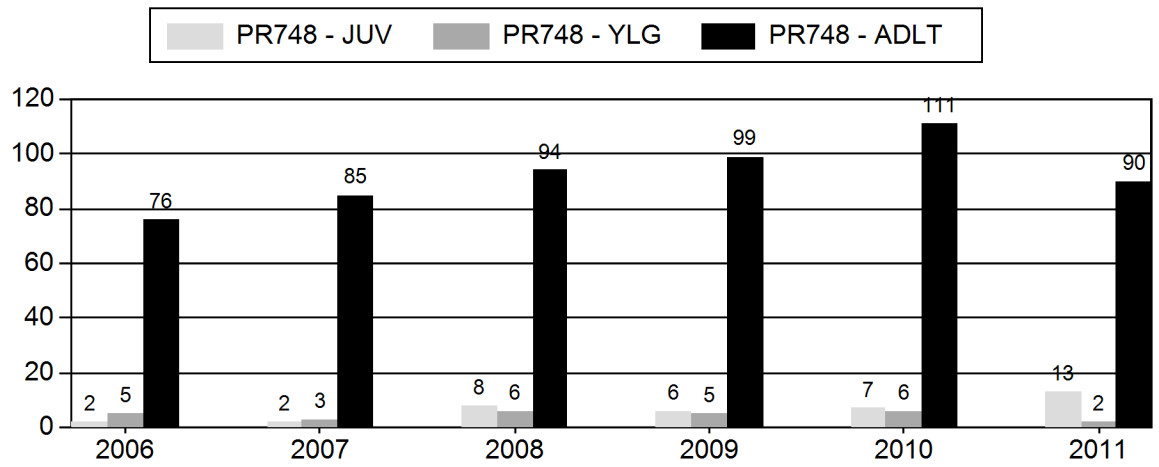
Proposed harvest rates (percent of pre-season estimate for each sex/age group):

	JCR Year	Proposed
Females Ó 1 year old:	11.2%	9.4%
Males Ó 1 year old:	28.9%	27.2%
Juveniles (< 1 year old):	2.9%	2.1%
Total:	13.22%	11.5%
Proposed change in post-season population:	-11.8%	-3.6%

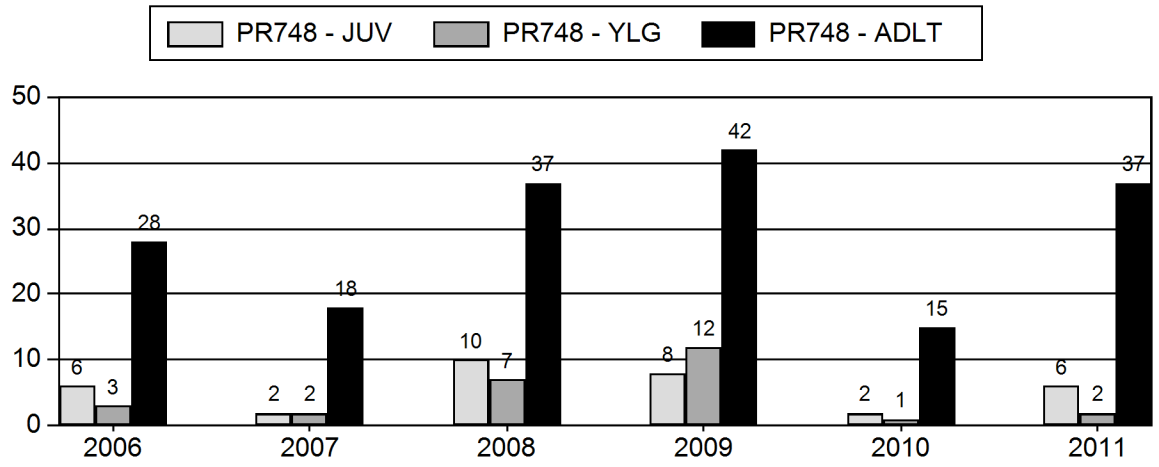
Age Structure of Field Checked Males



Age Structure Data (Field and Laboratory) - Male



Age Structure Data (Field and Laboratory) - Female



2006 - 2011 Preseason Classification Summary

for Pronghorn Herd PR748 - NORTH CONVERSE

		MALES				FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Pre Pop	Ylg	Adult	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Ylng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2006	36,609	230	265	495	22%	951	42%	802	36%	2,248	3,538	24	28	52	± 0	84	± 0	55
2007	38,547	343	442	785	27%	1,200	41%	974	33%	2,959	3,523	29	37	65	± 0	81	± 0	49
2008	37,843	289	488	777	27%	1,248	44%	832	29%	2,857	3,496	23	39	62	± 4	67	± 5	41
2009	39,360	312	740	1,052	29%	1,430	40%	1,101	31%	3,583	3,287	22	52	74	± 5	77	± 5	44
2010	38,310	373	807	1,180	32%	1,490	41%	999	27%	3,669	3,160	25	54	79	± 5	67	± 4	37
2011	29,240	93	480	573	27%	895	42%	683	32%	2,151	3,105	10	54	64	± 5	76	± 6	47

2011 HUNTING SEASONS

PR748 - NORTH CONVERSE

Hunt Area	Add'l Hunt Areas	Type	Quota	Season Dates	Limitations
25		ARCH		08/15 - 09/30	Refer to Section 3 of this Chapter
25		Type 1	1000	10/01 - 10/14	Any
25		Type 6	800	10/01 - 10/14	Reduced Price doe/fawn
26		ARCH		08/15 - 09/23	Refer to Section 3 of this Chapter
26		Type 1	1800	09/24 - 10/14	Any
26		Type 6	1500	09/24 - 10/14	Reduced Price doe/fawn

2011 PR748 Harvest by Hunt Area Summary

Area	Type	Active Lic/Htrs		Buck	Doe	Fawn	Total	Success		Days/Harvest	Days	Licenses Sold
2011												
25 ORMSBY												
	Type 1	835		776	0	0	776	92.90%		3	2296	907
	Type 6	465		0	341	29	370	79.60%		4.2	1566	517
Pooled Total		1219	(1300)*	776	341	29	1146	94.00%	(88.2%)*	3.4	3862	
Pooled Resident		520		423	46	0	469	90.20%		3.5	1651	
Pooled Nonresident		699		353	295	29	677	96.90%		3.3	2211	
26 BEAR CREEK												
	Type 1	1551		1387	30	0	1417	91.40%		3.2	4470	1601
	Type 6	1001		0	742	76	818	81.70%		4.3	3548	1213
Pooled Total		2444	(2552)*	1387	772	76	2235	91.40%	(87.6%)*	3.6	8018	
Pooled Resident		446		266	100	23	389	87.20%		4	1567	
Pooled Nonresident		1998		1121	672	53	1846	92.40%		3.5	6451	
2011 Hunt Area Total		3663	(3852)*	2163	1113	105	3381	92.30%	(87.8%)*	3.5	11880	4238
2011 Herd Total		3663	(3852)*	2163	1113	105	3381	92.30%	(87.8%)*	3.5	11880	4238

*Active Licenses

2006 - 2011 Harvest Age Structure

for Pronghorn Herd PR748 - NORTH CONVERSE

	Males										Females										Herd
Year	Juv	1	% 1 *	2	3 ^	% 3 **	Total Aged ++	Not Aged +++	Unk	Total Chkd	Juv	1	% 1 *	2	3 ^	% 3 **	Total Aged ++	Not Aged +++	Unk	Total Chkd	Total
2006	2	5	6%	23	53	65%	83	0	5	88	6	3	10%	6	22	71%	37	0	6	43	131
2007	2	3	3%	30	55	62%	90	0	1	91	2	2	10%	7	11	55%	22	0	0	22	113
2008	8	6	6%	21	48	64%	83	25	9	117	10	7	16%	12	16	46%	45	9	8	62	179
2009	6	5	5%	28	44	57%	83	27	2	112	8	12	22%	7	13	41%	40	22	12	74	186
2010	7	6	5%	14	55	73%	82	42	7	131	2	1	6%	4	1	17%	8	10	6	24	155
2011	13	2	2%	16	36	67%	67	38	3	108	6	2	5%	5	16	70%	29	16	8	53	161

* Percent of aged animals (including unaged adults but excluding juveniles) 1 1/2 years old

^ Number of animals three years old and older. Animals aged older than three (excluding unaged adults) are lumped into this three plus category

** Percent of aged animals (not including juveniles or unaged adults) three years old or older

++ includes juveniles

+++ Unaged adults - unaged animals older than yearlings

2012 HUNTING SEASON
NORTH CONVERSE PRONGHORN (PR748)

HUNT AREA	TYPE	SEASON DATES OPENS	CLOSES	LIMITATIONS
25	1	Oct. 1	Oct. 14	Limited quota; 1,000 licenses any antelope
	6	Oct. 1	Oct. 14	Limited quota; 800 licenses doe or fawn
26	1	Sept. 24	Oct. 14	Limited quota; 1,500 licenses any antelope
	6	Sept. 24	Oct. 14	Limited quota; 1,200 licenses doe or fawn

SUMMARY OF PROPOSED CHANGES IN LICENSE QUOTAS FROM 2011

Hunt Area	Type	Quota Change
25	1	
	6	
26	1	-300
	6	-300

MANAGEMENT EVALUATION

Population: The population objective for the North Converse Pronghorn Herd Unit is 28,000 pronghorn. The POP-II model is anchored to 3 Line Transect (LT) estimates, although the most recent LT survey was conducted in 2004. Since then, the population estimates for this herd have used the model only, with no end-of-year LT estimates to anchor the model. Considering preseason classification sample sizes have not met adequate sample sizes in 7 of the past 10 years, yet the model does track observed classification ratios reasonably well, the model is considered to be of "medium" quality. A line-transect survey for this herd is scheduled for the end of bio-year 2011. The 2010 postseason Mortality Severity Index (MSI) was elevated due to harsh winter conditions prevailing throughout the 2010-2011 winter, which resulted in above-normal winter losses and depressed fawn recruitment. The 2011 postseason population estimate is 25,507 pronghorn, which is 9% below objective.

Management Strategy: This herd is managed under the "recreational" management strategy to maintain preseason buck ratios between 30 and 59 bucks per 100 does. Hunting opportunity is limited due to the high prevalence of private land, resulting in restricted access and widespread outfitting. As a result, preseason buck ratios have exceeded management strategy maximums in 4 of the last 5 years.

Classifications: The 2011 preseason classifications resulted in observed ratios of 64 bucks and 76 fawns per 100 does. A total of 2,151 pronghorn were classified from the ground, which was not statistically adequate. Buck ratios generally remain above management strategy maximums in this herd unit, with the previous 5-year average equaling 66. Again, this is a function of under-subscription of licenses resulting from limited hunter access. The 2011 preseason fawn ratio was relatively high compared to adjacent herd units, which is typical for this herd. This herd has long experienced higher fawn productivity compared to adjacent herd units. For example, preseason fawn ratios in this herd have averaged 75 since 2006 while fawn ratios have averaged only 54 over the same time frame in the adjacent North Natrona herd unit. Reasons for this cannot be explained. Despite continual relatively high fawn productivity, this pronghorn herd has not grown at any higher rate than adjacent herds, with population trends mirroring those of adjacent herds over the past decade. Therefore, fawn recruitment is likely poorer in this herd, which may be a function of marginal winter range in the eastern portion of the herd unit. This area is predominantly mixed grass prairie with low canopy coverage of sagebrush. In years with significant snow cover, exposed shrub availability is often much more limited compared to central and western Wyoming. Given relatively harsh late winter/early spring weather conditions have prevailed over the past 4 years, with the 2010-2011 winter being severe, fawn recruitment has undoubtedly been depressed resulting in recent population decline. However, recent decline has not been precipitous, and many landowners have indicated that pronghorn numbers remain strong throughout the herd unit. This is corroborated by the model, as the 2011 postseason population estimate is only 9% below objective.

Harvest: For the 2011 season, an estimated 3,657 hunters harvested 2,163 bucks, 1,113 does, and 105 fawns for a total harvest of 3,381 pronghorn with a license success rate of 91% and an average days/animal of 3.5. This represents the highest harvest obtained in this herd unit since 1992. While buck harvest has been gradually increasing over the last several years, doe/fawn harvest has dramatically increased. The 2011 doe/fawn harvest (1,218) was 114% higher than the previous 10-year average of 568. This increase stems from higher license issuance and improved sales resulting from the ability of hunters to purchase up to four Type 6 licenses per person, the institution of internet-based license sales, and recent license fee reductions. However, there was an increase in unsold licenses in 2011 following substantial Type 1 and 6 quota increases in both hunt areas. In 2011, a total of 285 and 568 Type 1 and 6 licenses, respectively, remained unsold in the herd unit. Neither license type sold out in both Areas 25 and 26.

It is difficult to correlate harvest statistics with population trends in this herd unit due to under-subscription of licenses. It can therefore be difficult to achieve management objectives in this herd unit. Licenses are typically undersold in both Areas 25 and 26, with the exception of the 2010 season when all license types in both areas sold out. Overall harvest is a function of license sales, and ultimately hunter access, in this herd unit rather than license issuance and pronghorn availability. Days/animal and hunter success are very similar to adjacent herd units and are typically stable across years and are therefore poor indicators of population trend when considered alone.

A landowner meeting held in February 2012 resulted in all landowners present desiring to maintain the same number of pronghorn licenses in both hunt areas despite under-subscription in 2011. Landowner and field personnel perceptions indicate pronghorn densities are currently acceptable, although no habitat data is collected to support this claim. However, field personnel

repeatedly deal with a substantial number of non-resident hunters in both areas that purchase leftover licenses only to realize public land access is extremely limited. While the Department is not responsible for providing access and warns hunters regarding the high percentage of private land in this herd unit, this scenario leads to a great deal of frustration with the public, landowners, and Department field personnel. As such, the Department is proposing to decrease license issuance in Area 26 by 300 Type 1 and 300 Type 6 licenses to decrease the potential for frustrated license holders that cannot obtain sufficient access. This proposal will not affect drawing odds whatsoever as only 24% of Type 1 licenses (Areas 25 & 26 combined) were sold in the draw in 2011. The proposal to decrease Area 26 Type 6 licenses was also meant to decrease doe/fawn harvest slightly (considering under-subscription in 2011) given this herd is below objective. The proposed 2012 season will likely not affect harvest or license sales very much given the degree of under-subscription in 2011. In fact, proposed 2012 herd-unit wide license issuance will still be higher than at any other time since 1992 (except in 2011).

The proposed 2012 harvest will decrease this population slightly from current levels, and should be comprised of about 2,100 bucks, 1,150 does, and 110 fawns. This predicted harvest represents 12% of the estimated 2012 preseason population and 28%, 10%, and 1% of the estimated preseason buck, doe, and fawn population, respectively. The estimated 2012 postseason population is 23,302 pronghorn, which is 17% below objective.

Data Set: A748 2011JB long.GN1 06/22/2012 09:03 am Page 1

2003 North Converse Antelope Model
Data from 1999 to 2012 Simulation from 1999 to 2012

Age Class	Init Pop. Male	Prop. Female	Presn Male	Mort% Female	Postsn Mort% Male	Mort% Female	Effort Set 1 Male	Effort Set 1 Female	Effort Set 2 Male	Effort Set 2 Female
0	90.0	90.0	50.0	50.0	50.0	50.0	0.50	0.50	1.00	1.00
1	21.0	22.0	2.0	2.0	8.0	8.0	0.70	1.00	1.00	1.00
2	15.0	18.0	2.0	2.0	8.0	8.0	1.00	1.00	1.00	1.00
3	12.0	16.0	2.0	2.0	8.0	8.0	1.00	1.00	1.00	1.00
4	9.0	14.0	2.0	2.0	8.0	8.0	1.00	1.00	1.00	1.00
5	7.0	11.0	2.0	2.0	8.0	8.0	1.00	1.00	1.00	1.00
6	5.0	9.0	2.0	2.0	15.0	15.0	1.00	1.00	1.00	1.00
7	3.5	6.0	2.0	2.0	20.0	20.0	1.00	1.00	1.00	1.00
8	1.2	2.0	2.0	2.0	25.0	25.0	1.00	1.00	1.00	1.00
9	0.5	1.0	2.0	2.0	50.0	50.0	1.00	1.00	1.00	1.00
10	0.3	0.6	2.0	2.0	75.0	75.0	1.00	1.00	1.00	1.00
11	0.2	0.3	2.0	2.0	85.0	85.0	1.00	1.00	1.00	1.00
12	0.1	0.1	2.0	2.0	100.0	100.0	1.00	1.00	1.00	1.00

Sum = 354.8 Estimated Sum = 41000 Subadults: Ages 0 to 0

Data Set: A748 2011JB long.GN1 06/22/2012 09:03 am Page 2

MSI Function is Linear

Bio-Year	Preseason MSI	Harvest // Des. Pop Size in NA Subadults#	Males#	Females#	Postseason MSI	Effort & Wound Set Used
1999	1.10	40	1651	257	1.05	1
2000	0.83	35	1590	400	0.96	1
2001	1.00	38	1284	278	1.15	1
2002	0.89	18	1235	353	1.19	1
2003	0.94	66	1173	334	0.86	1
2004	0.80	61	1204	334	0.64	1
2005	0.91	85	1295	555	1.00	1
2006	0.88	44	1162	496	1.00	1
2007	0.90	84	1486	708	1.00	1
2008	1.10	99	1618	711	1.00	1
2009	1.00	36	1746	928	1.00	1
2010	1.10	135	1861	1188	1.32	1
2011	1.05	105	2163	1113	1.00	1
2012	1.00	110	2100	1150	1.00	1
Set 1 Wounding Loss		10.%	10.%	10.%	Yearling Male 10.%	
Set 1 Wounding Loss		10.%	10.%	10.%	Yearling Male 10.%	

Data Set: A748 2011JB long.GN1 06/22/2012 09:03 am Page 3

Bio-Year	Young/100 Fems Age 1 - 1	Young/100 Fems Age 2 - 12	Young/100 Fems Disabled	Sex Ratio: 50 : 50
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	

Bio-Year	Young/100 Fems Age 1 - 1	Young/100 Fems Age 2 - 12	Young/100 Fems Disabled	Sex Ratio: 50 : 50
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	
2010	0.0	180.0	0.0	
2011	0.0	180.0	0.0	
2012	0.0	180.0	0.0	
2013	0.0	180.0	0.0	

POP-II (V1.2.5) Simulation Output Tables for A748 2011JB long.GN1, 06/22/2012 09:03 am

Table 1. Population Size During Bio-Year for A748 2011JB long.GN1 06/22/2012 09:03 am

Bio-Year	Start	Pre-Season	Post Season	End	%Growth
1999	41000	29115	26973	20123	-8.0
2000	37702	30073	27845	21101	4.3
2001	39316	29786	28026	20311	-0.2
2002	39243	30457	28690	19844	-3.5
2003	37877	29028	27298	21356	5.0
2004	39784	32071	30312	25231	14.4
2005	45507	35822	33694	25304	3.4
2006	47069	37047	35175	26250	2.0
2007	48008	37744	35238	26473	0.8
2008	48408	35761	33091	25439	-2.0
2009	47420	35921	32940	24814	-3.7
2010	45675	33655	30153	20697	-13.3
2011	39598	29240	25521	19080	-9.8
2012	35701	27009	23313	17291	-8.2

Table 3. Harvest Mortality for A748 2011JB long.GN1 06/22/2012 09:03 am

Bio-Year	Sub-Adults	Adult Males	Adult Females	Total	% of Pop
1999	40	1651	257	1948	6.7
2000	35	1590	400	2025	6.7
2001	38	1284	278	1600	5.4
2002	18	1235	353	1606	5.3
2003	66	1173	334	1573	5.4
2004	61	1204	334	1599	5.0
2005	85	1295	555	1935	5.4
2006	44	1162	496	1702	4.6
2007	84	1486	708	2278	6.0
2008	99	1618	711	2428	6.8
2009	36	1746	928	2710	7.5
2010	135	1861	1188	3184	9.5
2011	105	2163	1113	3381	11.6
2012	110	2100	1150	3360	12.4

Table 4. Harvest Percentages for A748 2011JB long.GN1 06/22/2012 09:03 am

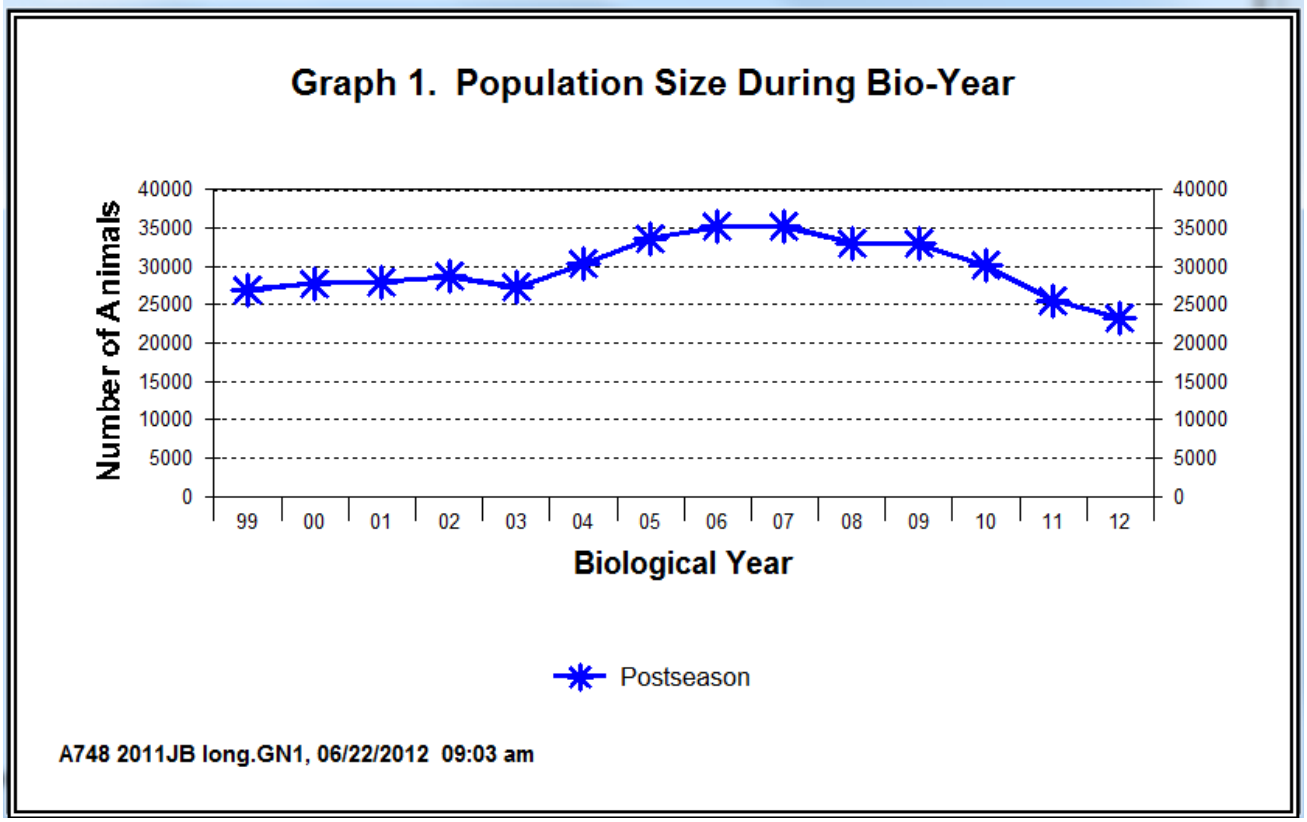
Bio-Year	Sub-Adults	Adult Males	Adult Females	Total	Yearling Males
1999	0.4	19.5	2.3	6.69	21.5
2000	0.3	19.9	3.4	6.73	20.7
2001	0.4	15.8	2.2	5.37	24.8
2002	0.2	16.0	2.9	5.27	18.5
2003	0.7	15.5	2.8	5.42	21.0
2004	0.6	14.5	2.6	4.99	24.9
2005	0.8	12.9	3.8	5.40	28.7
2006	0.4	11.3	3.4	4.59	19.9
2007	0.7	13.6	4.8	6.04	20.8
2008	1.0	14.6	4.8	6.79	19.9
2009	0.3	16.5	6.5	7.54	17.0
2010	1.4	18.1	8.5	9.46	19.8
2011	1.2	25.6	9.4	11.56	13.5
2012	1.3	28.1	10.2	12.44	22.3

POP-II (V1.2.5) Simulation Output Tables for A748 2011JB long.GN1, 06/22/2012 09:03 am

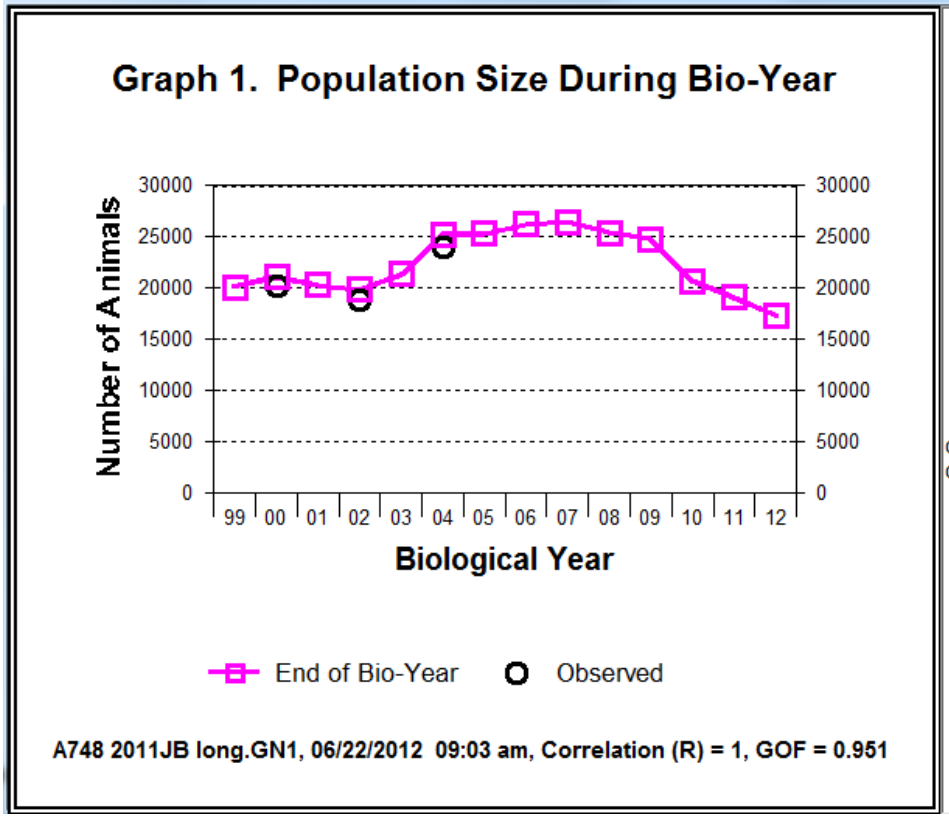
Table 6. Preseason Ratios for A748 2011JB long.GN1 06/22/2012 09:03 am

Bio-Year	Subadults /100 1+F	2+ Males /100 1+F	Yr. Males /100 1+F	Ad Males /100 1+F
1999	82.8	53.8	21.0	74.8
2000	87.3	49.5	18.5	68.0
2001	72.7	44.2	20.8	65.1
2002	86.0	47.7	15.5	63.2
2003	80.2	45.9	17.5	63.4
2004	86.8	44.1	20.9	65.0
2005	75.0	43.3	24.9	68.2
2006	83.7	52.1	18.5	70.6
2007	80.6	53.5	20.1	73.6
2008	66.6	55.1	19.6	74.7
2009	76.5	57.0	16.7	73.6
2010	67.0	54.1	19.1	73.2
2011	76.0	58.5	13.0	71.5
2012	74.1	47.3	19.4	66.7

POP-II (V1.2.5) Graph 1. Population Size During Bio-Year

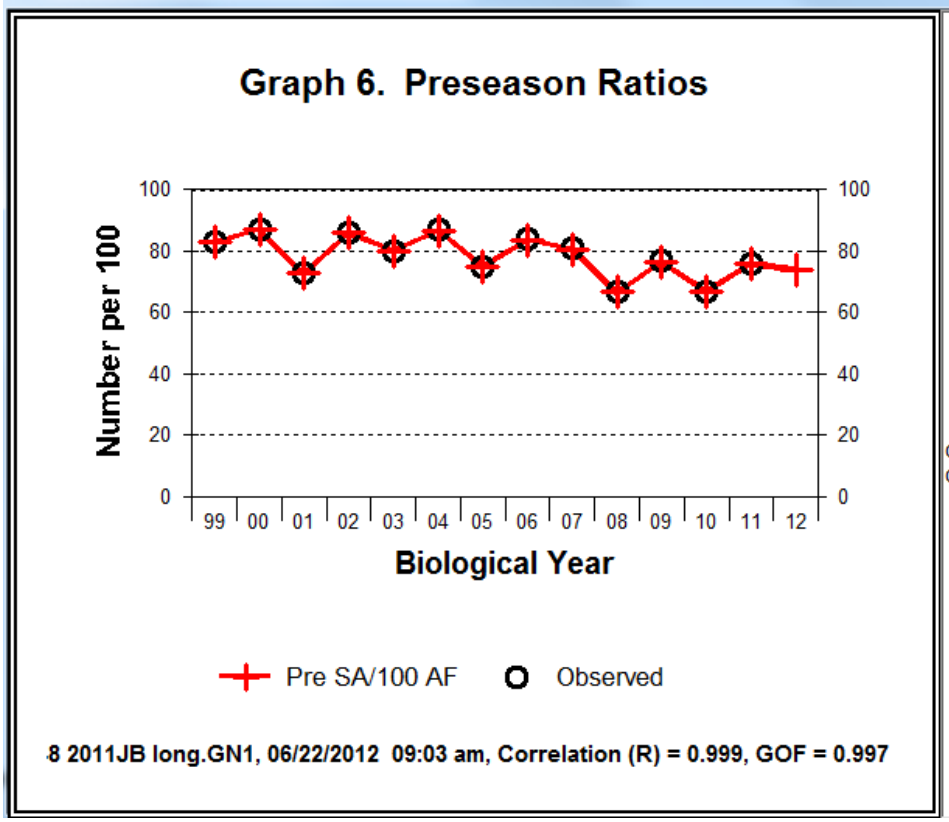


POP-II (V1.2.5) Graph 1. Population Size During Bio-Year



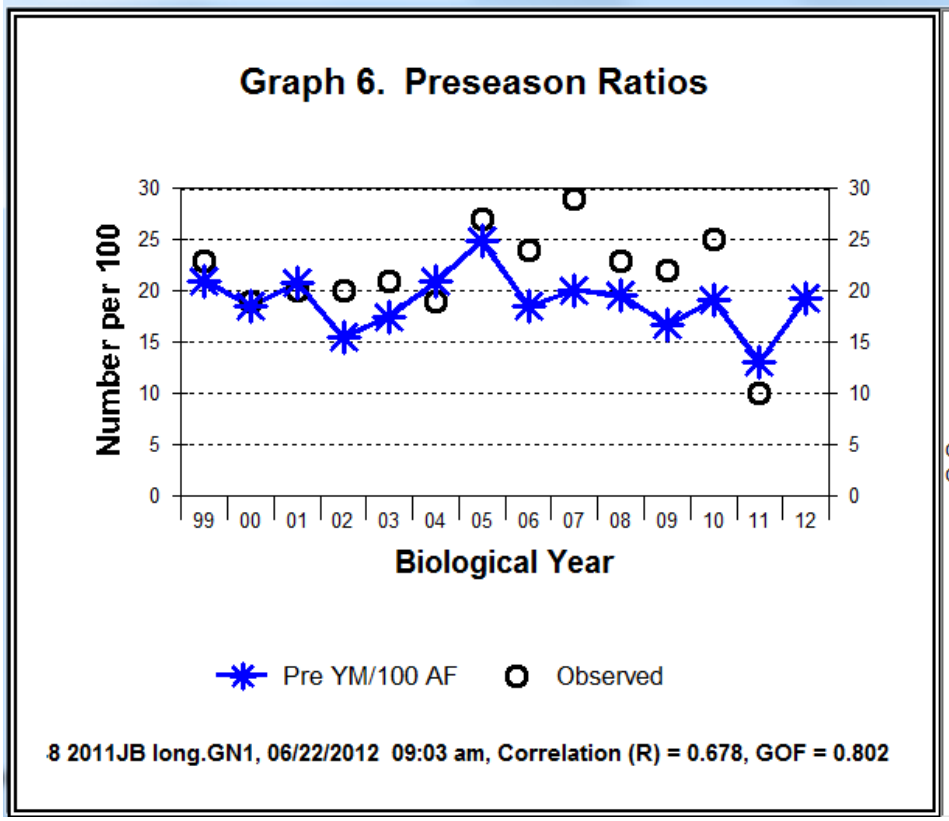
YR	SIM	OBS
99	20123	-----
00	21101	20200
01	20311	-----
02	19844	18907
03	21356	-----
04	25231	24000
05	25304	-----
06	26250	-----
07	26473	-----
08	25439	-----
09	24814	-----
10	20697	-----
11	19080	-----
12	17291	-----
	AVERAGES	
of Col.	22379	
of Pair	22058	21036

POP-II (V1.2.5) Graph 6. Preseason Ratios



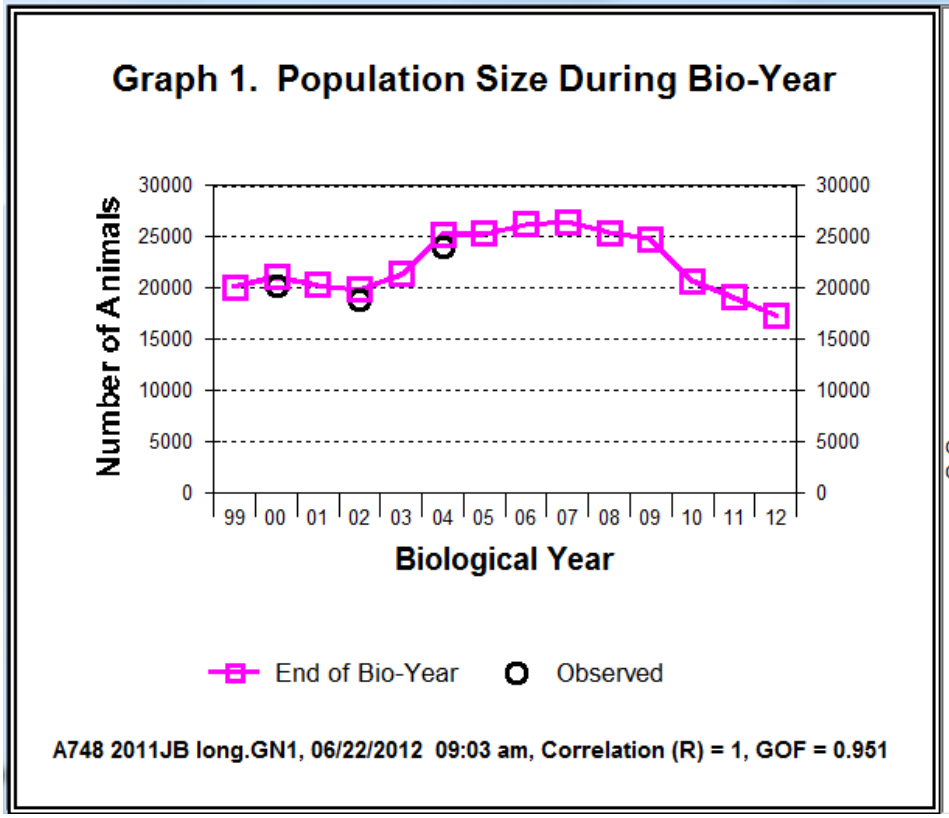
YR	SIM	OBS
99	83	83
00	87	87
01	73	73
02	86	86
03	80	80
04	87	87
05	75	75
06	84	84
07	81	81
08	67	67
09	77	77
10	67	67
11	76	76
12	74	-----
	AVERAGES	
of Col.	78	
of Pair	79	79

POP-II (V1.2.5) Graph 6. Preseason Ratios



YR	SIM	OBS
99	21	23
00	18	19
01	21	20
02	15	20
03	17	21
04	21	19
05	25	27
06	18	24
07	20	29
08	20	23
09	17	22
10	19	25
11	13	10
12	19	-----
	AVERAGES	
of Col.	19	
of Pair	19	22

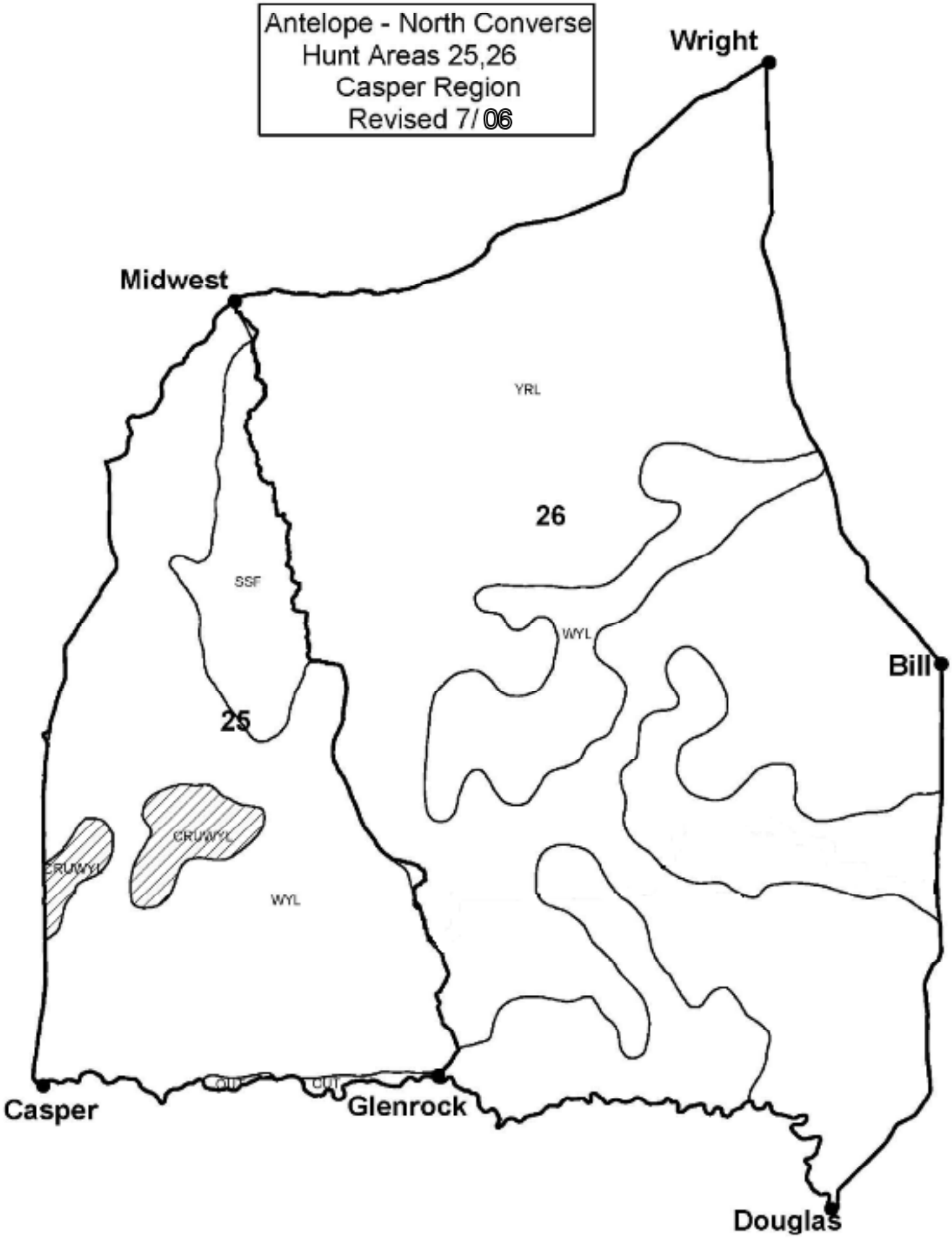
POP-II (V1.2.5) Graph 1. Population Size During Bio-Year



YR	SIM	OBS
99	20123	-----
00	21101	20200
01	20311	-----
02	19844	18907
03	21356	-----
04	25231	24000
05	25304	-----
06	26250	-----
07	26473	-----
08	25439	-----
09	24814	-----
10	20697	-----
11	19080	-----
12	17291	-----

AVERAGES

of Col.	22379	
of Pair	22058	21036


Antelope - North Converse
Hunt Areas 25,26
Casper Region
Revised 7/06
Wright
Midwest
YRL
26
SSF
WYL
Bill
25
CRUWYL
CRUWYL
WYL
CUT
CUT
Casper
Glenrock
Douglas