

2006 JOB COMPLETION REPORT

SPECIES : **EIk**
 HERD UNIT : **FALL CREEK**
 HERD UNIT # : **103**
 HUNT AREAS : **84,85**

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

	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>
1. PREHUNT 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

2. HARVEST					
Adult Males	221	352	395	366	323
Yearling Males	70	78	139	79	109
Total Males	291	430	534	445	432
Females	313	305	534	255	382
Juveniles	40	56	120	43	124
Totals	644	791	1,188	743	938

	#	%	#	%	#	%	#	%	#	%
3. AGE STRUCTURE OF FIELD CHECKED ANIMALS										
Juvenile Female	2	2	1	1	2	2	1	2	0	
Yearling Female	2	2	2	2	3	3	4	6	3	3
Adult Female	39	36	20	24	54	54	8	12	32	34
Juvenile Male	2	2	1	1	0		2	3	6	6
Yearling Male	18	17	4	5	4	4	3	5	7	8
Adult Male	45	42	57	67	37	37	48	73	45	48
Total Sample Size	108		85		100		66		93	

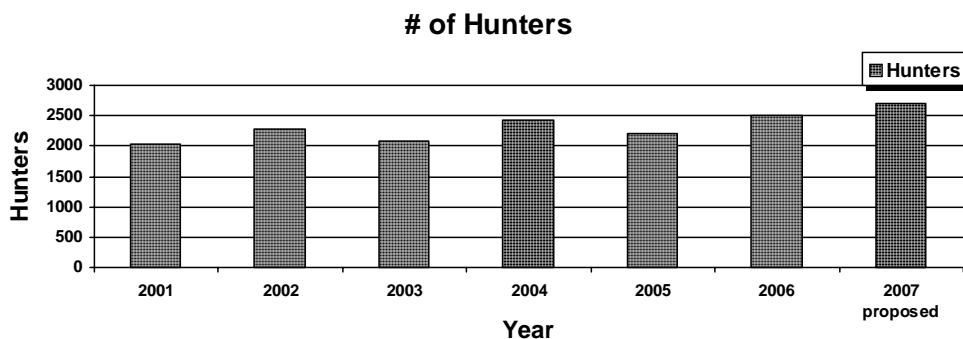
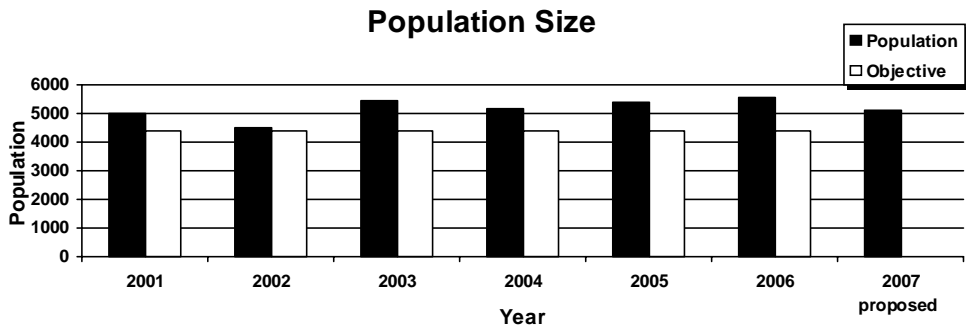
4. POSTHUNT SEX AND AGE RATIO COUNT (per 100 females)					
Juveniles	29	41	32	34	33
Males	18	22	20	23	24
Yearling Males	9	10	10	11	11
Mature Males	9	11	9	12	13
Total Sample Size	4,294	5,117	4,694	5,184	5,139
Adequate Sample Size	528	643	588	674	647

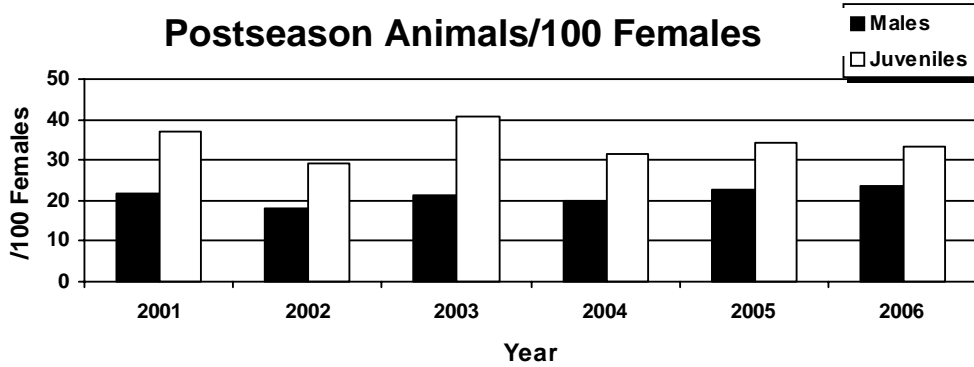
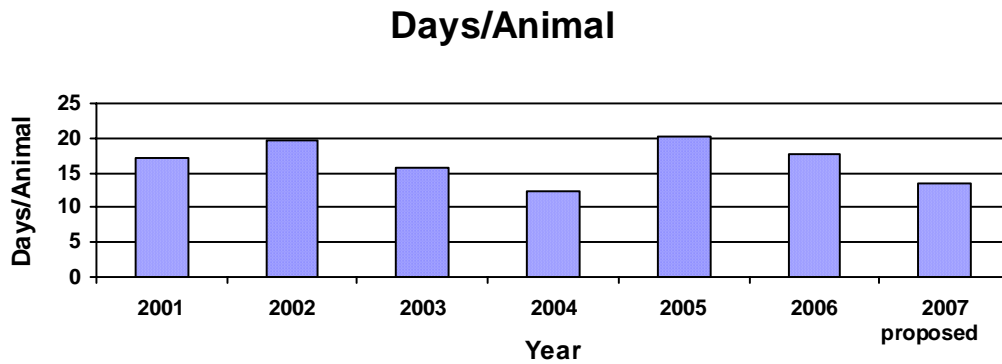
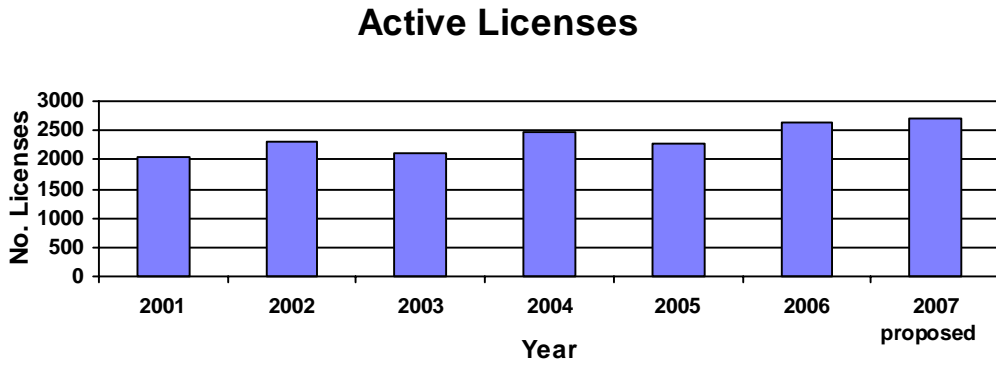
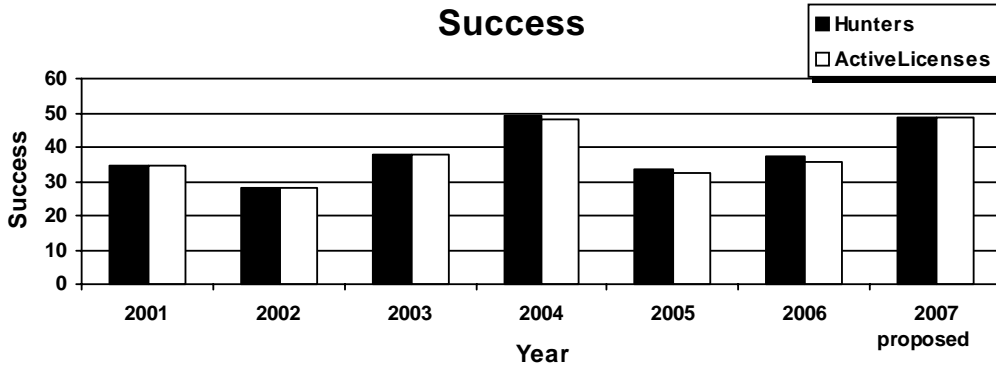
5. POPULATION TRENDS					
Trend Count Dates:	2/03	2/04	2/05	2/06	2/07
Trend Count:	4,386	5,168	4,694	5,185	5,321
Herd Model Pop Est:	4,503	5,447	5,150	5,369	5,528
Line Trans Pop Est:	0	0	0	0	0

SPECIES : Elk
 HERD UNIT : FALL CREEK
 YEAR : 2006

MODEL DATE : 5/4/07

	Averages 2001 - 2005	2006	Proposed 2007	Objective
Population (Est.)	5,090	5,528	5,086	4,400
Harvest	814	938	1,315	
Hunters	2,213	2,502	2,707	
Hunter Success	36.8%	37.5%	48.6%	
Active Licenses	2,237	2,624	2707	
Active Licenses Success	36.4%	35.7%	48.6%	
Recreation Days	13,385	16,472	17,903	
Days/Animal	16.4	17.6	13.6	





JCR **Season Setting** **Evaluation Form** (2004)
(check one)

Year: **2006** Species: **Elk** Herd Unit: **Fall Creek** Herd unit #: **103** Biologist: **Fralick**

Management strategy: Recreational Special

	5-year average	Current year	Proposed
Population:	5,090	5,528	5,086
Harvest:	814	938	1,315
Hunters:	2,213	2,502	2,707
% Success:	37%	37%	49%
Rec. Days:	13,385	16,472	17,903
Days/animal:	16.44	17.56	13.61

Population objective 4,400

Percent population is above (+) or below (-) objective: 26%

Number of years population has been + or - objective in recent trend: 11

Population estimates tracking with trend counts or line transect results? Yes

Population trend (incr., stable, decr.): Increasing

Most recent classification ratio (j/100f/m): 33/100/24

(This classification is: at or above adequate or well below adequate)

Ratio trends (incr., stable, decr.): m/100f: Increasing

J/100f: Stable

Most recent 5-year average classification ratio (j/100f/m): 34/100/21

(Generally, these classifications have been: at or above adequate or well below adequate)

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

	JCR Year	Proposed
Females ≥ 1 year old:	10.00%	23.00%
Males ≥ 1 year old:	53.00%	51.00%
Juveniles (< 1 year old):	10.00%	6.00%
Total:	14.00%	20.00%

Projected change in post-season population: (+ or -)5.00% (+ or -) 8.00%

Moose: Average age of male harvest:

Rationale provided for season proposals or management data that appear unusual?

SEX AND AGE COUNT REPORT

SPECIES : **EIK**

HERD UNIT : **FALL CREEK**

YEAR : **2006**

PREPARED BY : **GARY FRALICK**

POSTHUNT CLASSIFICATION DATES : 2/07

Hunt Area	----- MALES -----			Females	Juveniles	Total
	Yearlings	Adults	Total			
84	275	354	629	2,601	851	4,081
85	72	72	144	673	241	1,058
Total Sample	347	426	773	3,274	1,092	5,139
Adequate Sample			100	424	141	665
Precision	@	90	C.L.			

Juveniles / 100 Females : 33 ± 1
Total Males / 100 Females : 24 ± 0
Adult Males / 100 Females : 13
Yearlings / 100 Females : 11

2006 ELK HUNTING SEASONS

FALL CREEK HERD UNIT - E103

<u>HUNT AREA</u>	<u>TYPE</u>	<u>OPENS</u>	<u>CLOSES</u>	<u>LIMITATIONS</u>
84		Sept. 26	Oct. 31	General License; any elk
	1	Nov. 1	Jan. 31	Limited Quota; 20 licenses any elk, valid only in that portion of Area 84 on private land west of U.S. Highway 191 and north and east of the Snake River starting at the South Park bridge
	2	Sept. 10	Nov. 8	Limited Quota; 50 licenses antlerless elk
	6	Sept. 10	Nov. 12	Limited Quota; 400 licenses cow or calf
		Nov. 13	Jan. 31	Limited Quota; Unused Area 84 Type 6 licenses Antlerless elk, valid only in that portion of Area 84 on private land west of U.S. Highway 191 and north and east of the Snake River starting at the South Park bridge
85		Sept. 26	Oct. 31	General License; any elk
	1	Nov. 1	Jan. 31	Limited Quota; 20 licenses any elk, valid only in that portion of Area 85 on private land north of Butler Creek
	2	Sept. 10	Nov. 8	Limited Quota; 50 licenses antlerless elk
	6	Sept. 10	Nov. 12	Limited Quota; 400 licenses cow or calf valid only in that portion of Area 85 upstream from Wolf Creek within the Snake River drainage
		Nov. 13	Jan. 31	Limited Quota; Unused Area 85 Type 6 licenses Antlerless elk, valid only in that portion of Area 85 on private land north of Butler Creek
84,85		Sept. 1	Sept. 25	General License; Archery only, Refer to Section 4

HARVEST REPORT

SPECIES **Elk**

HERD UNIT : **FALL CREEK**

YEAR : **2006**

PERIOD COVERED : **9/1/06 - 01/31/07**

Prepared By : **GARY FRALICK**

Hunt Area	License Type	L.Q. Licenses	No. Hunters	Ylg. Males	Adult Males	Females	Juveniles	Total	Percent Success	Days/Animal Taken
	Resident	0	1,060	46	96	149	39	330	31.1	20.4
84	Non-Resident	0	393	23	85	51	29	188	47.8	11.0
	Total	0	1,453 (1501)*	69	181	200	68	518	35.7 (34.5)*	17.0
	Resident	0	859	17	84	122	43	266	31.0	22.9
85	Non-Resident	0	327	23	58	60	13	154	47.1	10.3
	Total	0	1,186 (1272)*	40	142	182	56	420	35.4 (33.0)*	18.3
	Resident	0	1,810	63	180	271	82	596	32.9	21.5
Total	Non-Resident	0	692	46	143	111	42	342	49.4	10.7
	Total	0	2,502 (2624)*	109	323	382	124	938	37.5 (35.7)*	17.6

* Active Licenses

2006 AGE STRUCTURE OF FIELD CHECKED ANIMALS

SPECIES : Elk
 HERD UNIT : FALL CREEK

PREPARED BY : GARY FRALICK

Hunt Area	Sex	Young	1+	2+	3+	4+	5+	6+	7+	Older	Unaged Adults *	Total
84	Male	4	6	34	0	0	0	0	0	0	0	44
	Female	0	3	24	0	0	0	0	0	0	0	27
85	Male	2	1	11	0	0	0	0	0	0	0	14
	Female	0	0	8	0	0	0	0	0	0	0	8
Totals :	Male	6	7	45	0	0	0	0	0	0	0	58
	Female	0	3	32	0	0	0	0	0	0	0	35

* Unaged animals older than yearlings

Total Aged : 93

TREND COUNT REPORT

YEAR : 2006

SPECIES : Elk

HERD UNIT : FALL CREEK

METHOD : Helicopter, ground

DATE : 2/07

CONDITIONS : Good snow cover and visibility

OBSERVERS : Fralick, Fuchs, District 1

Hunt Area	Count Block	Flight H : M	Number Counted	Photo	Comments
84	0	0 : 0	1,626		Horse Creek Feedground
84	0	0 : 0	1,119		Camp Creek Feedground
84	0	0 : 0	1,249		South Park Feedground
84	0	0 : 0	87		Native Range
85	0	0 : 0	1,016		Dog Creek Feedground
85	0	0 : 0	224		Native Range
Totals		0 : 0	5,321		

SPECIES: Elk
DAU NAME: Fall Creek (E103)
HUNT AREAS: 84,85
TITLE: 2006 Fall Creek Elk JCR

BACKGROUND

The Fall Creek Herd Unit encompasses 686.1 miles of habitat in Teton County and small portions of Sublette and Lincoln counties. The U.S. Forest Service manages 91% of the land in this herd unit. While private lands account for only 6% of the surface area, several crucial winter ranges exist on or near private holdings, creating special management challenges. There are four feedgrounds (South Park, Horse Creek, Camp Creek, and Dog Creek) which support a much larger elk herd than could be sustained solely on native winter range. This herd has experienced a significant loss of historic winter range in the Jackson Hole area due to human developments since the early 1900s.

This herd has traditionally been popular for "backcountry" elk hunting by both residents and nonresidents. Access into the hunt areas is primarily limited to hiking and horseback. There are few roads in most of the herd unit because much of the area is designated as wilderness or wilderness study areas. The Cliff Creek drainage and the lower Granite Creek drainage in Hunt Area 84 and the Munger Mountain-Mosquito Creek area in Hunt Area 85 are accessible by graveled roads, but there is limited vehicle access in the remainder of the herd unit.

In 1992, the Department implemented a shorter general "any elk" hunting season for 36 days to respond to chronically low mature bull: cow ratios and low total and mature bull numbers observed in the posthunt population. The antlered bull season was reduced by 16 days, by moving the opening date from September 10 to September 26 in 1992. The length of the bull elk season was reduced by opening the season later to reduce hunting during the rut and closing the hunting season for bull elk on October 31 to preclude late hunts on winter ranges. Rugged terrain and the absence of an extensive road network of national forest system lands has contributed to the recruitment of bulls into the older age cohorts of this population with these shorter hunting seasons. Since 1992 the number of mature bulls observed during postseason surveys has increased, which is likely a result of the shorter 36-day hunting season for antlered elk.

Since 1989, hunting seasons have been designed to maintain this herd near the postseason population objective of 4,400 elk. Over the last six years, however, this herd has exhibited the ability to increase to levels well above the population objective. This usually occurs when weather conditions during the October portion of the hunting season remain hot and dry with little snow accumulations in the backcountry to force elk to lower elevations. During years when the desired population reduction does occur, it is because of the deeper snow accumulations described above. Population reductions are achieved through a combination of general license any/antlered elk hunting and the issuance of limited quota antlerless elk licenses that are typically valid into November. A late hunt has been place since 1997 in an attempt to reduce chronic elk damage on private property along the Snake River bottomlands in Area 84.

A special management concern has developed over the last six years in the Snake River Bottomlands between Wilson and South Park. Elk numbers have been increasing on private lands in this area. Current elk numbers are estimated between 250-400, which reside on private lands along the Snake River. Since the lands are privately owned, key landowners have been reluctant to allow hunting on their property in order to harvest some of these elk or disperse them off the property, and perhaps into areas where hunters may have access to them. The issues that continue to develop with this situation are elk numbers will likely continue to increase with little or no opportunity to design a hunting season to harvest these elk and the potential for damages to private property and commingling with livestock may develop. Currently, most if not all of the elk that summer in these areas move to the South Park elk feedground in winter. This creates another issue in that several hundred elk are being fed on a Department-operated feedground that are largely unavailable for harvest by the general hunting public because they reside on private property where landowners do not provide hunting opportunities.

MANAGEMENT EVALUATION

Classification Data

2004 Trend Count and Herd Composition Survey

During 2004 posthunt trend counts, 4694 elk were observed on Department-operated feedgrounds and native winter ranges (Appendix B). Ninety one percent (91%) of the elk counted during the trend count were documented on feedgrounds. Only 401 elk (9% of the total trend count) were documented using native winter ranges.

A total of 3733 elk, or 79% of the herd unit total, were documented in Hunt Area 84. In Hunt Area 85, a total of 961 elk (21%) were observed. The number of elk documented on native winter ranges tallied 401 elk. A total of 221 and 180 elk were counted on winter ranges in Hunt Areas 84 and 85, respectively.

The observed bull:100 cow ratios were 9 mature bulls:100 cows and 10 yearling bulls:100 cows. The total bull:100 cow ratio decreased only slightly from the 21 bulls:100 cows in 2003. A total of 615 antlered elk were tallied during postseason herd composition surveys. This is the 4th highest number of antlered elk observed in this herd unit in over 25 years. During the four-year period since 2001, three of the four highest total antlered elk counts have occurred.

A total of 978 calves were classified in 2004. This is the 4th highest tally of calves in the management history of the elk herd. The highest number of calves (n=1,281 elk) occurred in 2003. In 2004, the observed calf:100 cow ratio was 31, which is a decline from the 40 calves:100 cows observed in 2003. The 2004 calf:cow ratio is slightly below the 5-year average of 33 calves:100 cows. The four feedgrounds tallied calf:100 cow ratios of: Camp Creek/Horse Creek: 27 calves:100 cows; South Park: 29 calves:100 cows; and Dog Creek: 31 calves:100 cows.

2005 Trend Count and Herd Composition Survey

During 2005 posthunt trend counts, 5185 elk were observed on Department-operated feedgrounds and native winter ranges (Appendix B). Ninety six percent (96%) of the elk observed during the current year's trend count were documented on feedgrounds. Only 192 elk (4%) were documented using native winter ranges.

A total of 3972 elk, or 77% of the herd unit total, were documented in Hunt Area 84. In Hunt Area 85, a total of 1213 elk (23%) were observed. The number of elk documented on native winter ranges tallied 192. A total of 86 and 106 elk were counted on winter ranges in Hunt Areas 84 and 85, respectively. In Hunt Area 84, 10 elk were observed in the area from Bailey Creek to Palmer Creek, while 66 elk were found on native ranges from Leeks Canyon south to Poison Creek. In Hunt Area 85, a total of nine elk were observed in Snake River Canyon between Dog Creek and Sheep Gulch. The highest number (n=88 elk) of elk on native range in Area 85 was noted on the south portion of Munger Mountain, from Bonnetts Canyon to Fall Creek.

The observed bull:100 cow ratios were 12 mature bulls:100 cows and 11 yearling bulls:100 cows. The total bull:100 cow ratio was the highest since 1995. A total of 753 antlered elk were tallied during postseason surveys. This is the highest number of antlered elk ever observed in this herd unit. During the five-year period since 2001, three of the five highest total antlered elk counts have occurred.

A total of 1,127 calves were classified in 2005. This is the 3rd highest tally of calves ever recorded in this elk herd. The highest number of calves (n=1,281) counted occurred in 2003. In 2005, the observed calf:100 cow ratio was 34, which is an increase from the 31 calves:100 cows ratio noted in 2004. The 5-year average calf:100 cow ratio is 34:100. The four feedgrounds tallied calf:100 cow ratios of: Camp Creek/Horse Creek: 32 calves:100 cows, South Park: 33 calves:100 cows, and Dog Creek: 37 calves:100 cows.

2006 Trend Count and Herd Composition Survey

During 2006 posthunt trend counts, 5321 elk were observed on Department-operated feedgrounds and native winter ranges (Appendix B). The 2006 trend count is the 3rd year since 2003 that more than 5100 elk have been observed

during these annual surveys. Ninety four percent (94%) of the elk observed during the current year's trend count were documented on feedgrounds.

A total of 4081 elk, or 77% of the herd unit total, were documented in Hunt Area 84. In Hunt Area 85, a total of 1240 elk (23%) were observed. The number of elk documented on native winter ranges tallied 311 elk, or only 6% of the trend count. A total of 87 and 224 elk were counted on winter ranges in Hunt Areas 84 and 85, respectively.

The observed bull:100 cow ratios were 13 mature bulls:100 cows and 11 yearling bulls:100 cows. The total bull:100 cow ratio of 24 total bulls:100 cows was the highest ever recorded in the Fall Creek Elk Herd. The total number of antlered elk (n=773) observed during the 2006 trend count attained an all-time high. During the six-year period since 2001, four of the six highest total antlered elk counts have occurred.

The observed calf:cow ratio was 33 calves:100 cows in 2006. A total of 1,092 calves were classified in 2006, which is a minimal decrease from the 1,127 calves observed in 2005. This is the 4th highest tally of calves ever recorded in this elk herd. The highest number of calves (n=1,281) counted was in 2003. In 2001, a total of 1136 calves were counted in this herd. The 5-year average (2001-2005) calf:100 cow ratio is 34:100. The four feedgrounds tallied calf:100 cow ratios of: Camp Creek/Horse Creek: 29 calves:100 cows, South Park: 38 calves:100 cows, and Dog Creek: 35 calves:100 cows.

WEATHER DATA

Weather data for 2004-2006 is provided in Appendix A. It is recognized that the weather conditions may not be a valid indicator of actual winter elk mortality because approximately 93%-96% of all elk counted during annual trend counts were observed on Department-operated feedgrounds. Winter mortality is reduced to negligible levels because of the supplemental feeding operation in this elk herd.

In general, spring through fall moisture regimes has been typical of droughty conditions. Winter snow accumulations have been generally below long-term average, except during the 2004-2005 winter when snow accumulations exceeded the average.

Modeling

The population model was updated during the 2004-2006 period with herd composition and harvest data. The POP2 model, Version 1.25 was utilized to generate population estimates for the seventh consecutive year. The 2004-2006 posthunt population estimates were 5150, 5369, and 5528 elk, respectively. The population model was updated with standardized statewide parameters in 2003. These model parameters enabled all elk populations to be modeled using criteria that were based on peer-reviewed research.

The current model appears to mimic the herd age/sex composition and numbers of elk that managers are observing during annual trend counts. Consequently, the model is likely depicting a reasonable representation of the herd dynamics.

HARVEST STATISTICS

2004 Hunting Season

The 2004 hunting season was designed to reduce the population because of rapid growth observed in 2002-2003. A total of 5100 elk were counted during the 2003 trend count. The high number of elk counted in 2003 required a season in 2004 that would affect an immediate decrease in the population. Consequently, the general license, antlerless elk hunting seasons were extended from November 1 to November 12 for the first time since 1997. The extended general seasons into November in concert with 250 Type 6, additional cow/calf licenses achieved the desired result of reducing the population closer to objective.

A total of 1188 elk were harvested in 2004 according to the harvest survey. The 2004 harvest was a dramatic increase above 2002 and 2003 levels. A total of 534 cows were killed in 2004. Sixty seven percent (67%, n=367

elk) of the adult cow harvest was by general license hunters. Limited quota antlerless elk and additional cow/calf license holders tallied 31% (n=167 cows). In 2004, a total of 534 antlered elk (395 bulls, 139 spikes) were taken.

The primary reason that the 2004 elk harvest exceeded 1100 elk was due to October weather conditions. A series of October weather events deposited snow at higher elevations in sufficient amount to force elk to migrate out of the roadless backcountry to locations that made them more accessible to hunters. Hunters capitalized on the higher concentrations of elk around the herd unit's five feedgrounds to effectively harvest antlerless elk in numbers that resulted in the desired population reduction.

2005 Hunting Season

The 2005 hunting seasons were designed to continue to reduce the elk population. A combination of General License "any" elk hunting seasons and 350 Limited Quota Type 2 and Type 6 antlerless elk licenses were offered in 2005. Due to hot, dry fall hunting conditions, harvest objectives were not met.

A total of 743 elk were harvested in 2005 according to the harvest survey. This was a significant decline from the 1188 elk harvested in 2004. A total of 255 cows were killed in 2005 with approximately 74% (n=190) of the cow harvest recorded by general license holders. Limited quota antlerless elk and additional cow/calf license holders tallied only 26% (n=65) of the cow harvest. Antlered elk harvest declined to 445 in 2005. Branch-antlered bull elk comprised 82% (n=366) of the 2005 male harvest, while yearling bulls tallied 18% (n=79) of the total antlered harvest.

2006 Hunting Season

A total of 938 elk were harvested in 2006. This is was a moderate increase from the 743 elk taken in the 2005 hunt. The number of elk taken in 2006 was insufficient to suppress population growth. Antlered and antlerless harvest comprised 46% (n=432) and 54% (n=506), respectively. Hunter success was estimated at 37%, while hunters needed on average about 18 days to harvest an elk.

Hunt Areas 84 and 85 tallied 52% (n=389 elk) and 48% (n=354 elk) of the harvest, respectively. More antlered elk (n=139 bulls) were harvested in Area 84 than Area 85 (n=113 bulls). Hunters recorded about the same success rates in both hunt areas. Area 84 hunters had a 30% success in 2006, while Area 85 hunters tallied 34% success.

Limited quota antlerless elk hunters accounted for 258 cows and calves or 51% of the total antlerless harvest, in 2006. General license holders killed 248 cows and calves, which accounted for 49% of the antlerless harvest. Hunt Area 84 hunters harvested 256 cows and calves, or 53% of all antlerless elk harvested in this herd. Area 85 hunters accounted for the remaining 47% (n=238 elk) of the herd unit's antlerless elk harvest. Nonresident elk hunters harvested 189 antlered elk, or 44% of all antlered elk yet represented only 28% of the total hunter numbers.

Field Checks

2004 Field Checks

A total of 100 elk were checked in the field in 2004. The number of elk checked represents about 8% of the total estimated harvest. The 2004 field checks comprised 41% males (n=41 elk) and 59% females (n=59 elk). A total of 41 antlered elk were checked and of these, yearling bulls tallied 10% (n=4) of the antlered field checks, while 2+ bulls (n=37) comprised 90%.

A total of seventy-three elk (n=73), or 73% of the herd unit total, were checked in Hunt Area 84. A total of 30 antlered elk were field checked in this hunt area. Department personnel examined a total of 43 antlerless elk in 2004.

In Hunt Area 85, a total of 27 elk, or 24% of the herd unit's field checked elk were examined. Forty one percent (41%, n=11) were antlered elk and 59% (n=16) were antlerless elk. A total of nine adult bulls and two yearling bulls were checked in 2004. Adult cows 2+ years old comprised 94% of the total antlerless elk checked.

2005 Field Checks

A total of 66 elk were checked in the field in 2005. This is a decline from the 100 elk checked in the field in 2004. Approximately 9% of the total estimated harvest (n=743) was checked in the field. Department personnel examined a total of 53 males and 13 females. Antlered elk 2+ years old comprised 90% while yearling bulls accounted for only 6% (n=3) of all antlered elk.

A total of forty-six elk (n=46), or 70% of the herd unit total, were checked in Hunt Area 84. A total of 36 male elk were field checked in this hunt area, and of these 34 were 1+ years old. Yearlings accounted for 6% of the antlered elk taken in Area 84.

In Hunt Area 85, a total of 20 elk, or 30% of the herd unit's field checked elk were examined. Eighty-five percent (85%, n=17) were antlered elk and 15% (n=3) were antlerless elk. A total of 16 adult bulls and one yearling bull were checked in 2005. One yearling cow elk accounted for the only female elk checked in Area 85.

2006 Field Checks

A total of 93 elk were checked in the field in 2006. This is an increase from the 66 elk checked in 2005, and about the same number of elk checked in 2006 (N=100 elk). Approximately 10% of the total estimated harvest (n=938) was checked in the field. Department personnel examined a total of 58 males and 35 female elk. Antlered elk 2+ years old comprised 78% of all male elk field checked. Yearling bulls accounted for only 13% (n=7) of all antlered elk.

A total of seventy-one elk (n=71), or 76% of the herd unit total, were checked in Hunt Area 84. A total of 44 male elk were field checked in this hunt area. Yearling bulls accounted for 15% of all antlered elk that were 1+ years old. Bulls aged 2+ years comprised 85% of the antlered elk harvest. Twenty-seven (n=27) cow elk were checked. Adult cows 2+ years old accounted for 88% of the antlerless elk harvest.

In Hunt Area 85, a total of 22 elk, or 24% of the herd unit's field checked elk were examined. Sixty four percent (64%, n=14) were male elk and 36% (n=8) were antlerless elk. A total of 11 adult bulls and one yearling bull were checked in 2006. All eight of the cow elk checked were 2+ years of age.

Tag Returns

Hunter harvested elk that were previously tagged on Department-operated feedgrounds provides an assessment of elk movement patters within herd unit boundaries as well as the amount of egress from the herd unit. The most current tag return data for 2004-2006 is provided in Table 1.

A total of 28 elk that were captured and ear-tagged on Fall Creek feedgrounds are reported harvested in Table 1. A total of 20 elk, or 72% of the total tagged elk died within the herd unit. Hunt Area 85 accounted for the most tagged elk taken (n=13, 65%) during this period, while Hunt Area 84 comprised the remaining seven elk (n=7, 35%). A total of 11 elk recovered in Hunt Area 85 were originally tagged in Hunt Area 84 (South Park FG). The remaining two elk taken in Area 85 were tagged on Dog Creek (HA85, n=1)) and Horse Creek (HA84, n=1). The seven elk that were killed in Area 84 were tagged on the South Park FG (n=5 elk), Horse Creek FG (n=1 elk), and Dog Creek FG (n=1 elk).

There were a total of 8 elk that were taken in herd units other than the Fall Creek DAU. Those herd units, and the number of elk taken were: Jackson DAU – 6 elk; Afton DAU – 1 elk; and Thorofare DAU – 1 elk.

Tag. No	Tag Site	Tag Date	Tag HA	Sex/Age	Kill Site	Kill HA	Kill Date	Comment
B003/4	Dog Cr.	2/96	85	F/J	Munger Mtn	85	10/05	
B191/92	Dog Cr.	2/96	85	F/J	Telephone Pas	89	10/04	
B0413/14	Horse Cr.	2/00	84	F/A	Little Horse	84	10/04	

B0635/36	Horse Cr.	2/00	84	F/A	Taylor Cr.	85	10/04	
B0585/86	Horse Cr.	2/00	84	M/A	Poison Cr.	84	10/06	
A4284/85	South Park	2/05	84	M/J	Fall Cr.	85	10/05	
A4094/95	South Park	2/03	84	F/A	SPFG	84	3/06	Nec.Stomatitus
A4202/03	South Park	2/03	84	M/J	UNK	85	9/06	
A4088/89	South Park	2/03	84	M/J	Dog Cr.	85	10/05	
A4162/63	South Park	2/03	84	F/Y	Gros Ventre	78	9/05	
A4190/91	South Park	2/03	84	M/J	Lucas Ranch	78	1/05	
A4238/39	South Park	2/03	84	F/A	Snake River	85	1/05	
A4258/59	South Park	2/03	84	F/J	Taylor Creek	85	10/05	
A4038/41	South Park	2/03	84	F/A	Walton Ranch	78	12/04	
A4052/53	South Park	2/03	84	F/A	Walton Ranch	78	9/04	
A4084/85	South Park	2/03	84	F/Y	UNK	84	9/04	
A4150/51	South Park	2/03	84	M/Y	Thorofare	60	9/04	Woody Ridge
A4178/79	South Park	2/03	84	M/J	SFFall Cr.	85	10/04	
A4206/07	South Park	2/03	84	M/J	SPFG	84	10/04	
A4035/36	South Park	2/03	84	F/J	Snake River	84	9/06	
A4058/59	South Park	2/03	84	F/A	Munger Mtn	85	10/06	
A4068/69	South Park	2/03	84	F/A	UNK	85	11/06	
A4172/73	South Park	2/03	84	F/A	Spring Gul.	78	1/07	
A4188/89	South Park	2/03	84	F/Y	UNK	78	10/06	
A4231/32	South Park	2/03	84	M/J	Munger Mtn.	85	11/06	
A4244/45	South Park	2/03	84	F/J	Bob Lucas R.	84	1/06	
A5503/04	South Park	2/05	84	F/J	SF Elk Cr.	85	9/06	
A5508/09	South Park	2/05	84	M/J	Mosquito Cr.	85	9/06	

BRUCELLOSIS MANAGEMENT

BRUCELLOSIS MANAGEMENT ACTION PLAN

Per request of the Governor's Brucellosis Coordination Team, drafting of the Fall Creek Elk Herd Unit (E103) Brucellosis Management Action Plan (BMAP) was initiated in July 2005 with presentation of the final document in July 2006. The document is one of 7 BMAPs (1 per elk herd unit within the Brucellosis Endemic Area) drafted for the Jackson/Pinedale region and covers all aspects of brucellosis, feedground, habitat management and ongoing research. No significant changes occurred to management of feedgrounds based on data included and discussed within the BMAP. In order to develop the BMAP, WGFD consulted with cooperating land management agencies (e.g., Bridger-Teton National Forest), cattle producers, as well as the Wyoming Livestock Board and the federal Animal and Plant Health Inspection Service - Vet Services. Options discussed during the process included: 1) feedground relocation, 2) feedground elimination, 3) reducing the elk population, 4) providing incentives for cattle producer change of operation, 5) fencing stackyards, feedgrounds, or other areas, 6) habitat enhancements, 7) acquiring productive habitat/protecting habitat from development through conservation easements, and 8) continuing strain 19 vaccination on feedgrounds. Options 1-3 were deemed unfeasible at the present. WGFD will continue to pursue Options 4-7 as opportunities arise. Finally, Option 8 will continue to be carried out at each of the feedgrounds for the foreseeable future.

STRAIN 19 VACCINATION

Dog Creek Feedground

Calfhood vaccination was not very successful this year with 120 out of 233 (52%) calves classified being vaccinated. The late arrival of vaccine and very open winter conditions hampered vaccination efforts. Vaccination occurred on March 14th. Elk have been vaccinated at this feedground since 1990. Through the 2007 feeding season, a total of 3,623 juveniles and 1,252 adults have been vaccinated.

Camp Creek Feedground

Vaccination was completed on March 12th at both Camp Creek and Horse Creek feedgrounds. A total of 245 of 245 (100%) juveniles were vaccinated at Camp Creek feedground. Since 1993, a total of 2,596 juveniles have been vaccinated.

Horse Creek Feedground

Administering strain 19 to juvenile elk was also completed on March 12, 2007. A total of 205 of 281 (73%) juveniles were inoculated. The late arrival of vaccine and very open winter conditions attributed to this marginal success. Since 1993, a total of 3,870 juveniles have been inoculated.

South Park Feedground

Vaccination was completed for the seventeenth consecutive year at this feedground. A total of 263 out of 289 (91%) juveniles were vaccinated in 2007. The late arrival of vaccine and very open winter conditions attributed to this marginal success. Since 1990, a total of 4,504 juveniles and 909 adult females have been inoculated.

FEEDGROUND MANAGEMENT SUMMARY

Table 2. Summary data from Dog Creek Feedground, 1975-76 to 2006-07

YEAR	ELK #	TONS	DAYS	DEAD	COST/ELK	TON/ELK
1975-76	750	452	135	23	35	0.6
1976-77	0	0	0	0	0	0
1977-78	734	400	123	10	32	0.54
1978-79	670	454	139	22	41	0.68
1979-80	750	302	103	2	26	0.4
1980-81	500	184	120	6	30	0.37
1981-82	600	408	150	4	51	0.68
1982-83	588	329	130	4	45	0.56
1983-84	815	575	145	10	57	0.71
1984-85	787	510	138	9	53	0.65
1985-86	1020	619	139	13	49	0.61
1986-87	746	402	113	1	44	0.54
1987-88	910	596	111	9	50	0.65
1988-89	1068	754	156	15	57	0.71
1989-90	1000	430	118	7	45	0.43
1990-91	873	399	105	5	42	0.46
1991-92	950	500	116	2	47	0.53
1992-93	985	506	128	24	48	0.51
1993-94	650	229	108	1	32	0.35
1994-95	756	378	116	4	47	0.5
1995-96	742	260	90	5	35	0.35
1996-97	788	371	130	22	53	0.47
1997-98	623	311	119	7	66	0.5
1998-99	870	364	116	6	42	0.42
1999-00	885	460	119	0	51	0.52
2000-01	848	421	114	4	54	0.5
2001-02	1040	547	132	12	73	0.53

2002-03	817	318	111	7	47	0.39
2003-04	1214	652	141	16	59	0.54
2004-05	781	362	105	7	55	0.46
2005-06	1107	638	144	4	65	0.58
2006-07	1016	464	117	9	54	0.46
30 Year Ave	809	425	120	8	46	0.51

Table 3. Summary data from Camp Creek Feedground, 1975-76 to 2006-07.

YEAR	ELK #	TONS	DAYS	DEAD	COST/ELK	TON/ELK
1975-76	1025	491	130	1	28	0.48
1976-77	0	0	0	0	0	0
1977-78	500	218	117	2	28	0.44
1978-79	854	525	137	11	37	0.61
1979-80	615	302	106	6	32	0.49
1980-81	625	121	63	3	16	0.19
1981-82	686	399	134	8	45	0.58
1982-83	510	199	120	0	35	0.39
1983-84	815	575	136	10	57	0.7
1984-85	787	510	138	9	53	0.65
1985-86	651	531	134	8	65	0.81
1986-87	770	381	123	9	42	0.49
1987-88	1073	467	113	4	35	0.44
1988-89	960	584	145	10	53	0.61
1989-90	935	393	108	4	44	0.42
1990-91	950	379	115	7	37	0.4
1991-92	1180	371	110	3	29	0.31
1992-93	957	474	124	34	48	0.5
1993-94	1000	119	54	0	11	0.12
1994-95	600	273	105	5	45	0.46
1995-96	582	270	93	1	47	0.46
1996-97	582	261	136	3	53	0.45
1997-98	485	200	96	9	76	0.53
1998-99	516	334	104	8	72	0.64
1999-00	650	256	106	0	43	0.39
2000-01	1000	429	101	1	45	0.43
2001-02	1076	530	143	31	67	0.49
2002-03	1292	408	125	3	39	0.32
2003-04	1004	490	139	11	58	0.49
2004-05	1246	475	126	10	45	0.38
2005-06	853	599	145	4	84	0.7
2006/07	1119	536	122	10	62	0.48
30 Year Ave	809	378	114	7	45	0.46

Table 4. Summary data from Horse Creek Feedground, 1975-76 to 2006-07.

YEAR	ELK #	TONS	DAYS	DEAD	COST/ELK	TON/ELK
1975-76	700	450	139	6	29	0.64
1976-77	0	0	0	0	0	0
1977-78	1170	659	122	9	32	0.56
1978-79	959	493	141	16	31	0.51
1979-80	1250	445	104	6	22	0.36
1980-81	496	73	59	1	12	0.15
1981-82	722	499	132	8	44	0.69
1982-83	925	458	123	4	38	0.49
1983-84	880	617	136	13	54	0.7
1984-85	1393	633	127	18	36	0.45
1985-86	1550	885	146	18	45	0.57
1986-87	879	393	111	4	36	0.44
1987-88	940	464	103	5	39	0.49
1988-89	1287	833	148	17	54	0.64
1989-90	1155	454	107	6	41	0.39
1990-91	1194	494	112	2	38	0.41
1991-92	1005	401	109	5	36	0.39
1992-93	1179	539	125	9	43	0.46
1993-94	712	139	56	0	18	0.2
1994-95	1033	423	106	10	36	0.41
1995-96	1104	397	94	3	38	0.36
1996-97	1330	793	135	12	57	0.6
1997-98	1505	609	104	13	47	0.42
1998-99	1587	625	117	13	42	0.39
1999-00	1321	517	111	3	41	0.39
2000-01	1200	673	109	6	56	0.56
2001-02	1414	716	138	17	68	0.51
2002-03	895	529	114	8	78	0.59
2003-04	1346	778	100	8	60	0.58
2004-05	1066	540	107	8	55	0.51
2005-06	1729	947	141	13	60	0.55
2006/07	1626	705	112	7	51	0.43
30 Year Ave	1111	537	112	8	42	0.46

Table 5. Summary data from South Park Feedground, 1975-76 to 2006-07.

YEAR	ELK #	TONS	DAYS	DEAD	COST/ELK	TON /ELK
1975-76	700	564	149	2	46	0.81
1976-77	0	0	0	0	0	0
1977-78	1150	569	136	4	21	0.49
1978-79	1200	672	130	15	26	0.56
1979-80	900	333	104	6	24	0.37
1980-81	600	110	62	0	15	0.18
1981-82	780	378	136	3	38	0.48

1982-83	675	306	128	5	39	0.45
1983-84	918	557	142	7	48	0.61
1984-85	896	511	130	0	46	0.57
1985-86	1002	662	139	3	52	0.66
1986-87	1185	680	136	4	46	0.57
1987-88	966	466	114	5	39	0.48
1988-89	1575	902	148	38	54	0.57
1989-90	909	322	100	3	39	0.35
1990-91	800	323	112	3	40	0.4
1991-92	1033	467	107	4	41	0.45
1992-93	1200	556	127	8	45	0.46
1993-94	1024	361	112	0	32	0.35
1994-95	1155	494	128	4	40	0.43
1995-96	1117	465	100	4	40	0.42
1996-97	1372	692	135	18	53	0.5
1997-98	1080	418	125	7	55	0.41
1998-99	886	314	108	8	39	0.35
1999-00	988	323	91	6	34	0.33
2000-01	1112	448	105	2	42	0.4
2001-02	1238	552	123	8	59	0.45
2002-03	1083	286	104	10	32	0.26
2003-04	1401	650	127	18	56	0.46
2004-05	1200	508	118	10	48	0.42
2005-06	1304	710	143	25	58	0.54
2006/07	1249	545	112	9	51	0.44
30 Year Ave	1022	473	117	7	41	0.44

MANAGEMENT SUMMARY

The 2006 posthunt population was estimated at 5528 elk. This is an increase from the 5400 elk estimated in the 2005 posthunt population. The population should be reduced to approximately 5086 elk following the 2007 hunting season. The population objective for this elk herd is 4400 elk.

Since 2004, hunting seasons were designed to reduce the elk population. A high 2003 trend count resulted in the implementation of liberal hunting seasons in 2004. These seasons were designed to allow general and limited quota license holders to take antlerless elk in November when elk are generally more accessible to hunters in the front-country. In addition, the number of limited quota Type 6, cow/calf licenses were significantly increased from 250 licenses in 2005 to 400 licenses in 2006 in both Areas 84 and 85 to encourage additional harvest of cow elk.

The 2004 hunting season resulted in the desired population reduction. During postseason trend counts a total of 4694 elk were counted. The population reduction occurred because of significant snowfall in the backcountry in mid-October that forced elk into areas adjacent to winter ranges where they were more accessible to hunters. However, this one-year population reduction was not sustained and population increases were once again observed in 2005 and 2006 after these hunting seasons failed to achieve the desired antlerless harvest. As a result, near record high trend counts occurred after the conclusion of these hunting seasons.

The 2007 hunting seasons are the most liberal seasons in at least 25 years. After two consecutive years of significant elk population increase, the 2007 seasons should exact a dramatic population decline. In order to

achieve the desired population reduction, both general and limited quota license hunters will have the opportunity to take antlerless elk in both hunt areas into November. The general portion of the November season will run November 1-11 for antlerless elk, while unused Type 2 and 6 license holders may take an additional cow or calf from November 1-18. The desired population reduction effort is likely to occur during the November portion of the hunting season by targeting antlerless elk after snow conditions have forced elk out of the backcountry to lower, more accessible elevations.

The upcoming hunting seasons are projected to harvest a total of 1315 elk. Approximately 400 antlered elk, 825 cow elk, and 90 calves are projected in the 2007 harvest. The dramatic increase in the projected adult cow segment of the population should lower the population to approximately 5100 elk following the hunting season.

MANAGEMENT RECOMMENDATIONS

1. Monitor existing and potential damage situations and develop hunting seasons or depredation hunts to resolve damage problems throughout the herd unit and along the Snake River Bottomlands.
2. Work with the Forest Service to inventory, develop and implement habitat improvement projects in suitable areas adjacent to all feedgrounds and important spring/fall transition ranges in this elk herd.
3. Maintain and monitor the 36 day general elk hunting season for bull elk in this herd unit resulting from shortening the season by moving the opening date from September 10 to September 26. Continue to monitor hunting season structure and effects on bull and total elk numbers during postseason trend counts. Maintain an observed bull:cow ratio of at least 20:100 in the posthunt population.
4. Manage antlerless harvest to maintain elk numbers at objective.
5. Work with Forest Service personnel to implement a summer motorized travel plan that will effectively manage motorized travel in crucial parturition habitat and in important summer and fall ranges.
6. Develop an elk trapping schedule in cooperation with BFH personnel to monitor *Brucella* seroprevalence on herd unit feedgrounds. Concurrent with this effort, attempt to maximize the number of elk tagged in order to assess and evaluate intra-and inter-herd unit movements based on hunter-harvested tag returns.

2007 ELK HUNTING SEASONS

FALL CREEK HERD UNIT - E103

<u>HUNT AREA</u>	<u>TYPE</u>	<u>OPENS</u>	<u>CLOSES</u>	<u>LIMITATIONS</u>
84		Sept. 26	Oct. 31	General License; any elk
		Nov. 1	Nov. 11	General License; antlerless elk
		Nov. 12	Nov. 30	General License; antlerless elk valid only in that Portion of Area 84 in the Cache Creek drainage
	1	Nov. 1	Jan. 31	Limited Quota; 20 licenses any elk, valid only in that portion of Area 84 on private land west of U.S. Highway 191 and north and east of the Snake River starting at the South Park bridge
	2	Sept. 10	Nov. 18	Limited Quota; 50 licenses antlerless elk
	6	Sept. 10	Nov. 18	Limited Quota; 250 licenses cow or calf
		Nov. 19	Jan. 31	Limited Quota; Unused Area 84 Type 6 licenses Antlerless elk, valid only in that portion of Area 84 on private land west of U.S. Highway 191 and north and east of the Snake River starting at the South Park bridge
85		Sept. 26	Oct. 31	General License; any elk
		Nov. 1	Nov. 11	General License; antlerless elk
	1	Nov. 1	Jan. 31	Limited Quota; 20 licenses any elk, valid only in that portion of Area 85 on private land north of Butler Creek; access to private land is limited
	2	Sept. 10	Nov. 18	Limited Quota; 50 licenses antlerless elk
	6	Sept. 10	Nov. 18	Limited Quota; 250 licenses cow or calf
			Nov. 19	Jan. 31
84,85		Sept. 1	Sept. 25	General License; Archery only, Refer to Section 4

FALL CREEK ELK HERD POSTSEASON CLASSIFICATIONS

Appendix B. Posthunt herd composition data, 2001-2006.

Year	Yrlng Males	Adult Males	Total Males	Females	Calf	Total	100 Females			
							YM	AM	TotM	Juv
<u>2001</u>										
84 HCFG	116	136	252	925	237	1,414				
84 CCFG	78	14	92	647	337	1,076				
84 SPFG	83	67	150	822	266	1,238				
84 NR	10	1	11	22	13	46				
85 DCFG	86	59	145	634	261	1,040				
85 NR	15	11	26	29	22(2)	79				
TOTAL	388	288	676	3,079	1,136(2)	4,893	13	9	22	37
<u>2002</u>										
84 HCFG	41	90	131	590	174	895				
84 CCFG	103	32	135	962	195	1,292				
84 SPFG	46	51	97	748	238	1,083				
84 NR	19	43	62	16	4(84)	166				
85 DCFG	45	43	88	539	190	817				
85 NR	00	09	09	67	49(8)	133				
TOTAL	263	259	522	2,922	850(92)	4,386	9	9	18	29
<u>2003</u>										
84 HCFG	66	121	187	808	351	1,346				
84 CCFG	73	45	118	673	213	1,004				
84 SPFG	72	100	172	892	337	1,401				
84 NR	19	21	40	44	17 (36)	137				
85 DCFG	80	65	145	711	358	1,214				
85 NR	14	3	17	29	5 (15)	66				
TOTAL	324	355	679	3,157	1,136(51)	5,168	10	11	21	40
<u>2004</u>										
84 HCFG	73	81	154	694	218	1,066				
84 CCFG	71	68	139	895	212	1,246				
84 SPGF	77	76	153	811	236	1,200				
84 NR	24	12	36	96	89	221				
85 DCFG	52	36	88	528	165	781				
85 NR	25	20	45	77	58	180				
TOTAL	322	293	615	3,101	978	4,694	10	9	20	31
<u>2005</u>										
84 HCFG	136	123	259	1,163	307	1,729				
84 CCFG	52	75	127	502	224	853				
84 SPGF	85	101	186	843	275	1,304				
84 NR	7	14	21	25	39(1)	86				
85 DCFG	73	66	139	708	260	1,107				
85 NR	9	12	21	63	22	106				
TOTAL	362	391	753	3,304	1,127(1)	5,185	11	12	23	34
<u>2006</u>										
84 HCFG	104	146	250	1,095	281	1,626				
84 CCFG	87	69	156	718	245	1,119				
84 SPFG	80	114	194	766	289	1,249				
84 NR	4	25	29	22	36	87				
85 DCFG	57	66	123	660	233	1,016				
85 NR	15	6	21	13	8 (182)	224				
TOTAL	347	426	773	3,274	1,092(182)	5,321	11	13	24	33

FALL CREEK ELK NEW103V2003

Data from 1995 to 2008

Simulation from 1995 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
0	1325.0	1325.0	40.0	40.0	15.0	15.0	1.00	1.00	1.00	1.00
1	700.0	1200.0	1.0	1.0	3.0	3.0	0.80	1.00	0.70	1.00
2	325.0	885.0	1.0	1.0	3.0	3.0	1.00	1.00	1.00	1.00
3	200.0	592.0	1.0	1.0	3.0	3.0	1.00	1.00	1.00	1.00
4	105.0	494.0	1.0	1.0	3.0	3.0	1.00	1.00	1.00	1.00
5	28.0	368.0	1.0	1.0	3.0	3.0	1.00	1.00	1.00	1.00
6	11.0	388.0	1.0	1.0	3.0	3.0	1.00	1.00	1.00	1.00
7	7.0	367.0	1.0	1.0	5.0	3.0	1.00	1.00	1.00	1.00
8	5.0	282.0	1.0	1.0	5.0	3.0	1.00	1.00	1.00	1.00
9	3.0	240.0	1.0	1.0	10.0	5.0	1.00	1.00	1.00	1.00
10	2.0	231.0	1.0	1.0	20.0	5.0	1.00	1.00	1.00	1.00
11	1.0	181.0	1.0	1.0	30.0	10.0	1.00	1.00	1.00	1.00
12	1.0	161.0	1.0	1.0	40.0	15.0	1.00	1.00	1.00	1.00
13	0.0	128.0	1.0	1.0	50.0	25.0	1.00	1.00	1.00	1.00
14	0.0	83.0	1.0	1.0	70.0	50.0	1.00	1.00	1.00	1.00
15	0.0	26.0	1.0	1.0	100.0	100.0	1.00	1.00	1.00	1.00
Sum =		9664.0	Estimated Sum =		9000		Subadults: Ages 0 to 0			

Bio-Year	Preseason		MSI Function is Linear			Postseason	Effort & Wound Set Used
	MSI	Subadults#	Harvest // Des.	Pop Size in NA	Postseason		
	MSI	Subadults#	Males#	Females#	MSI		
1995	1.16	39	452	388	0.40	1	
1996	1.34	120	359	416	1.80	1	
1997	1.55	59	462	383	0.40	1	
1998	1.55	37	425	198	0.70	1	
1999	1.70	92	467	341	0.80	1	
2000	1.37	53	416	240	0.90	2	
2001	1.25	38	421	244	1.50	2	
2002	1.49	40	291	313	1.20	2	
2003	1.15	56	430	305	1.20	2	
2004	1.43	120	534	534	1.30	2	
2005	1.34	43	445	255	1.00	2	
2006	1.33	124	432	382	1.00	2	
2007	1.00	90	400	825	1.00	2	
2008	1.00	90	425	575	1.00	2	
Set 1 Wounding Loss		10.0%	10.0%	10.0%	Yearling Male 10.0%		
Set 1 Wounding Loss		10.0%	10.0%	10.0%	Yearling Male 10.0%		

Bio-Year	Young/100 Fems		Young/100 Fems		Young/100 Fems		Sex Ratio:
	Age 1 - 1	Age 2 - 2	Age 3 - 2	Age 3 - 15	Age 3 - 15	50 : 50	
1996	0.0	15.0	90.0				

Bio- Year	Young/100 Fems Age 1 - 1	Young/100 Fems Age 2 - 2	Young/100 Fems Age 3 - 15	Sex Ratio: 50 : 50
1997	0.0	15.0	90.0	
1998	0.0	15.0	90.0	
1999	0.0	15.0	90.0	
2000	0.0	15.0	90.0	
2001	0.0	15.0	90.0	
2002	0.0	15.0	90.0	
2003	0.0	15.0	90.0	
2004	0.0	15.0	90.0	
2005	0.0	15.0	90.0	
2006	0.0	15.0	90.0	
2007	0.0	15.0	90.0	
2008	0.0	15.0	90.0	
2009	0.0	15.0	90.0	

Table 1. Population Size During Bio-Year for NEWEL03v2003.gnl 05/04/2007 01:17 pm

Bio-Year	Start	Pre-Season	Post Season	End	%Growth
1995	9000	7779	6812	6610	11.5
1996	10032	8109	7125	6193	-4.2
1997	9611	7396	6401	6226	0.2
1998	9626	7421	6695	6341	1.5
1999	9773	7332	6342	5971	-4.6
2000	9321	7404	6624	6151	1.4
2001	9449	7723	6950	6152	-2.1
2002	9253	7313	6605	6059	-1.6
2003	9108	7636	6766	6151	0.2
2004	9130	7338	6032	5477	-10.9
2005	8133	6636	5818	5384	-1.0
2006	8050	6560	5528	5098	-5.9
2007	7573	6532	5086	4652	-12.8
2008	6600	5774	4575	4208	-11.3

Table 2. Preseason Natural Mortality for NEWEL03v2003.gnl 05/04/2007 01:17 pm

Bio-Year	Sub-Adults	Adult Males	Adult Females	Total	% of Pop
1995	1145	15	61	1221	13.6
1996	1834	18	70	1923	19.2
1997	2119	22	74	2215	23.0
1998	2108	23	74	2205	22.9
1999	2334	26	82	2441	25.0
2000	1836	19	63	1917	20.6
2001	1649	19	58	1726	18.3
2002	1849	24	68	1940	21.0
2003	1403	20	50	1473	16.2
2004	1704	26	62	1792	19.6
2005	1424	22	52	1497	18.4
2006	1418	21	51	1490	18.5
2007	990	15	36	1041	13.7
2008	780	16	30	826	12.5

Table 3. Harvest Mortality for NEWEL03v2003.gnl 05/04/2007 01:17 pm

Bio-Year	Sub-Adults	Adult Males	Adult Females	Total	% of Pop
1995	39	452	388	879	11.3
1996	120	359	416	895	11.0
1997	59	462	383	904	12.2
1998	37	425	198	660	8.9
1999	92	467	341	900	12.3
2000	53	416	240	709	9.6
2001	38	421	244	703	9.1
2002	40	291	313	644	8.8
2003	56	430	305	791	10.4
2004	120	534	534	1188	16.2
2005	43	445	255	743	11.2
2006	124	432	382	938	14.3
2007	90	400	825	1315	20.1
2008	90	425	575	1090	18.9

Table 4. Harvest Percentages for NEWWE103v2003.gnl 05/04/2007 01:17 pm

Bio-Year	Sub-Adults	Adult Males	Adult Females	Total	Yearling Males
1995	2.9	35.4	7.5	11.30	44.9
1996	7.6	26.5	8.0	11.04	38.4
1997	4.5	32.7	8.2	12.22	31.9
1998	2.9	29.3	4.2	8.89	34.1
1999	8.4	31.2	7.2	12.28	31.7
2000	3.5	30.2	5.3	9.58	24.2
2001	2.3	28.0	5.3	9.10	33.0
2002	3.2	18.3	7.0	8.81	30.5
2003	3.4	25.3	7.1	10.36	22.1
2004	9.4	29.6	12.5	16.19	27.9
2005	3.5	27.8	6.7	11.20	21.7
2006	9.9	27.7	10.2	14.30	24.7
2007	6.1	26.6	23.3	20.13	24.0
2008	7.7	26.6	19.1	18.88	28.7

Table 5. Postseason Natural Mortality for NEWWE103v2003.gnl 05/04/2007 01:17 pm

Bio-Year	Sub-Adults	Adult Males	Adult Females	Total	% of Pop
1995	77	10	115	202	3.0
1996	393	53	486	932	13.1
1997	74	11	91	176	2.7
1998	131	21	201	354	5.3
1999	120	24	226	370	5.8
2000	197	26	251	473	7.1
2001	362	50	387	798	11.5
2002	218	49	280	546	8.3
2003	285	48	281	614	9.1
2004	223	52	280	555	9.2
2005	178	37	219	434	7.5
2006	167	36	228	431	7.8
2007	208	36	190	434	8.5
2008	161	39	168	367	8.0

Table 6. Preseason Ratios for NEWWE103v2003.gnl 05/04/2007 01:17 pm

Bio-Year	Subadults /100 1+F	2+ Males /100 1+F	Yr. Males /100 1+F	Ad Males /100 1+F
1995	25.5	12.2	12.4	24.7
1996	30.7	14.7	11.5	26.2
1997	27.7	19.0	11.2	30.2
1998	27.6	18.9	12.2	31.1
1999	23.2	20.0	11.6	31.6
2000	33.6	21.0	9.6	30.6
2001	36.1	19.4	13.6	33.0
2002	28.0	21.9	13.7	35.6
2003	38.4	28.2	11.4	39.6
2004	29.9	27.3	15.0	42.3
2005	32.4	30.2	11.9	42.1
2006	33.2	28.2	13.2	41.5
2007	41.9	29.2	13.2	42.4
2008	38.9	33.8	19.4	53.2

Table 7. Postseason Ratios for NEWWE103v2003.gnl 05/04/2007 01:17 pm

Bio-	Subadults	2+ Males	Yr. Males	Ad Males
------	-----------	----------	-----------	----------

Year	/100 1+F	/100 1+F	/100 1+F	/100 1+F
1995	26.9	7.6	8.9	16.4
1996	30.9	11.0	9.4	20.4
1997	29.0	12.8	8.5	21.3
1998	28.1	12.9	9.2	22.1
1999	22.9	13.7	8.9	22.6
2000	34.3	14.1	7.6	21.7
2001	37.4	13.4	10.9	24.3
2002	29.3	18.3	12.5	30.9
2003	40.1	21.3	9.8	31.0
2004	31.1	20.1	13.0	33.1
2005	33.7	21.7	9.9	31.6
2006	33.3	21.1	11.4	32.5
2007	52.6	26.6	13.7	40.3
2008	45.1	28.8	18.9	47.7

Table 8. End of Year Ratios for NEWEl03v2003.gnl 05/04/2007 01:17 pm

Bio-Year	Subadults /100 Adlts	Subadults /100 1+F	Yr. Males /100 1+F	Ad Males /100 1+F
1995	22.3	25.9	9.0	16.6
1996	20.7	25.2	9.9	21.4
1997	22.9	27.8	8.5	21.5
1998	21.5	26.3	9.5	22.6
1999	17.2	21.2	9.1	23.2
2000	25.7	31.5	7.8	22.4
2001	25.4	31.8	11.4	25.4
2002	19.6	25.8	12.9	31.8
2003	26.8	35.4	10.1	32.1
2004	20.2	27.1	13.5	34.3
2005	23.0	30.5	10.2	32.6
2006	22.7	30.4	11.8	33.7
2007	33.9	48.2	14.3	42.0
2008	27.6	41.3	19.8	49.6

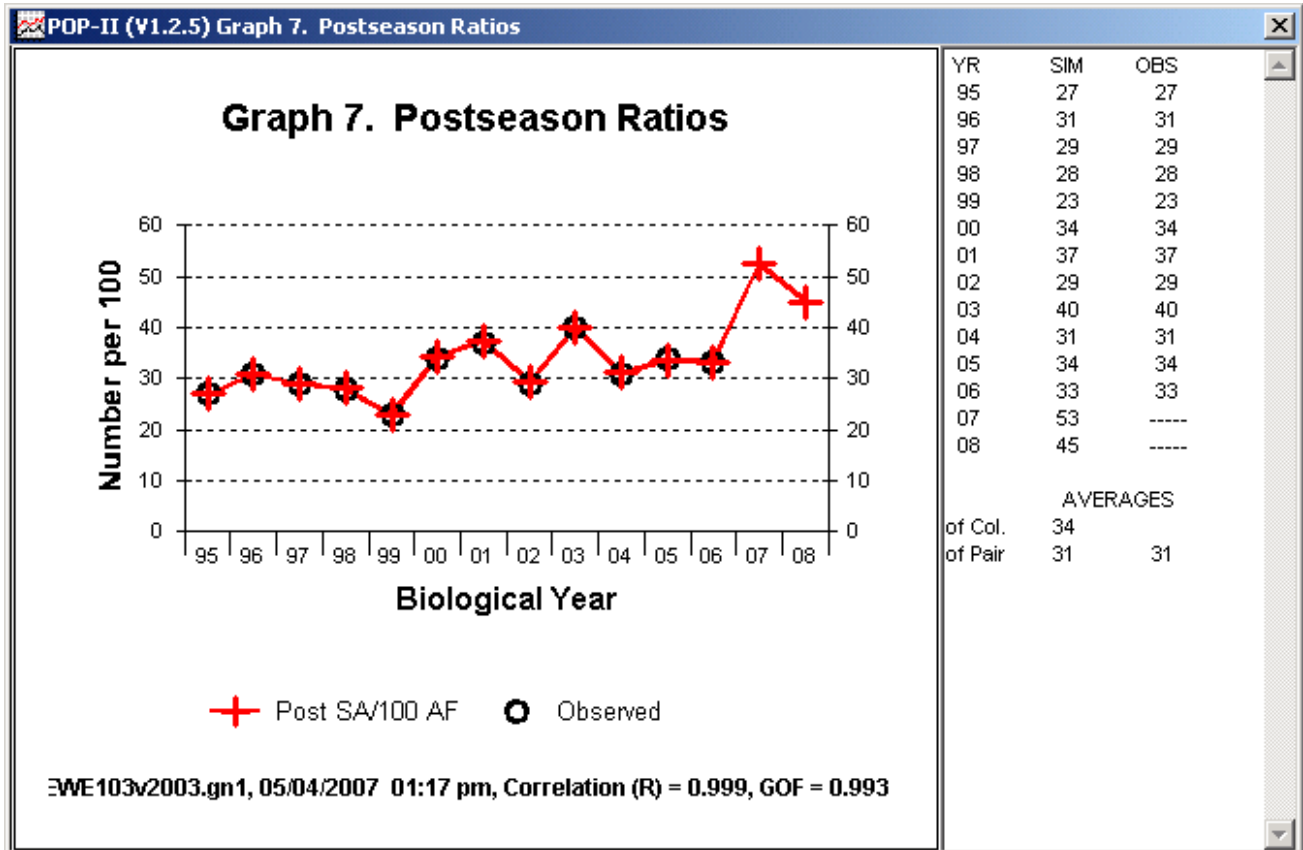
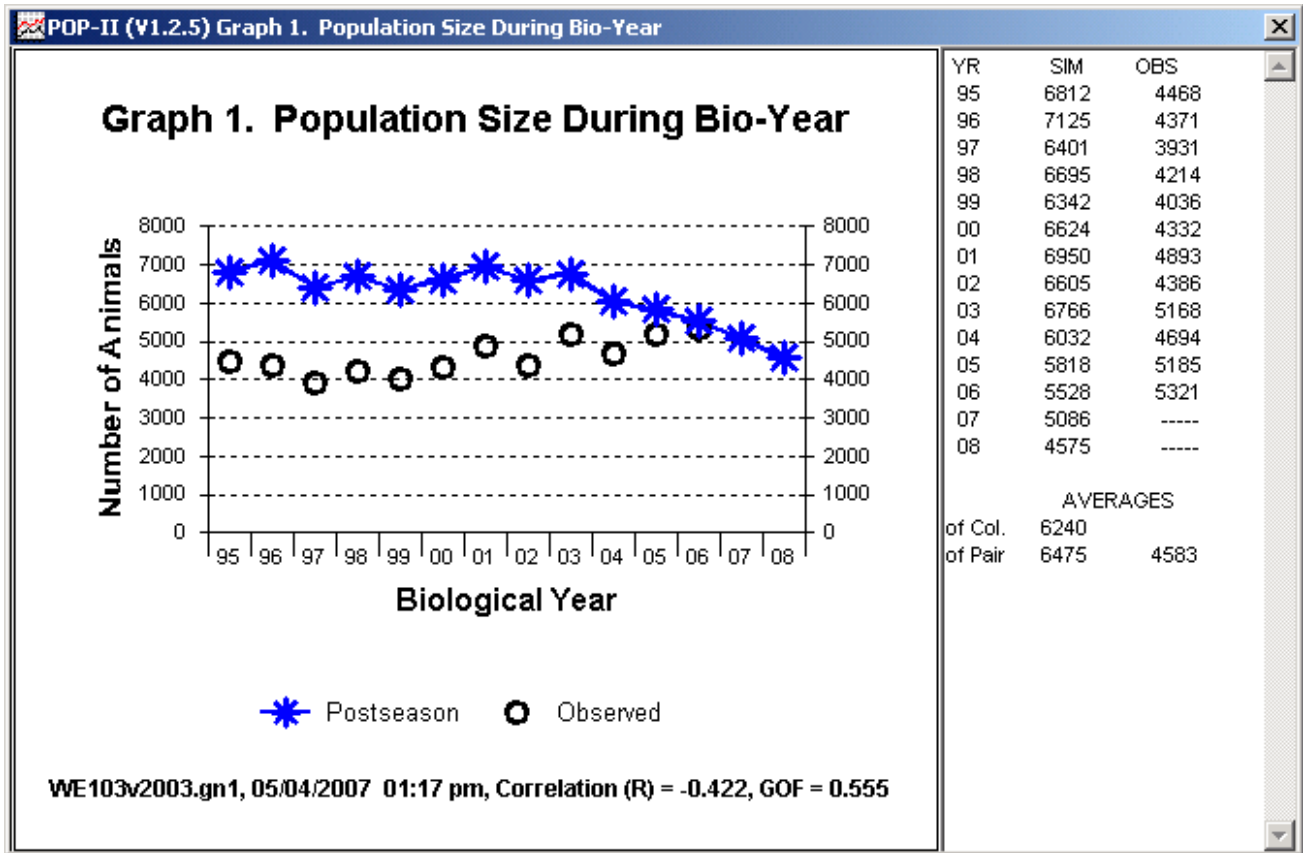
Table 9. Reproduction at Start of Bio-Year for NEWEl03v2003.gnl 05/04/2007 01:17 pm

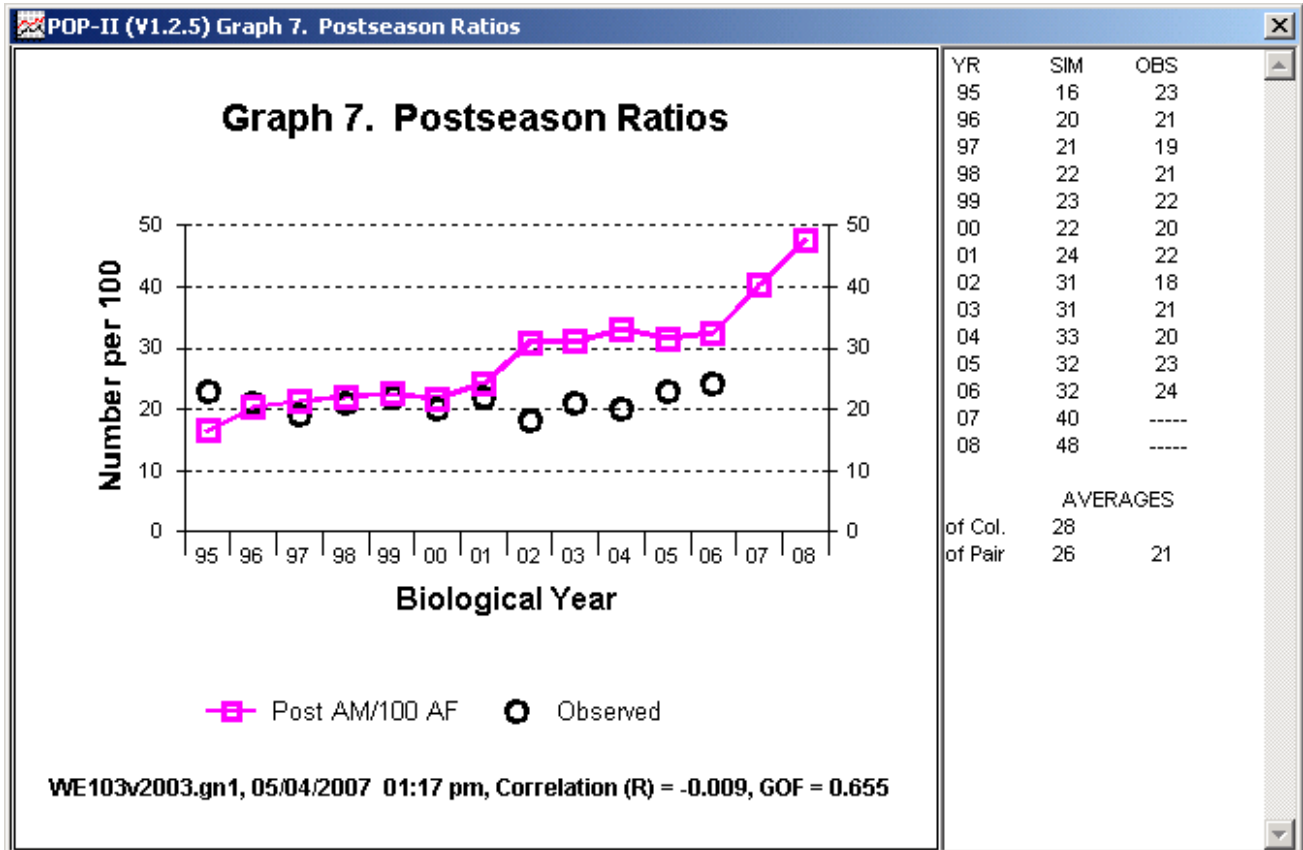
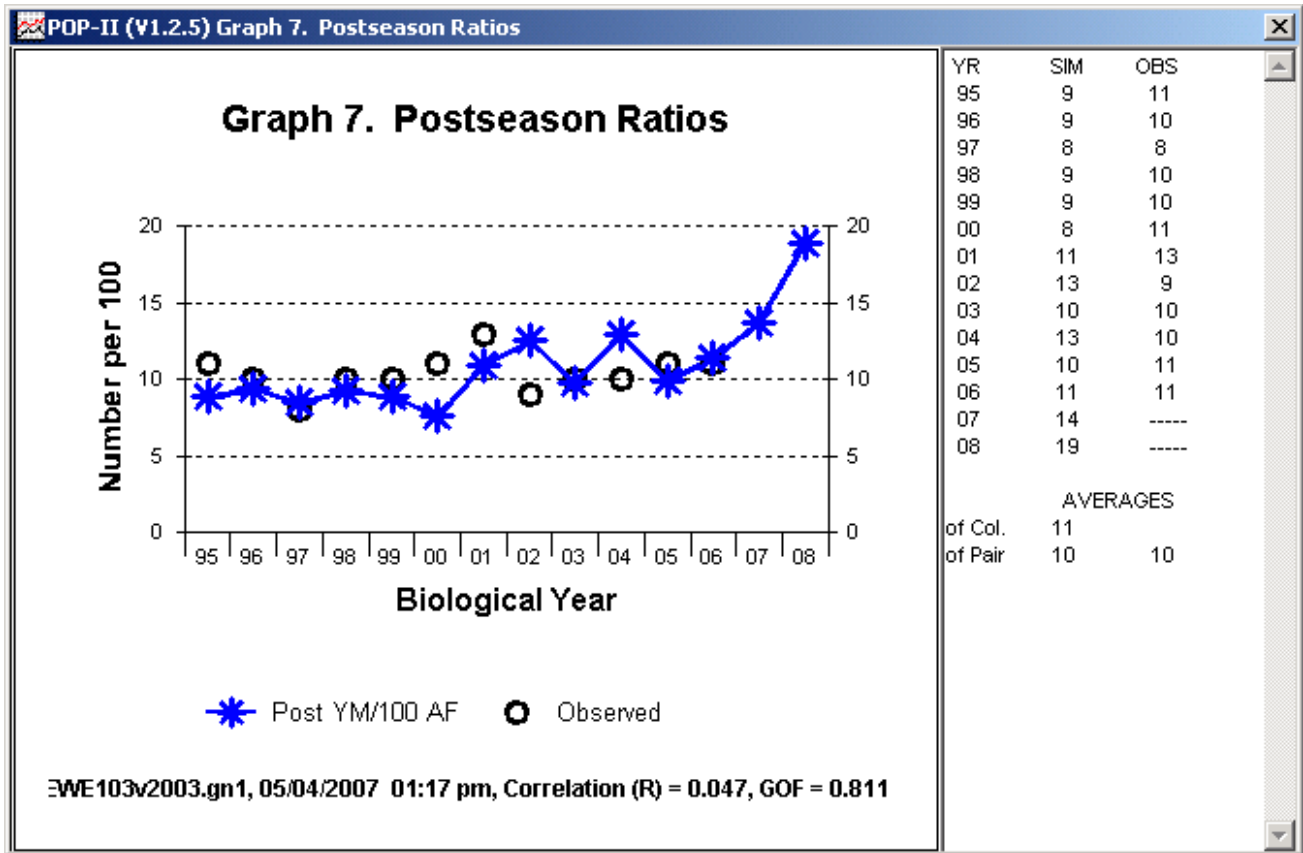
Bio-Year	Young / 100 AF 1 +	Sub-Ad. / 100 AF 1 +	Total Young	Total Sub-Adult	Total Females 1 +
1995	47	47	2468	2468	5239
1996	65	65	3422	3422	5238
1997	72	72	3418	3418	4756
1998	72	72	3400	3400	4750
1999	71	71	3432	3432	4817
2000	73	73	3350	3350	4573
2001	71	71	3299	3299	4625
2002	68	68	3102	3102	4535
2003	70	70	3050	3050	4339
2004	69	69	2979	2979	4323
2005	69	69	2656	2656	3853
2006	70	70	2666	2666	3806
2007	69	69	2475	2475	3580
2008	64	64	1949	1949	3036

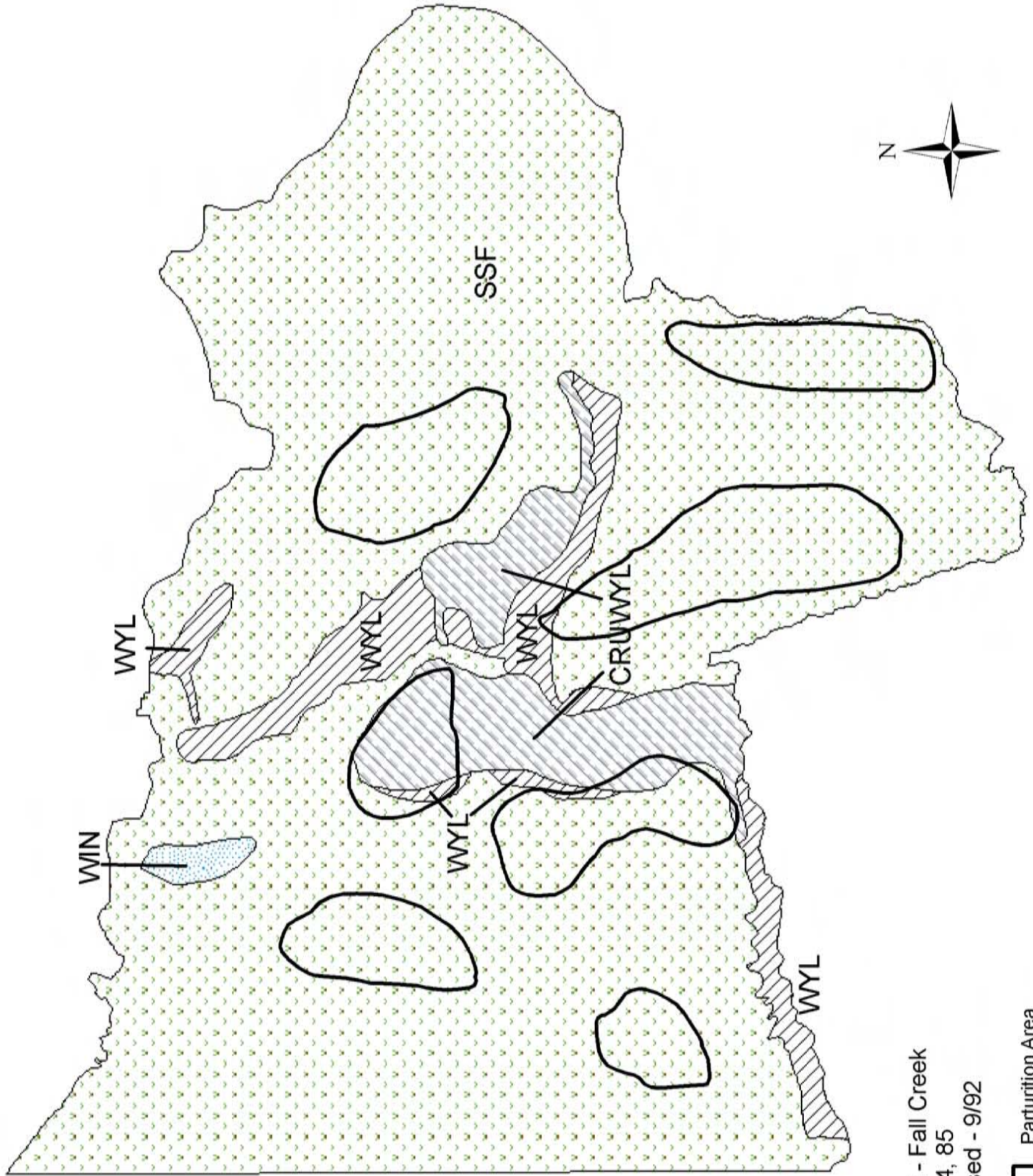
Table A. Intra-Annual Natural Survival(%) for NEWEl03v2003.gnl 05/04/2007 01:17 pm

Bio-Years	Sub Adults	Adult Males	Adult Females	Overall Survival
-----	-----	-----	-----	-----

1995-1996	92.74	97.44	96.26	95.74
1996-1997	71.87	92.98	88.30	85.57
1997-1998	92.54	97.24	96.36	95.75
1998-1999	87.98	96.18	93.86	93.10
1999-2000	86.79	96.18	93.52	92.87
2000-2001	85.42	95.96	92.92	91.70
2001-2002	76.35	93.82	89.64	87.19
2002-2003	81.06	95.06	92.15	90.68
2003-2004	80.83	94.73	91.56	89.62
2004-2005	79.42	94.45	91.13	89.58
2005-2006	83.87	95.38	92.53	91.31
2006-2007	84.15	95.67	92.24	91.29
2007-2008	84.15	95.61	91.87	90.55







E103 - Fall Creek
 HA 84, 85
 Revised - 9/92

Parturition Area