

Unit(s): 1

Species: Mountain Lion

Year: 2009/10

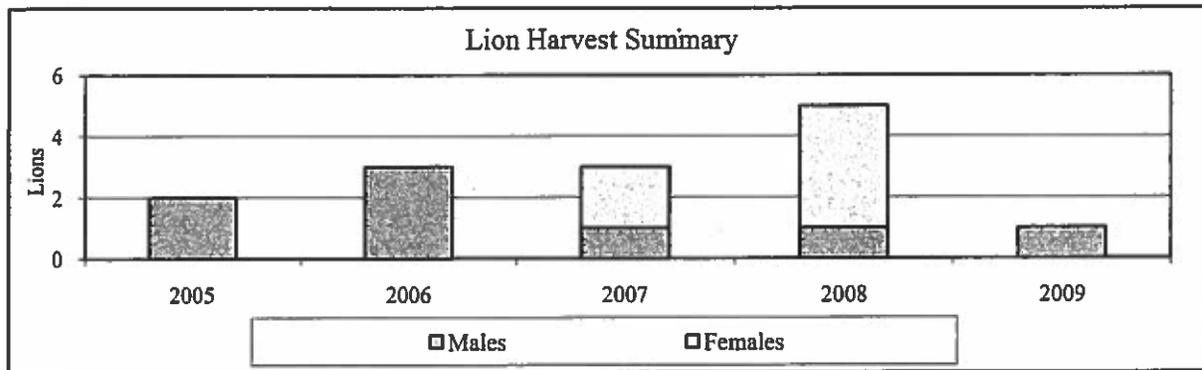
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	2	0	2	0	0%	NO
2006	3	0	3	0	0%	NO
2007	1	2	3	2	67%	YES
2008	1	4	5	1	20%	NO
2009	1	0	1			
2-Year Mean					43%	YES

Management Considerations:

*Evaluate Adjacent Unit Zone Management

*Consider Female Harvest Limit



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 1 - Unitwide	None	None

Submitted by: T. Richins
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval: 

Date: 3-16-10

Unit(s): 1

Species: Mountain Lion

Year: 2009/10

Management Notes:

It is recommended to continue with the current standard hunt in Unit 1 without a female harvest limit. In 2009 no female mountain lions were harvested. The resulting 2 year mean of the percentage of adult females harvested will be 10% next year which is below Commission guidelines.

Unit(s): 2ABC

Species: Mountain Lion

Year: 2009/10

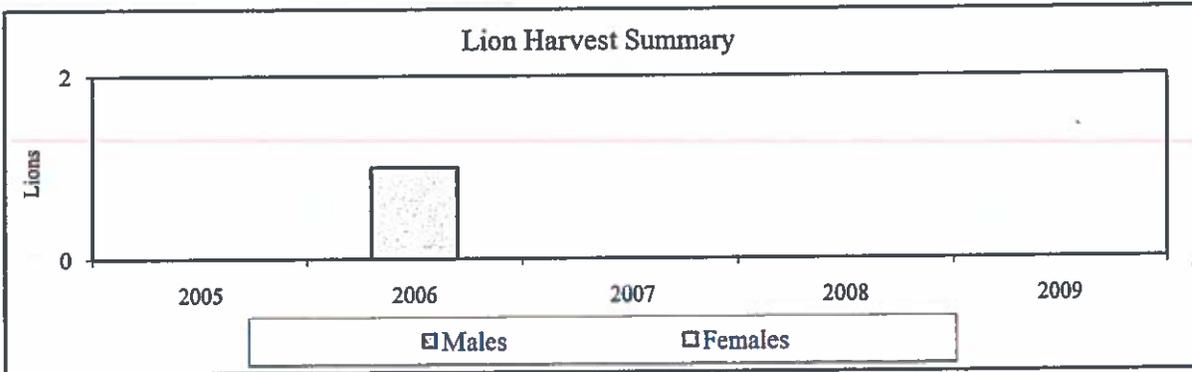
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005			0		#DIV/0!	#DIV/0!
2006		1	1	1	100%	YES
2007			0		#DIV/0!	#DIV/0!
2008			0		#DIV/0!	#DIV/0!
2009			0			
2-Year Mean					#DIV/0!	#DIV/0!

Management Considerations:

#DIV/0!

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Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 2ABC - Unitwide	None	None

Submitted by: Joel Weiss
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-16-10

Unit(s): 2ABC

Species: Mountain Lion

Year: 2009/10

Management Notes:

Maintain current hunt structure of August 20th, 2010 – May 19, 2011 season dates with bag limit of one mountain lion per year for the entire unit.

The current hunt structure in GMU 2ABC is an open season from August 20th 2010 through May 19th, 2011 with a bag limit of one lion per year. This season and bag limit is consistent with most of the state.

Unit(s): 3A, 3B, 3C

Species: Mountain Lion

Year: 2009/2010

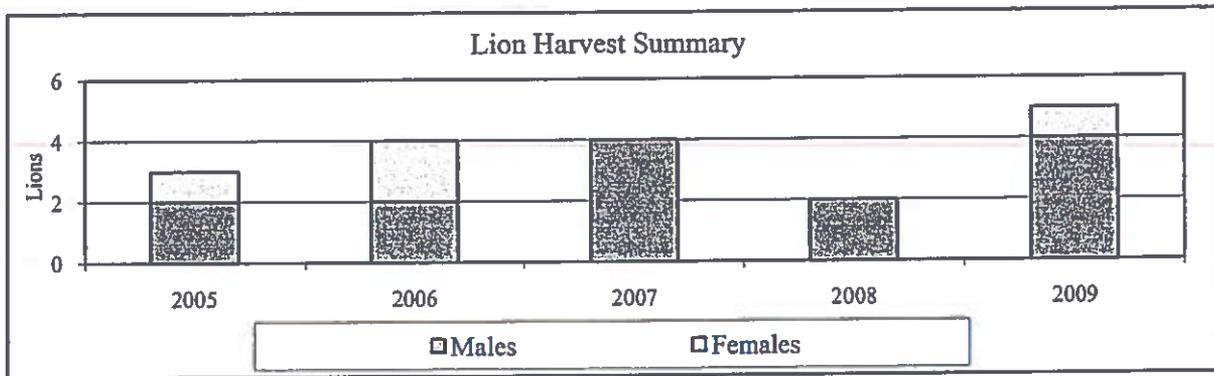
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	2	1	3	0	0%	NO
2006	2	2	4	1	25%	NO
2007	4	0	4	0	0%	NO
2008	2	0	2	0	0%	NO
2009	4	1	5			
2-Year Mean					0%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 3A, 3B, 3C - Unitwide	None	None

Submitted by: Eric Podoll
Wildlife Manager(s)

Amendments & Notes:

Reviewed by 108 on 2/20/10.

Game Branch Approval:

Date: 3-16-10

Unit(s): 4A & 4B

Species: Mountain Lion

Year: 2009/10

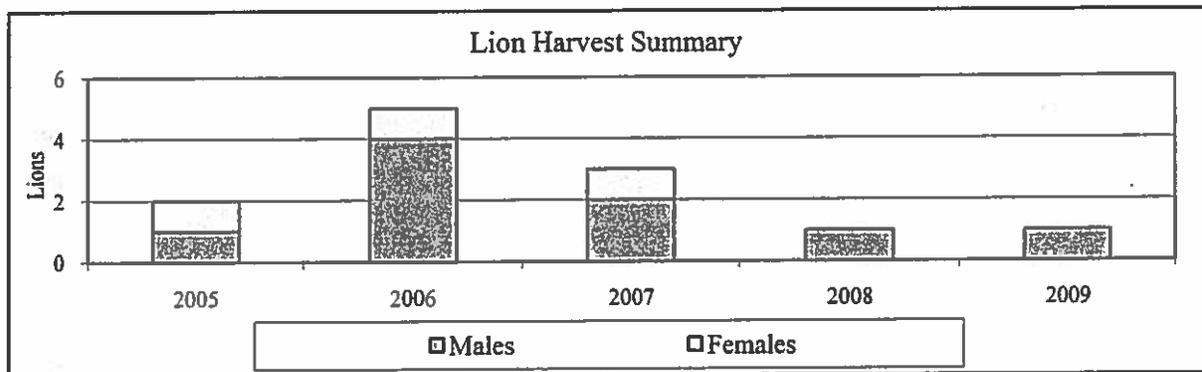
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	1	1	2	0	0%	NO
2006	4	1	5	0	0%	NO
2007	2	1	3	0	0%	NO
2008	1	0	1	0	0%	NO
2009	1	0	1			
2-Year Mean					0%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Statewide	None	None
Multiple Bag Limit (MBL)	July 1, 2010 - June 30, 2011			

Submitted by: B. G. Supervisor
Wildlife Manager(s)

Amendments & Notes:

Reviewed by Bob Birkeland, WMS, on 2-23-10.

Game Branch Approval:

[Handwritten Signature]

Date: 3-26-10

Unit(s): 4A & 4B

Species: Mountain Lion

Year: 2009/10

Management Notes:

Maintain standard hunt structure in Units 4A and 4B.

Unit(s): 27

Species: Mountain Lion

Year: 2009/10

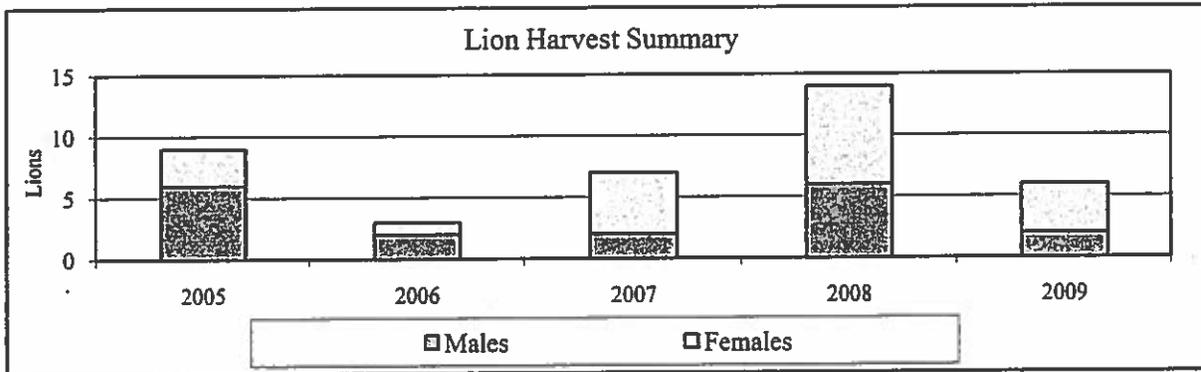
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	6	3	9	2	22%	NO
2006	2	1	3	0	0%	NO
2007	2	5	7	3	43%	YES
2008	6	8	14	3	21%	NO
2009	2	4	6			
2-Year Mean					32%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 27 - Unitwide	None	None
Multiple Bag Limit (MBL)	July 1, 2010 - June 30, 2011	Bear Canyon Hunt Area in Unit 27	5	
Multiple Bag Limit (MBL)	July 1, 2010 - June 30, 2011	Pipestem Hunt Area in Unit 27	10	

Submitted by: A. Hartzell
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-26-10

Management Notes:

The current hunt structure in GMU 27 is a recommended open season from August 20th through May 19th of the following year with a bag limit of one lion per year. This season and bag limit is consistent with most of the state. Additionally there are two multiple bag limit areas in the Bear Canyon and Pipestem areas of Unit 27. The two areas allow for year round lion hunting addressing population needs of recently reintroduced bighorn sheep.

The recommended triggers to initiate and/or stop these multiple bag hunts are as follows:

Bear Canyon – Initiate and/or continue the multiple bag hunt as long as the estimated sheep population is below 40 or there is two or more consecutive years with lamb recruitment below 35% at time of survey in the October/November survey period. This hunt will cease when the estimated sheep population is above 40 and one of the last two years of survey data indicates lamb recruitment is above 35%.

With these triggers in mind we are recommending to maintain the Bear Canyon multiple bag hunt for the 2010/2011 season. 2009 resulted in a poor survey with only 19 sheep observed. Fifteen additional sheep were observed later by hunters up KP canyon and would have resulted in a total of 34 sheep observed. Without including these sheep into the survey we come up with a population estimate of only 31, down from an estimate of 59 in 2008. Additionally, the lamb recruitment in 2009 was only 25% which is down from 50% in 2008. It is believed that the actual population is closer to the trigger of 40 animals but without the data to back that up we will remain conservative and recommend continuing the multiple bag limit hunt.

Pipestem – Initiate and/or continue the multiple bag hunt as long as the estimated sheep population is below 60 or there is two or more consecutive years with lamb recruitment below 35% at time of survey in the October/November survey period. This hunt will cease when the estimated sheep population is above 60 and one of the last two years of survey data indicates lamb recruitment is above 35%.

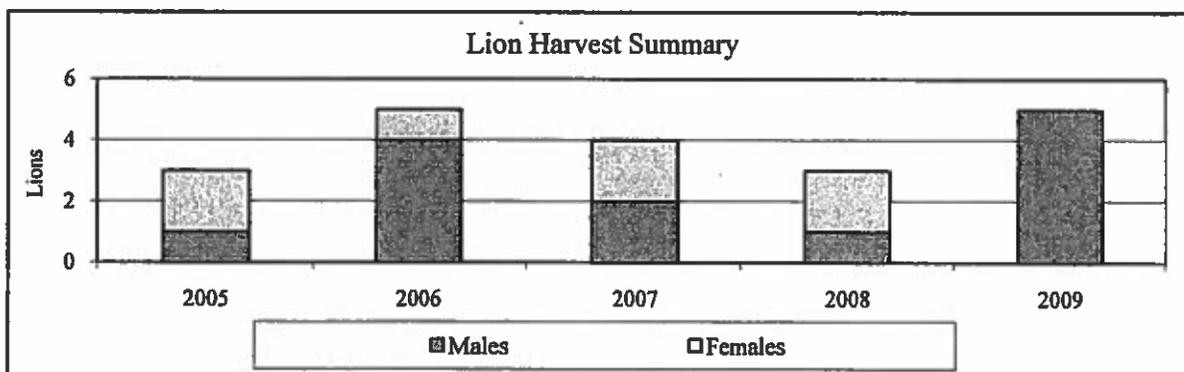
Without a survey in 2009 we have no data to suggest that we have hit the triggers to close down this multiple bag limit area. With neither of the above triggers having been met we will maintain the multiple bag hunt in the Pipestem area of unit 27. We will continue to monitor this population to determine future lion management in this area.

Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	1	2	3	2	67%	YES
2006	4	1	5	1	20%	NO
2007	2	2	4		0%	NO
2008	1	2	3	1	33%	NO
2009	5	0	5			
2-Year Mean					17%	NO

Management Considerations:

- *Continue Single Unit Management
- *No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Units 5A / 5B / 6A North - Statewide	None	None

Submitted by: C. Adams
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-10-10

Management Notes:

Harvest results from units 5A, 5B and 6A North were combined because it is believed that lions most likely travel between the units as they follow the prey base which is shared between the units. Of the 20 lions harvested between 2005 and 2009 only 4 (20%) were females greater than or equal to 3 years old. This is below the 35% limit and therefore I recommend that units 5A, 5B and 6A north remain open to lion hunting under the general statewide regulations and season dates.

Unit(s): 6A

Species: Mountain Lion

Year: 2009/10

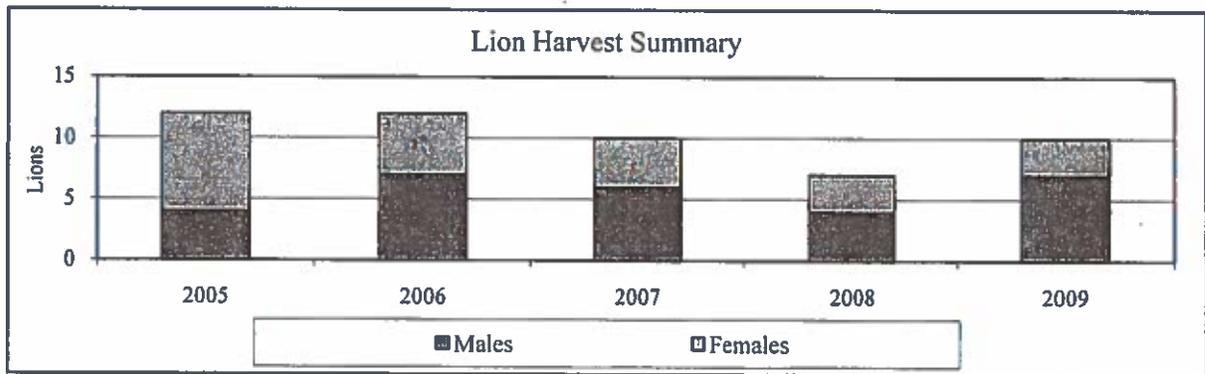
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	4	8	12	1	8%	NO
2006	7	5	12	2	17%	NO
2007	6	4	10	1	10%	NO
2008	4	3	7	2	29%	NO
2009	7	3	10			
2-Year Mean					19%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 6A	None	None
Multiple Bag Limit (MBL)	July 1, 2010 - June 30, 2011	Unit 6A South	15	None

Submitted by: E. M. Turnpaugh
Wildlife Manager(s)

Amendments & Notes:

WILL HAVE NEW MBL EVALUATION CRITERIA
SPECIFIC TO UNIT 6AS MANAGEMENT OBJECTIVES
NEXT YEAR

Game Branch Approval:

Date: 3-10-10

Management Notes:

During the 2009 hunting season 10 lions were harvested by hunters in GMU 6A (7 male, 3 female.)

Currently, a multiple bag limit for lions is in effect in GMU 6AS. Region II will discontinue the multiple harvest objective if:

- No lions are harvested in three consecutive years (lack of lion harvest may indicate a low population of lions), or*
- The Region is no longer monitoring radio-collared sheep, or*
- It is evident that predation is not impacting the reintroduced sheep population.*

Due to the fact that lions have been harvested within the last 3 years and Region II is currently monitoring radio-collared bighorn sheep in the area of West Clear Creek, it is my recommendation that the multiple bag limit stay in effect for the 2010 hunting season in GMU 6AS

Unit(s): 7,9

Species: Mountain Lion

Year: 2009/10

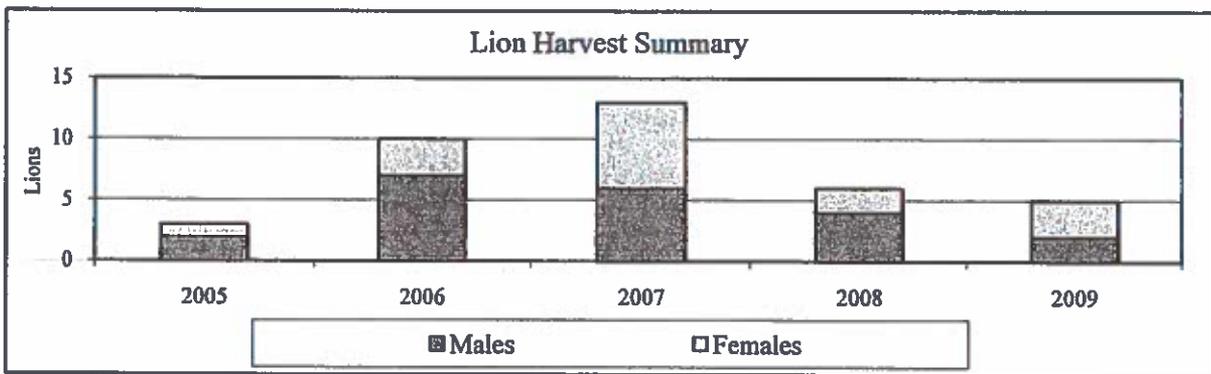
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	2	1	3	1	33%	NO
2006	7	3	10	3	30%	NO
2007	6	7	13	3	23%	NO
2008	4	2	6	1	17%	NO
2009	2	3	5			
2-Year Mean					20%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Units 7 and 9	None	None

Submitted by: M. White
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-10-10

Management Notes:Management Recommendations and Notes:

GMU's 7 and 9 are grouped together because they are similar in habitat type and large numbers of deer move back and forth across the unit boundaries between summer and winter ranges assuming that mountain lions follow their prey base.

The mountain lion harvest is split fairly evenly between GMU's 7 and 9 with a few more lions being taken in GMU 7. 54% of the harvest over the last five years have been males with 46% females. The average age of a male lion harvested in GMU's 7 and 9 over the last five years is 5.8 while only 3.6 for females.

GMU's 7 and 9 should remain open during the standard season type without a harvest limit since adult females ≥ 3 years of age have made up only 20% of the harvest between the two units (2 year mean). This will maximize hunter opportunity without jeopardizing the mountain lion population.

Unit(s): 8 & 6B

Species: Mountain Lion

Year: 2009/10

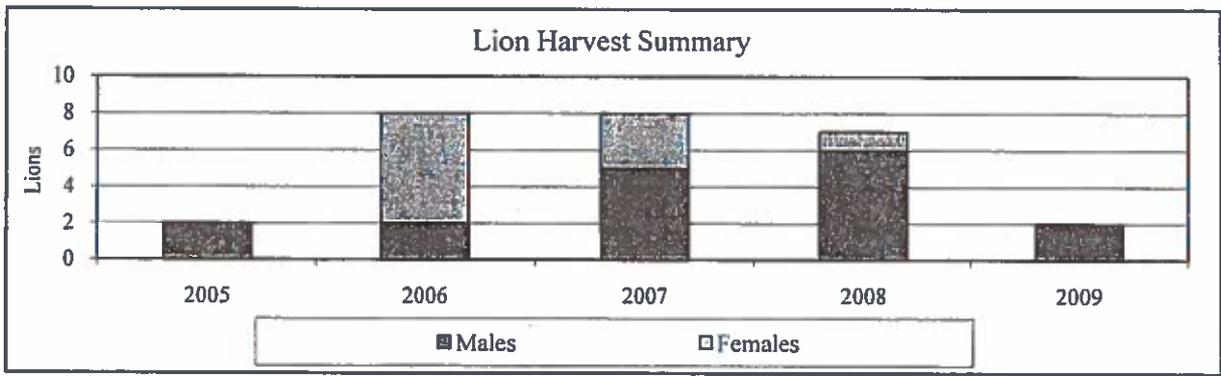
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	2	0	2	0	0%	NO
2006	2	6	8	4	50%	YES
2007	5	3	8	5	63%	YES
2008	6	1	7		0%	NO
2009	2	0	2			
2-Year Mean					31%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Units 8 & 6B - Unitwide	None	None

Submitted by: W. M. RICE & LEUDEKER
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-10-10

Management Notes:

SURVEY RESULTS:

There were no mountain lion surveys conducted in Units 6B & 8 for 2009. There were also no incidental observations made by the Unit Wildlife Managers. The Unit Wildlife Managers did find several lion killed deer and elk in the units as well as scrapes and tracks.

HUNT RESULTS:

For 2009 there were a total of 2 male mountain lions killed in Units 6B & 8.

OTHER INFORMATION:

No lion depredation complaints were made in 2008 in Unit 8. There were few observations of lions reported by the general public throughout the summer.

HUNT RECOMMENDATIONS:

Ten female lions have been killed in Units 6B & 8 from 2005 - 2008 with a median age of 4 years old (tooth data available for 6 of the 10 female lions killed during this period). I believe that Units 6B & 8 have a healthy mountain lion population due to a robust population of deer and elk.

Unit(s): 12A,12B,13A

Species: Mountain Lion

Year: 2009/10

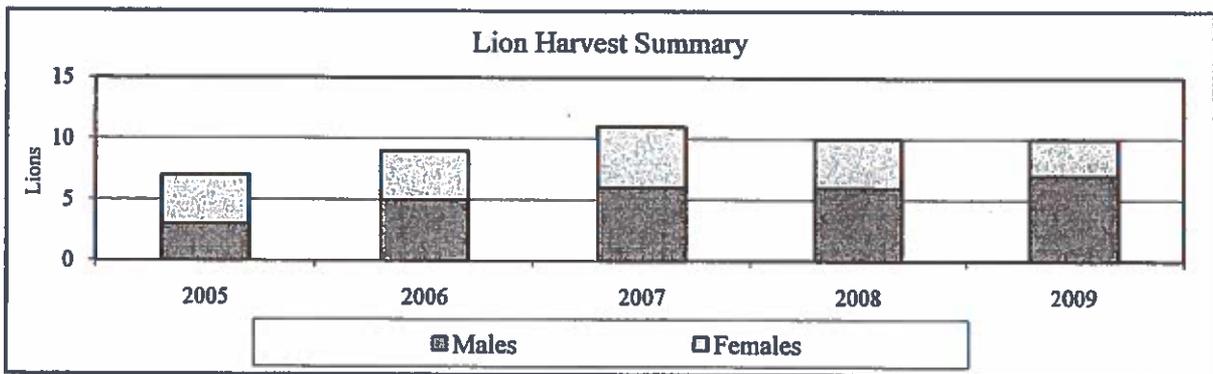
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	3	4	7	0	0%	NO
2006	5	4	9	2	22%	NO
2007	6	5	11	3	27%	NO
2008	6	4	10	0	0%	NO
2009	7	3	10			
2-Year Mean					14%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 12A/12B/13A - Unitwide	None	None

Submitted by: Todd Buck
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-10-10

Management Notes:

At the direction of regional game staff the harvest totals for 13A, 12A, and 12B were grouped for analysis of current harvest data. Current mountain lion harvest levels do not indicate a negative impact on the lion population. It is therefore proposed that the standard lion season be implemented in 12A/12B/13A for 2010.

Unit(s): 13B/13BS

Species: Mountain Lion

Year: 2009/10

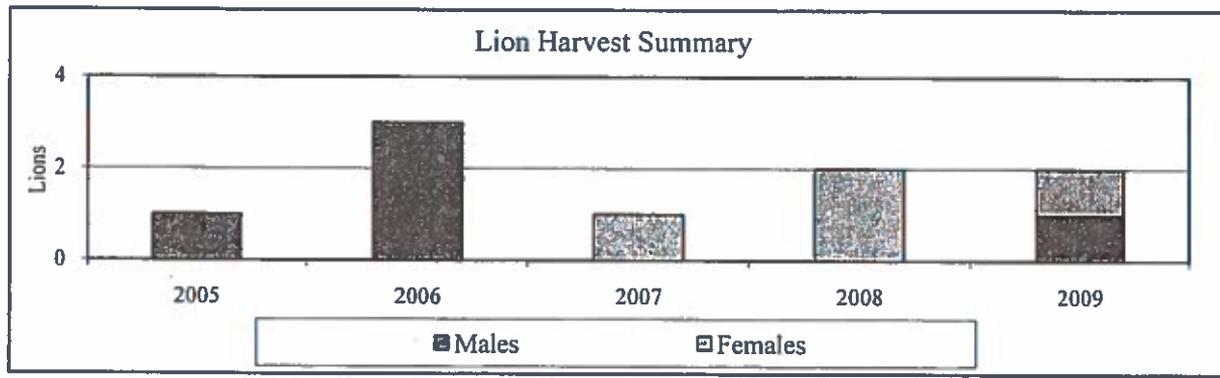
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	1	0	1	0	0%	NO
2006	3	0	3	0	0%	NO
2007	0	1	1	0	0%	NO
2008	0	2	2	1	50%	YES
2009	1	1	2			
2-Year Mean					25%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 13B - Unitwide	None	None
Multiple Bag Limit (MBL)	July 1, 2010 - June 30, 2011	13BS Hunt Unit	10	

Submitted by: L. Thompson
Wildlife Manager(s)

Amendments & Notes:

WILL DISCUSS WITH E-STAFF 13A/B COMBINED (TARGET 15)

Game Branch Approval:

[Signature]

Date: 3-10-10

Management Notes:

The 13B mountain lion population as a whole appears healthy. Track sign continues to be documented and track sign is relatively common. Archery deer hunters reported 4 different lions in a group on Black Rock Mountain during the August 2009 archery deer hunt, and for approximately 3 years in a row, track sign of 2 separate lions has been documented in the Mt. Dellenbaugh area of the unit.

Of note for the 13BS hunt unit is the multiple bag limit hunt. It is recommended that this hunt remain in place as a predator management tool to provide lion hunt opportunity. This hunt was structured as an incentive to draw mountain lion hunters to one of the most remote areas of the state and to help achieve management objectives for the struggling bighorn sheep population in the Grand Wash Cliffs.

Since 2002, ~17 mountain lions have been harvested as part of the multiple bag limit hunt. In 2002, the first year this was offered, 8 mountain lions were harvested. The harvest objective hunt encourages hunters to come to 13B when they otherwise won't because of the distance to travel, and the proximity of other Mountain Lion hunting areas in the central portions of AZ.

Multiple Bag Mountain Lion Hunt Triggers for 13BS:

To Continue the Hunt: The following stipulations apply:

1. A five-year average lamb:ewe ratio lower than what is recommended by Remington for a stable Arizona Bighorn Sheep Population (22:100);
2. A decline in the average number of class III and IV rams available for harvest within the population, equal to 2 or fewer permits on the permit worksheet;

To End the Hunt: The following stipulations apply:

1. An average lamb:ewe ratio above what is recommended by Remington for a stable Arizona Bighorn Sheep Population (22:100), based on survey data for two consecutive survey periods;
2. An increase in class III and IV rams available for harvest, equal to 3 or more permits on the permit worksheet;
3. No Lion Harvest for 3 consecutive years.

Unit(s): 10 Species: Mountain Lion

Year: 2009/10

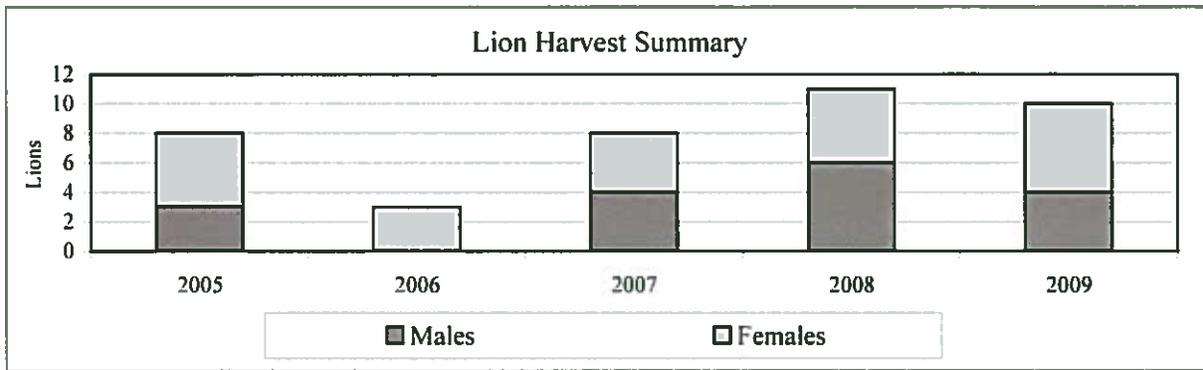
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	3	5	8	1	13%	NO
2006	0	3	3	1	33%	NO
2007	4	4	8	1	13%	NO
2008	6	5	11	4	36%	YES
2009	4	6	10			
2-Year Mean					24%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 10 - Unitwide	None	None

Submitted by: Ough, W.
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-11-10

Management Notes:

For 2010, no change is recommended for the mountain lion hunt structure in Unit 10. Presently, the harvest trend of adult lions does not justify a female harvest limit. Field observations of lion sign indicate a widely distributed population within this unit's 2,200 square miles.

A total of 40 lions have been harvested over the past 5 years, ranging from 3 to 11 annually. This averages 43% males and 57% females. Once, in 2008, the harvest exceeded 35% of females that are 3 years or older (36%). The 5-yr trend does not indicate an over-taking of breeding females in this unit.

Unit(s): 15 Species: Mountain Lion

Year: 2009/10

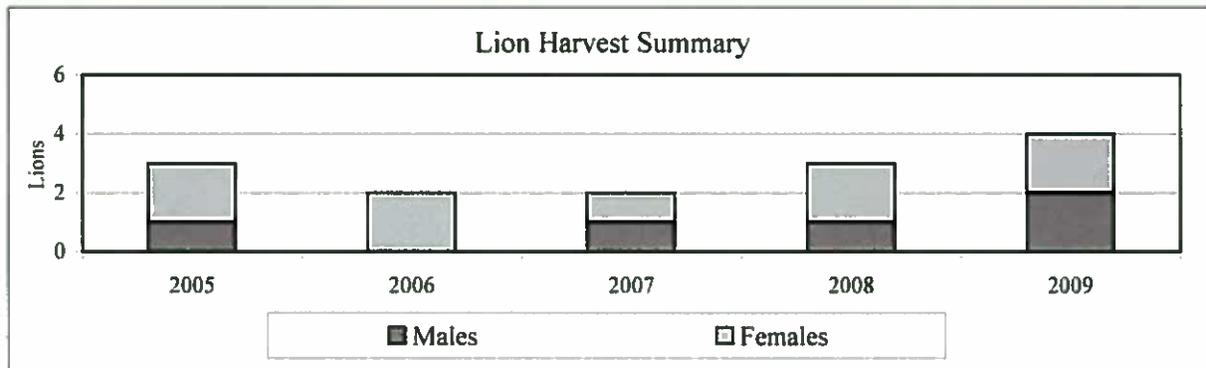
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	1	2	3	0	0%	NO
2006	0	2	2	1	50%	YES
2007	1	1	2	1	50%	YES
2008	1	2	3	1	33%	NO
2009	2	2	4			
2-Year Mean					42%	YES

Management Considerations:

*Evaluate Adjacent Unit Zone Management

*Consider Female Harvest Limit



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 15A/15BE - Unitwide		None
Multiple Bag Limit (MBL)	July 1, 2010 - June 30, 2011	Unit 15BW/15C/15D - Unitwide	10	None

Submitted by: Erickson, G., Kephart, D.
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-11-10

Management Notes:Multiple Bag Limit Triggers are as follows:

- * Sheep/hour observed in Unit 15CS reaches the 20-year average of 18.1 sheep/hr. In 2009 it was 9.6.
- * Average sheep observed in Unit 15CS reaches the 20-year average of >108 sheep. In 2009 it was 36.

Between April 2004 and October 2006 thirty mortalities were recorded on radio-collared sheep in the Black Mountains. Twenty of 30 mortalities were attributed to mountain lion predation. Over 25% of the radio-collared sheep on three active study areas (Hoover Dam, Unit 15CS, and Highway 68) had been killed by mountain lions in a two-year period. Actual percentages would be significantly higher without the addition of the Hwy 68 study, as these animals have only been collared since November 2005 (Black Mountain Bighorn Sheep Management Plan, 2006). In November 2006, thirty-five additional sheep were radio-collared in Unit 15CN and 15CS. Five mortalities occurred in 2007 (3 sheep in February, 1 sheep in May and 1 sheep in September); all were attributed to lion predation. In October 2008, an additional female sheep mortality was attributed to a mountain lion in Unit 15CN.

In the 2004-2005 hunt season, Units 15BW, 15C and 15D were added to the multiple bag limit hunt area. The hunt is to encourage removal of mountain lions by sport hunters to reduce predation on a declining bighorn sheep population. The harvest objective was placed at 10 due to the high density of lions in the area. A female harvest limit is not recommended.

Harvest Breakdown:

Unit	Year	♂	♀	Total	♀ >3 yrs	% Ad ♀
15AB	2005	0	1	1	0	0%
15AB	2006	0	0	0	0	0%
15AB	2007	1	1	2	1	50%
15AB	2008	0	2	2	1	50%
15AB	2009	1	1	2	0	0%

Unit	Year	♂	♀	Total	♀ >3 yrs	% Ad ♀
15MB	2005	1	1	2	0	0%
15MB	2006	0	2	2	1	50%
15MB	2007	0	0	0	0	0%
15MB	2008	1	0	1	0	0%
15MB	2009	1	1	2	0	0%

Unit(s): 16A Species: Mountain Lion

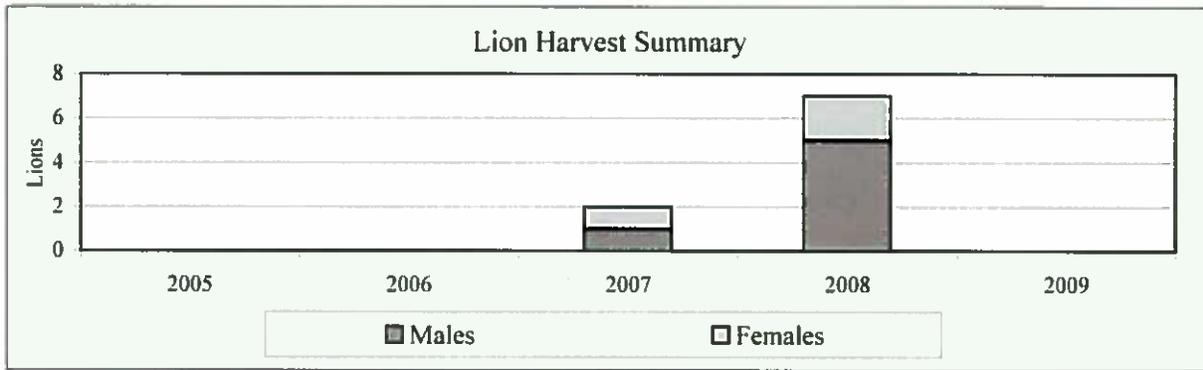
Year: 2009/10

Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005			0		#DIV/0!	#DIV/0!
2006			0		#DIV/0!	#DIV/0!
2007	1	1	2	0	0%	NO
2008	5	2	7	1	14%	NO
2009			0			
2-Year Mean					7%	NO

Management Considerations:

- *Continue Single Unit Management
- *No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 16A - Unitwide	None	None

Submitted by: Antolik, L.
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-11-10

Unit(s): 16B

Species: Mountain Lion

Year: 2009/10

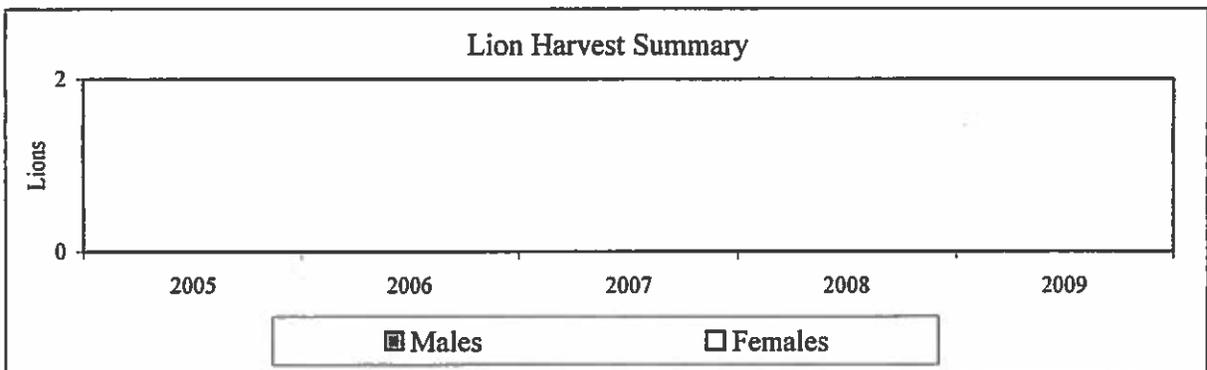
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005			0		#DIV/0!	#DIV/0!
2006			0		#DIV/0!	#DIV/0!
2007			0		#DIV/0!	#DIV/0!
2008			0		#DIV/0!	#DIV/0!
2009			0			
2-Year Mean					#DIV/0!	#DIV/0!

Management Considerations:

#DIV/0!

#DIV/0!



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	Sept. 1, 2010 - May 31, 2011	Unit 16B	None	None

Submitted by: D. Conrad
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-8-10

Unit(s): 16B

Species: Mountain Lion

Year: 2009/10

Management Notes:

There are no records of any sport killed lions for this hunt unit. We rarely receive reports of lion sightings from the public but these have not been substantiated. No lion sign has been documented in this unit in the last year.

Unit(s): 17A Species: Mountain Lion

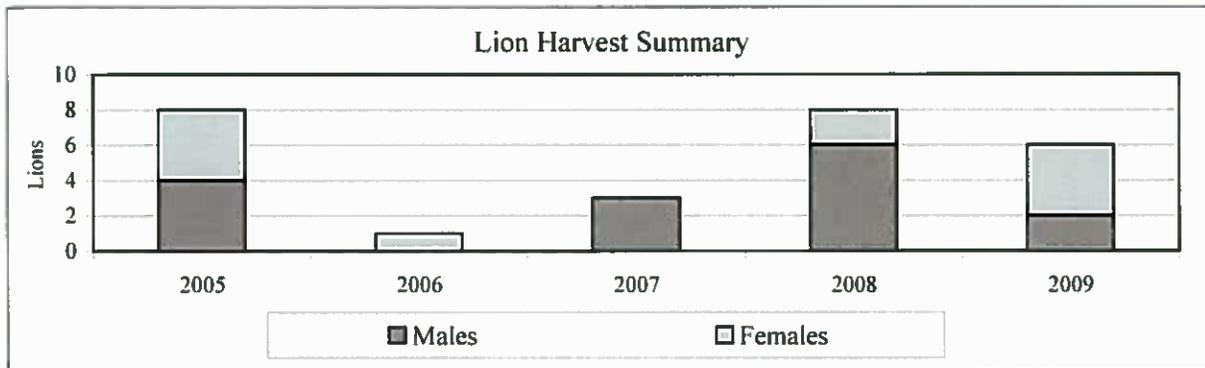
Year: 2009/10

Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	4	4	8	0	0%	NO
2006	0	1	1	1	100%	YES
2007	3	0	3	0	0%	NO
2008	6	2	8	1	13%	NO
2009	2	4	6			
2-Year Mean					6%	NO

Management Considerations:

- *Continue Single Unit Management
- *No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 17A - Unitwide	N/A	N/A

Submitted by: Tucker, D.
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-11-10

Management Notes:

Unit 17A is a very popular location for individuals hunting lions. Going back many decades, hunters in Unit 17A have harvested lions on an annual basis. In addition, livestock operators have historically taken depredating lions on a routine basis. This harvest is relatively stable, indicating no apparent change in the population. Furthermore, the number of lions taken by hunters/depredation is likely quite small compared to the total lion population in the unit. Ultimately, the driving force controlling the mountain lion population is prey availability, specifically mule deer.

I recommend no change to the mountain lion season in Unit 17A.

Unit(s): 17B Species: Mountain Lion

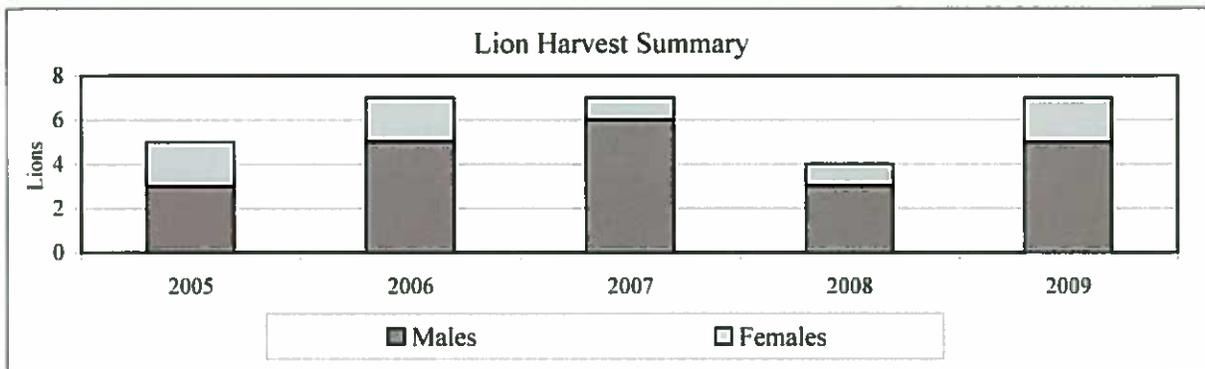
Year: 2009/10

Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	3	2	5	1	20%	NO
2006	5	2	7	0	0%	NO
2007	6	1	7	1	14%	NO
2008	3	1	4	0	0%	NO
2009	5	2	7			
2-Year Mean					7%	NO

Management Considerations:

- *Continue Single Unit Management
- *No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 17B - Unitwide	N/A	N/A

Submitted by: Tucker, D.
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-11-10

Management Notes:

Unit 17B is a very popular location for individuals hunting lions. Going back many decades, hunters in Unit 17B have harvested lions on an annual basis. In addition, livestock operators have historically taken depredating lions on a routine basis. This harvest is relatively stable, indicating no apparent change in the population. Furthermore, the number of lions taken by hunters/depredation is likely quite small compared to the total lion population in the unit. Ultimately, the driving force controlling the mountain lion population is prey availability, specifically mule deer.

I recommend no change to the mountain lion season in Unit 17B.

Unit(s): 18A Species: Mountain Lion

Year: 2009/10

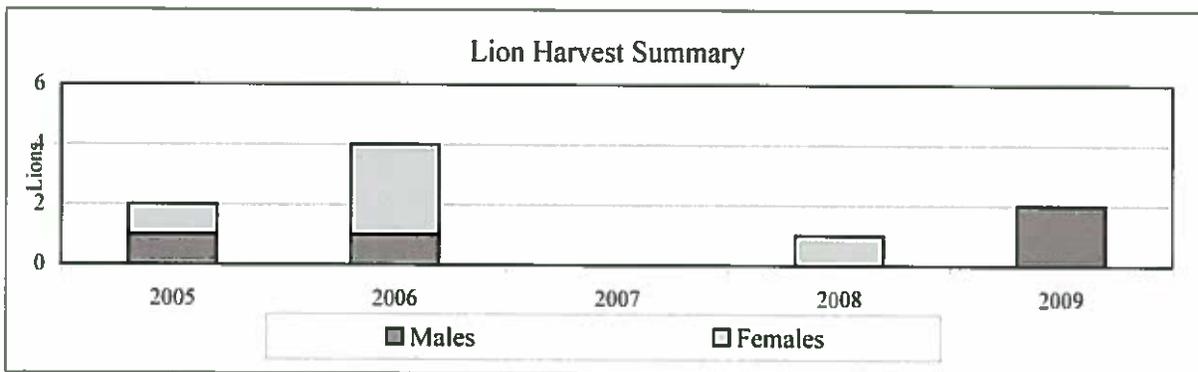
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	1	1	2	0	0%	NO
2006	1	3	4	1	25%	NO
2007	0	0	0	0	#DIV/0!	#DIV/0!
2008	0	1	1	1	100%	YES
2009	2	0	2			
2-Year Mean					#DIV/0!	#DIV/0!

Management Considerations:

#DIV/0!

#DIV/0!



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 18A - Unitwide	None	None

Submitted by: Kephart, D.
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-11-10

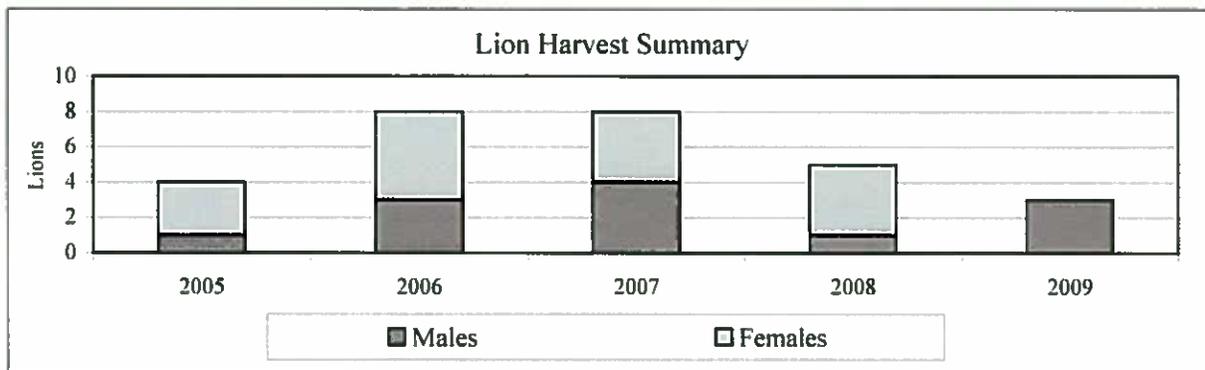
Unit(s): 18B Species: Mountain Lion

Year: 2009/10

Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	1	3	4	2	50%	YES
2006	3	5	8	2	25%	NO
2007	4	4	8	2	25%	NO
2008	1	4	5	3	60%	YES
2009	3	0	3			
2-Year Mean					43%	YES

Management Considerations: *Evaluate Adjacent Unit Zone Management
*Consider Female Harvest Limit



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 18B - Unitwide	None	None

Submitted by: Holt, V.
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Handwritten Signature]

Date: 3-11-10

Management Notes:

No female harvest is recommended for Unit 18B this year. The Wildlife Manager recommends combining Unit 18B with units 17A and 17B in the future. Although the two year mean percentage is slightly above guidelines, there were no females harvested in 2009.

Unit(s): 16AS/18BS Species: Mountain Lion

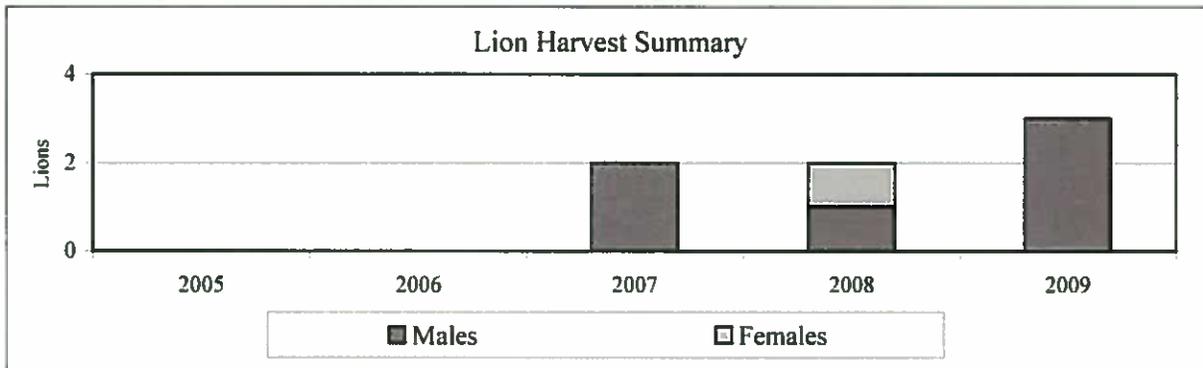
Year: 2009/10

Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	0	0	0	0	#DIV/0!	#DIV/0!
2006	0	0	0	0	#DIV/0!	#DIV/0!
2007	2	0	2	0	0%	NO
2008	1	1	2	1	50%	YES
2009	3	0	3			
2-Year Mean					25%	NO

Management Considerations:

- *Continue Single Unit Management
- *No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Multiple Bag Limit (MBL)	July 1, 2010 - June 30, 2011	Unit 16AS/18BS	15	None

Submitted by: Holt, V.
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-1-10

Management Notes:Multiple Bag Limit Triggers are as follows:

- * The bighorn sheep herd reaches a self sustaining level. In 2009 only 13 sheep were observed.
- * Less than 10% of the bighorn mortalities can be attributed to mountain lion predation. In 2009 there were no lion predation documented on bighorn sheep.

In November 2006, 28 bighorn sheep were released in Hell's Half Acre; then another 27 were released in 2007. The release planned for 2008 and 2009 was cancelled, but hopefully a third release will occur in 2010. Units 18BS & 16AS were added as a multiple bag limit hunt area to allow the bighorn sheep transplanted to settle in the area. Lion track surveys indicated a high density of lions in the area, so the harvest objective was 15 placed at 15 lions.

Unit 16AS should continue to be included since un-collared, ear-tagged sheep have been documented in Unit 16AS and have been documented crossing Highway 93 between Burro Creek and Kaiser Spring. A number of transplanted sheep reside in Unit 16AS at certain times of the year.

Unit(s): 19A Species: Mountain Lion

Year: 2009/10

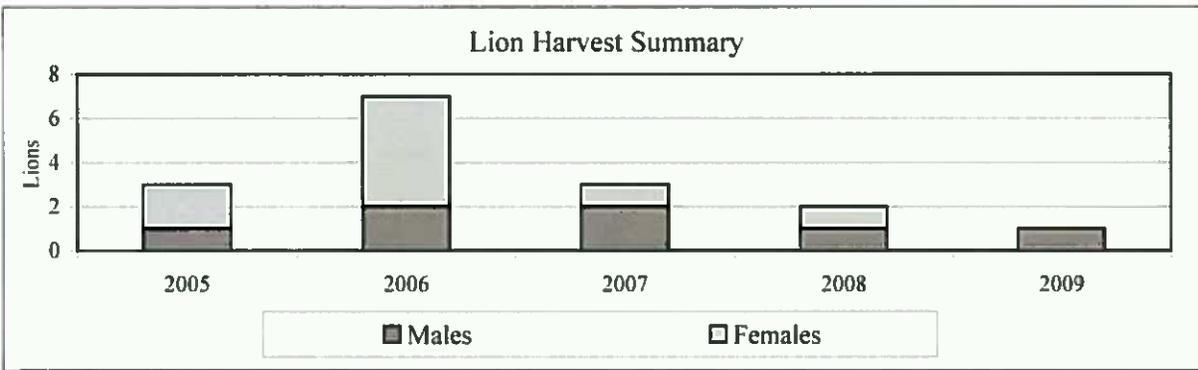
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	1	2	3	0	0%	NO
2006	2	5	7	0	0%	NO
2007	2	1	3	0	0%	NO
2008	1	1	2	0	0%	NO
2009	1	0	1			
2-Year Mean					0%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 19A - Unitwide	None	None

Submitted by: Gouldsbury, V.
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-11-10

Unit(s): 19B Species: Mountain Lion

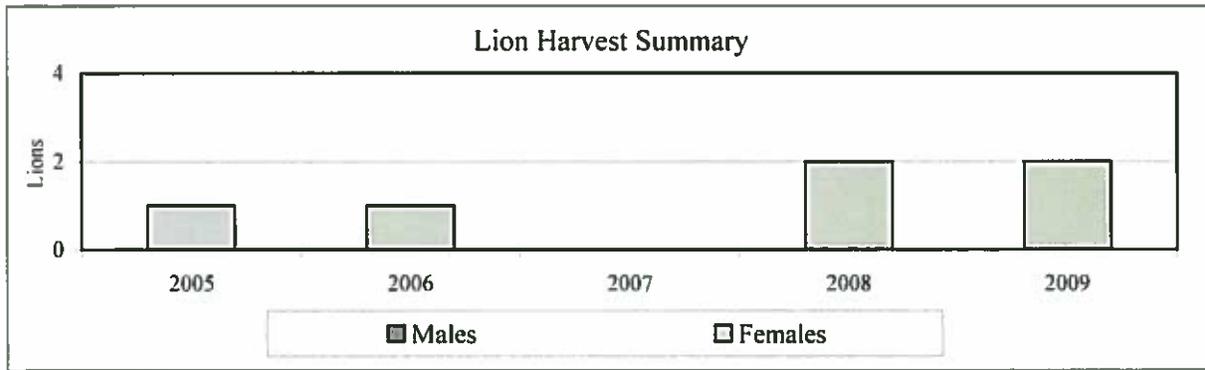
Year: 2009/10

Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	0	1	1	0	0%	NO
2006	0	1	1	1	100%	YES
2007	0	0	0	0	#DIV/0!	#DIV/0!
2008	0	2	2	2	100%	YES
2009	0	2	2			
2-Year Mean					#DIV/0!	#DIV/0!

Management Considerations:

#DIV/0!
#DIV/0!



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 19B - Unitwide	None	None

Submitted by: Ough, W.
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3/11/10

Management Notes:

For 2010, no changes in hunt strategy are recommended for Unit 19B. Historically, this unit has had a low harvest among its widely distributed lion population. Lion sign is consistently found throughout the unit's extensive pinyon pine-juniper woodlands. The low harvest is the result of the remote, rugged habitat that greatly reduces hunting opportunity. This is exemplified by Picacho Butte and Big Black Mesa. Most harvest is opportunistic during other hunts, e.g. deer and javelina seasons.

The female-only harvest for the past 5 years is assumed to be a function of small sample size and random chance. As a result, analysis of age-related harvest data must be taken with caution. Therefore, no harvest limit on females is recommended until harvest increases and includes the male segment.

Unit(s): 20A Species: Mountain Lion

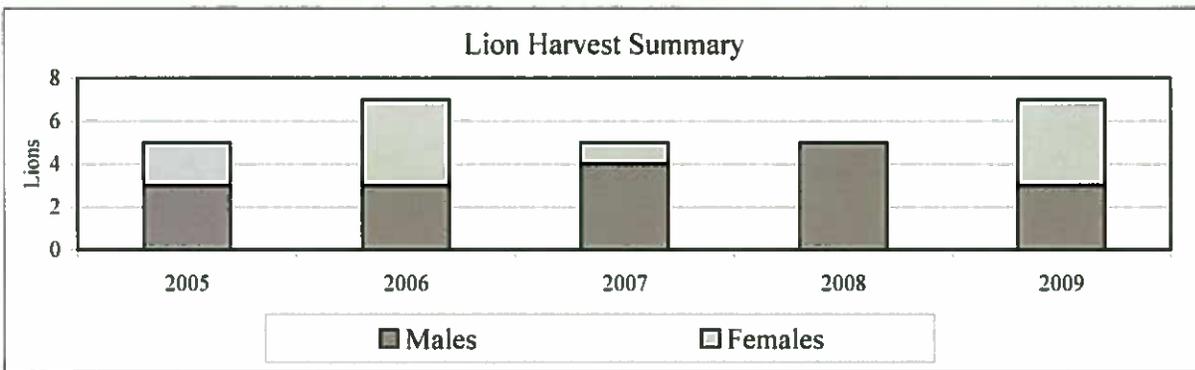
Year: 2009/10

Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	3	2	5	1	20%	NO
2006	3	4	7	0	0%	NO
2007	4	1	5	1	20%	NO
2008	5	0	5	0	0%	NO
2009	3	4	7			
2-Year Mean					10%	NO

Management Considerations:

- *Continue Single Unit Management
- *No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 20A - Unitwide	None	None

Submitted by: Poppenberger, S.
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-11-10

Unit(s): 20C

Species: Mountain Lion

Year: 2009/10

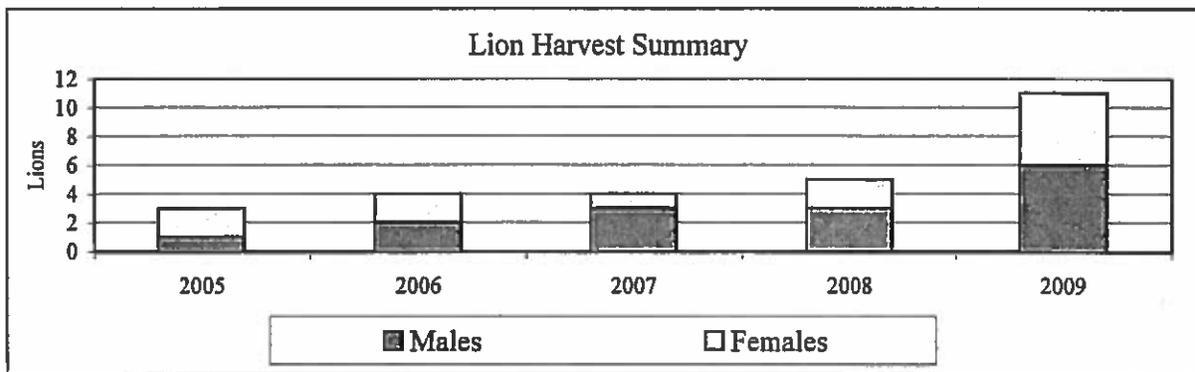
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	1	2	3	0	0%	NO
2006	2	2	4	1	25%	NO
2007	3	1	4	1	25%	NO
2008	3	2	5	0	0%	NO
2009	6	5	11			
2-Year Mean					13%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



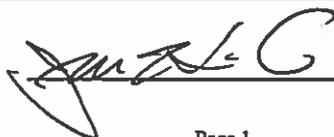
Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 20C - Unitwide	None	None

Submitted by: C. Herebrt
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:



Date: 3-8-10

Management Notes:**Survey Methods**

There were no mountain lion targeted surveys conducted. No mountain lions were observed during aerial surveys for deer and javelina. Undoubtedly 20C has a healthy mountain lion population given abundant prey populations and relatively large blocks of unfragmented habitat.

Comparative Hunt Data

2009 (11) observed a 120% increase in harvest over 2008 (5). The previous 3 year average harvest is 4.3 lions/year. The 2009 male:female harvest is 1.2:1. The previous 3 year average male:female harvest is 1.6:1.

Depredations

There were 3 depredation kills in 2009. One depredation kill was the result of two separate depredation events on young horses during the summer. Another depredation resulted from the take of a pet in Yarnell off the porch of a residence following numerous reports of two sub adult lions in the area. The circumstances of the third event are unknown.

Additional Information

Ranchers in the Peoples Valley and Wagoner areas continue to make up the majority of harvest for the unit. There were several unconfirmed reports of a mountain lion in the vicinity of the Hillside School during early and mid 2009. Calls were investigated and no evidence to support such claims were discovered.

Recommendation

20C should continue to be managed under the statewide standard season with no female harvest objective.

Unit(s): 40A

Species: Mountain Lion

Year: 2009/10

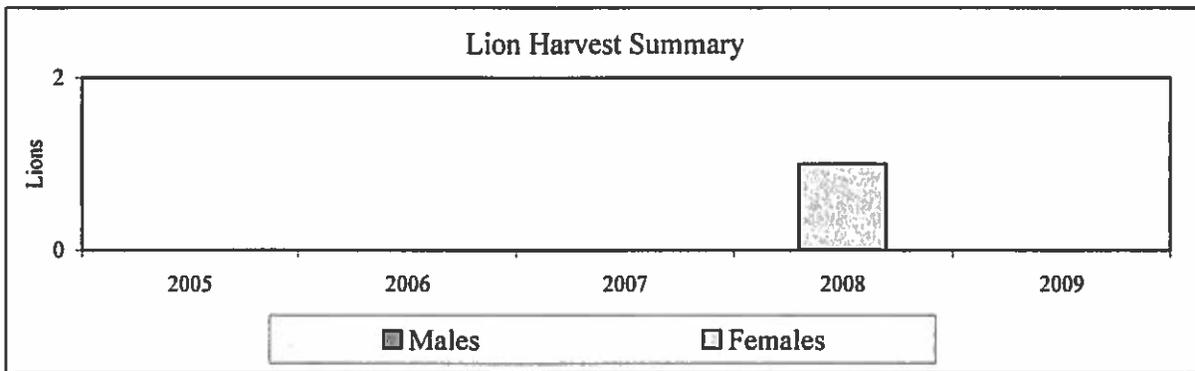
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	0	0	0	0	#DIV/0!	#DIV/0!
2006	0	0	0	0	#DIV/0!	#DIV/0!
2007	0	0	0	0	#DIV/0!	#DIV/0!
2008	0	1	1	0	0%	NO
2009	0	0	0			
2-Year Mean					#DIV/0!	#DIV/0!

Management Considerations:

#DIV/0!

#DIV/0!



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Multiple Bag Limit (MBL)	July 1, 2010 - June 30, 2011	40A	4	
			0	
			0	

Submitted by: WM D. URQUIDEZ
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-8-10

Management Notes:

Currently, only one lion has been harvested in 2008 since the multiple-bag limit was initiated.

Over the past two summers, trail cameras have photo-trapped several lions throughout Area B, BMGR. In addition, in 2008 several lions were also photo-trapped in the Vekol Valley area.

Adjacent units such as GMUs 39E & 40B near the GMU 40A's boundary have had several sightings reported, including several photos of lions in the South Maricopa Mountains. The South Maricopa Mountains are part of a complex of mountains that also experienced a bighorn sheep population crash during the same period as GMU 40A.

I recommend the multiple-bag limit of four be maintained.

The harvest objective should be discontinued when the bighorn sheep population in GMU 40A reaches a self-sustaining level of 200, or if evidence indicates that less than 10% of the bighorn sheep mortality can be attributed to mountain lion predation.

Unit(s): 40B

Species: Mountain Lion

Year: 2009/10

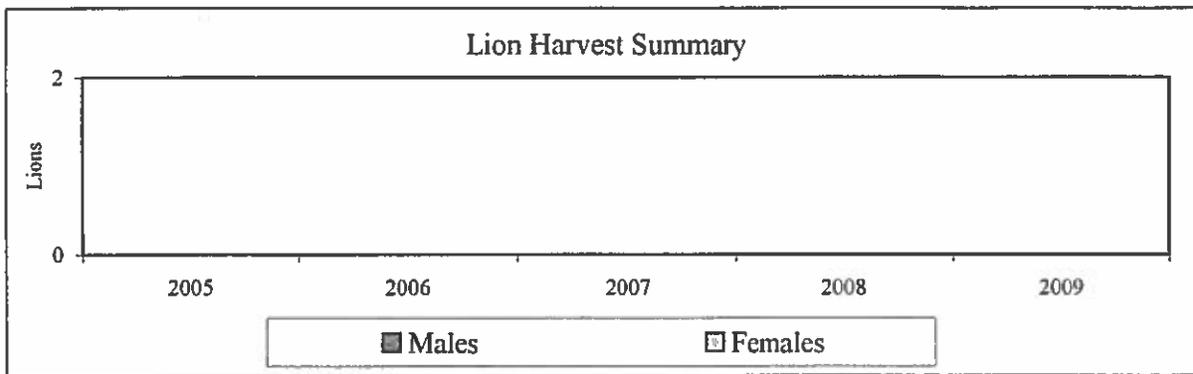
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	0	0	0	0	#DIV/0!	#DIV/0!
2006	0	0	0	0	#DIV/0!	#DIV/0!
2007	0	0	0	0	#DIV/0!	#DIV/0!
2008	0	0	0	0	#DIV/0!	#DIV/0!
2009	0	0	0			
2-Year Mean					#DIV/0!	#DIV/0!

Management Considerations:

#DIV/0!

#DIV/0!



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	40B	0	
			0	
			0	

Submitted by: WM D. URQUIDEZ

Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-8-10

Management Notes:

Lions in GMU 40B have been reported with some irregularity over the past years.

The central and western areas of 40B rarely have any reports of lions. One sighting in the southern Tinajas Altas occurred nearly a decade ago. Trail-cameras were set on all 40BW waters too include the Aguila Mountains for the past two summers between June and July. No lions were photo-trapped during these periods. No lion kills have been documented or reported in 40BW.

Ajo residents have reported several transient lions in and around Ajo over the past few years. Some years the reports are more frequent than others. Reports have included a horse and a dog attack. As well, several local people experiencing close encounters without an attack. Two road kill lions occurred on U.S. Hwy 85 and the other on U.S. Hwy 86 within the last two decades. The most recent road kill was three years ago. The last lion captured in the middle of Ajo occurred approximately in the late 1980's. Ajo is in close proximity of GMU 40A. This unit currently has a multiple-bag limit of four. The probability of a lion being harvested in the Ajo surrounding area is good.

Unit(s): 41

Species: Mountain Lion

Year: 2009/10

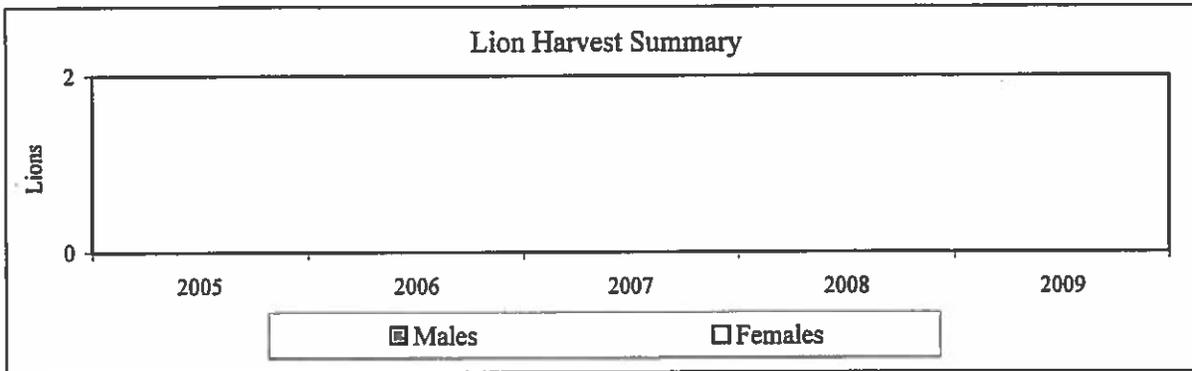
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	0	0	0	0	#DIV/0!	#DIV/0!
2006	0	0	0	0	#DIV/0!	#DIV/0!
2007	0	0	0	0	#DIV/0!	#DIV/0!
2008	0	0	0	0	#DIV/0!	#DIV/0!
2009	0	0	0			
2-Year Mean					#DIV/0!	#DIV/0!

Management Considerations:

#DIV/0!

#DIV/0!



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	41	None	None

Submitted by: J.SAYER
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-8-10

Management Notes:

No lions were reported to have been harvested in 2009 game management unit 41. There is no historical data of lions being harvested in unit 41. One lion was known to have been hit by a car near the White Wing Ranch.

Mountain lions were historically not known to inhabit game management unit 41. When lion sign was found it was often that of a transient male lion. It is thought that in the early to mid 2000's lions began inhabiting the area. Mountain lions are now believed to utilize much of the habitat in unit 41.

Currently there is an effort underway to better understand the movement and behavior of mountain lions in unit 41 and the surrounding areas. It is believed that the lion population has grown throughout the unit. Unconfirmed sightings have increased by locals over the last several years. In addition, the bighorn population is suspected to have become a significant prey base for lions in the western and northern portions of unit 41. Lion sign has been observed throughout the unit.

In the fall of 2009 a wildlife technician was hired to capture and attach GPS collars to lions in region IV. Currently there is one collared lion that inhabits unit 41. The data gained from the collars will be used to determine the movement and behavior of lions. Predation is heavily monitored to determine the lions effect on bighorn sheep. It is suspected that there are at least 4 lions that utilize the unit with at least one of them a female, indicating that a breeding population is present.

Lion scat is being collected to genetically determine where the lions originated from and what their diet consists of. This study is being conducted outside of the Arizona Game and Fish Department with samples jointly collected by department personnel.

Unit(s): 42

Species: Mountain Lion

Year: 2009/10

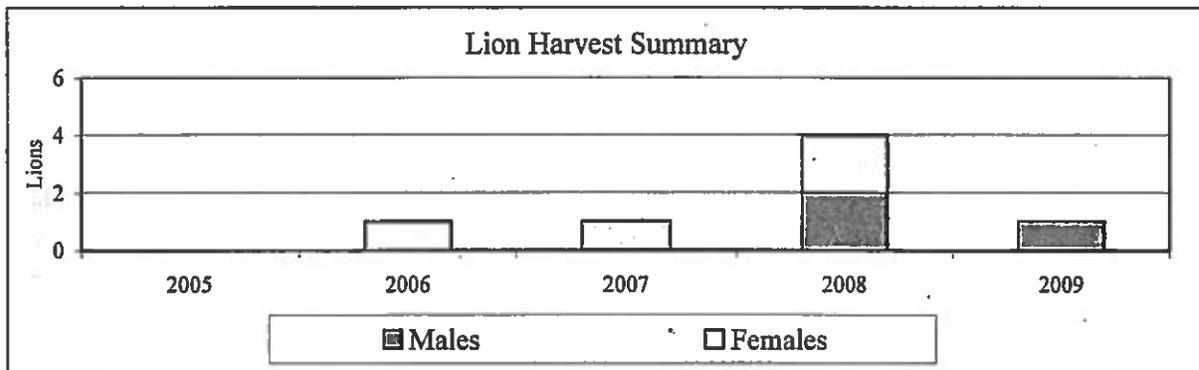
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	0	0	0	0	#DIV/0!	#DIV/0!
2006	0	1	1	1	100%	YES
2007	0	1	1	1	100%	YES
2008	2	2	4	0	0%	NO
2009	1	0	1			
2-Year Mean					50%	YES

Management Considerations:

*Evaluate Adjacent Unit Zone Management

*Consider Female Harvest Limit



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 42 - Unitwide	None	None
Multiple Bag Limit (MBL)	July 1, 2010 - June 30, 2011	42 (south of the Buckeye-Aguila Rd and west of 355th)	2	

Submitted by: C. W. Heath
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-8-10

Management Notes:**Unit 42 Lion Management Notes:**

Mountain lion management in GMU 42 is closely tied to the management of bighorn sheep in the Big Horn Mountains. A total of 39 bighorn sheep have been transplanted into the Big Horn Mountains in two releases to augment the remnant herd (26 sheep in 2007 and 13 sheep in 2009). Thirty one of the released sheep were fitted with telemetry collars.

Sixteen of the collared sheep have died since release. Mortalities of collared sheep have been examined to determine cause of death. Nine of the mortalities have been confirmed to be lion kills.

Three mortalities occurred in 2009. Ewe # 12 was a 10 year old from the 2005 release and was killed by a lion in February, 2009. Ewe # 31 was a 6 year old from the 2007 release and was also killed by a lion in June, 2009. Ewe #11 was a 9 year old from the 2005 release and was found dead in the Harquahala Mountains of unknown causes.

For four years no lions have been reported killed from the multiple bag limit zone of unit 42. Several hunters have attempted to hunt lions with dogs and calling within the zone but none have been successful.

Presently there is a collared female mountain lion in unit 42. This lion has traveled over a large portion of the unit with time spent in the White Tank Mountains, Belmont Mountains, Vulture Mountains and Big Horn Mountains. Several mule deer kills have been attributed to this lion. More data on habitat used and prey species taken will be examined during the life of this collared lion.

Additional lion sign has been documented unit wide with a few urban sightings in Tonopah and the Wickenburg area.

It is recommended that the MBL target of 2 lions remain in effect for the area south of the Buckeye-Aguila Road and west of 355th Ave. Bighorn sheep numbers have not reached the desired objective of 200 animals and the lion predation on collared bighorn sheep remains high.

Unit(s): 43A

Species: Mountain Lion

Year: 2009/10

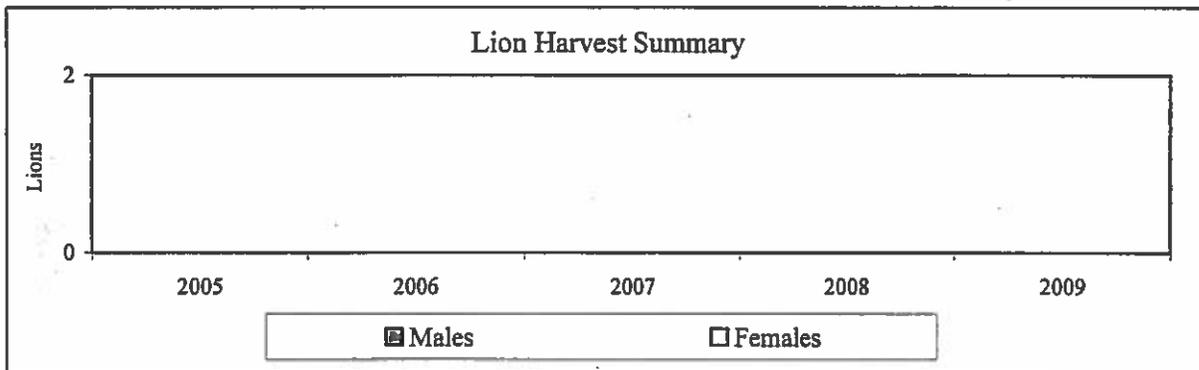
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	0	0	0	0	#DIV/0!	#DIV/0!
2006	0	0	0	0	#DIV/0!	#DIV/0!
2007	0	0	0	0	#DIV/0!	#DIV/0!
2008	0	0	0	0	#DIV/0!	#DIV/0!
2009	0	0	0			
2-Year Mean					#DIV/0!	#DIV/0!

Management Considerations:

#DIV/0!

#DIV/0!



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 43A - Unitwide	None	None

Submitted by: C. Shanley
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-8-10

Unit(s): 43A

Species: Mountain Lion

Year: 2009/10

Management Notes:

In the last five year there has been no record of a mountain lion being harvested in GMU 43A. Cameras were set up to record game activity at water catchments #737 and #738, both of which are located in the eastern part of 43A near the Kofa NWR boundary. These cameras were monitored almost continuously from May 2009 to August 2009. No mountain lion sightings were recorded during that time period.

Unit(s): 43B

Species: Mountain Lion

Year: 2009/10

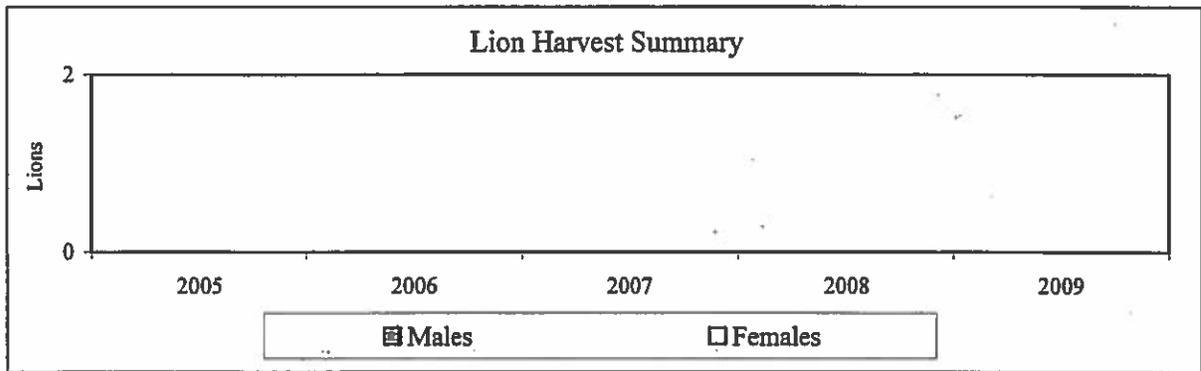
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	0	0	0	0	#DIV/0!	#DIV/0!
2006	0	0	0	0	#DIV/0!	#DIV/0!
2007	0	0	0	0	#DIV/0!	#DIV/0!
2008	0	0	0	0	#DIV/0!	#DIV/0!
2009	0	0	0			
2-Year Mean					#DIV/0!	#DIV/0!

Management Considerations:

#DIV/0!

#DIV/0!



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 43B - Unitwide	None	None
				It

Submitted by: W. M. Ranger Alicia Allen
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-8-10

Management Notes:

For the last five year period, there have been no reported mountain lion kills in GMU 43B. In the last year, the district wildlife manager has received two reports of mountain lion sightings; however, neither report was confirmed.

AGFD Research Branch has an ongoing study in U43B. Currently, there are several collared bighorn sheep rams in U43B, whose locations, movements, and mortality are being closely monitored. In addition several game cameras are in place along the mesquite bosque areas of U43B. Cameras are also placed on watercatchments in U43B by the region. In the last two year period, one mountain lion was documented on a sheep water catchment in the Chocolate Mountains and one mountain lion was documented on a deer water catchment in the Chocolate Mountains. It is unknown if this was the same lion or two different lions. These efforts may produce more information on lion occurrence and activity in 43B in the future.

Unit(s): 44AE

Species: Mountain Lion

Year: 2009/10

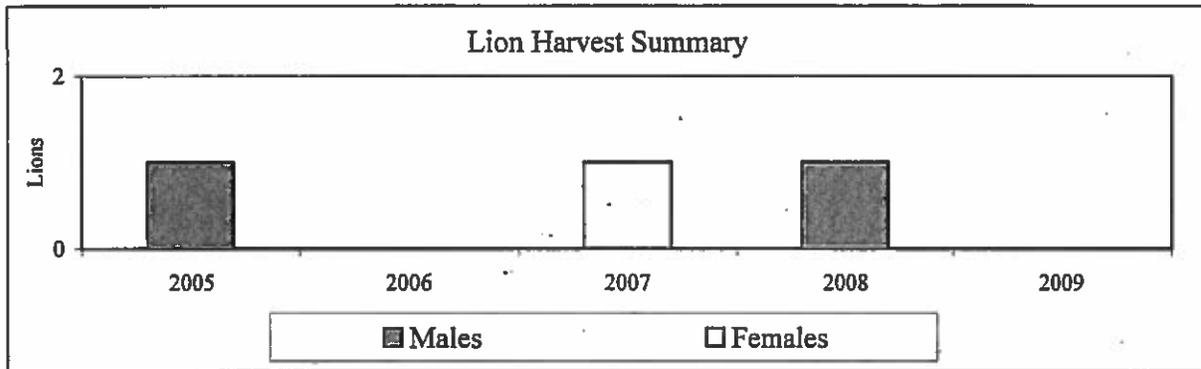
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	1	0	1	0	0%	NO
2006	0	0	0	0	#DIV/0!	#DIV/0!
2007	0	1	1	N/A	#VALUE!	#VALUE!
2008	1	0	1	1	100%	YES
2009	0	0	0			
2-Year Mean					#VALUE!	#VALUE!

Management Considerations:

#VALUE!

#VALUE!



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Multiple Bag Limit (MBL)	July 1, 2010 - June 30, 2011	Unit 44A East of Cunningham Wash	4	None
Standard	August 20, 2010 - May 19, 2011	44A west of Cunningham Wash	Standard	

Submitted by: S. A. Kohnke
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-8-10

Management Notes:

Hunt Unit 44A is partitioned into two hunt areas. One is the multiple bag limit area and the rest of the unit is the Standard. The Boundaries for the multiple bag limit area are as follows: Beginning at Alamo Lake; southeasterly along the Wenden- Alamo Lake Road to Cunningham Wash, southwesterly along Cunningham Wash to McVay Road; south on McVay Road to AZ Hwy 72; southeasterly on AZ Hwy 72 to Vicksburg; south on the Vicksburg Road to I-10; easterly on I-10 to the Salome-Hassayampa road (Exit 81); northwesterly on this road to Eagle Eye road; northeasterly on Eagle Eye road to Aguila; east on U.S. Hwy 60 to AZ Hwy 71; northeasterly on AZ Hwy 71 to U.S. Hwy 93; northwesterly on U.S. Hwy 93 to the Santa Maria River; westerly along the Santa Maria and Bill Williams rivers to Alamo Lake. The multiple bag limit area is surrounding a mojar bighorn sheep transplant area.

From 1994 to 2001, one hundred and eleven desert bighorn sheep have been transplanted into 4 different locations in the Granite Wash and Harcuvar Mountains. Of these 111 total sheep 72 were fitted with VHF radio telemetry collars (Telonics, Inc., Mesa, AZ) and were monitored through January of 2006. Mortality signals were located as soon as possible after each telemetry flight. 49 mortalities were indicated but one was not recovered. Of the 48 documented mortalities, 23 were caused by mountain lion, 15 were undetermined but not obvious predation, five were capture related, four had evidence of bad sinusitis, one from falling and one drowned.

In 2000, twenty-five desert bighorn sheep were transplanted into the Harquahala Mountains. Of these 25 sheep, 13 were fitted with VHF radio telemetry collars and were monitored through January of 2006. Mortality signals were located as soon as possible after each telemetry flight. 9 mortalities were documented and 3 radio collars either malfunctioned or their battery went dead. Of the 9 documented mortalities, 8 were caused by mountain lion and the other one appeared to be malnutrition.

Of these 57 documented desert bighorn sheep mortalities investigated 31 or 54% were caused by mountain lion predation. These predations occurred throughout the habitat from low creosote-paloverde to chaparral-scrub type. Lion predations during the radio telemetry study occurred in the Harquahalas, Little Harquahalas, Granite Wash, and the Harcuvar Mountains.

Adjacent bighorn sheep habitat includes the Bighorn and Belmont Mountains in unit 42. Research associated with construction of the Hayden/Rhodes aqueduct documented movement of radio collared bighorn sheep between the Little Harquahala and Harquahala Mts. and between the Harquahala and Bighorn/Belmont Mts. (Krausman, Etchberger 1993).

Management Notes:

Mountain lion sign and/or lion predations have been documented at almost every developed waterhole around these mountains. In 2009, eight deer predations have been observed at water developments in the multiple bag limit area. In 2006, fifteen deer predations were observed at a single water development on top of the Harcuvar Mountains.

Recommendation:

This unit has been open for the harvest of mountain lion, but only rarely is any harvest recorded. In the last five years only three lions were reported as harvested in 44A. It is hoped that the setting of a multiple bag with a harvest objective greater than one will encourage an increase in the sport take of mountain lions in this area. A temporary reduction in mountain lion numbers in bighorn sheep habitat is expected to reduce predation on sheep and help them to recover to a self-sustaining population level.

The harvest objective should be discontinued when the bighorn sheep population in this portion of Unit 44A reaches a self-sustaining level of 332. The current population estimate is 91 animals.

Population information for lions in this habitat type is scarce and population estimating techniques are few. One mapping strategy from several years ago categorized lion habitat using designations of sparse, low and medium habitat. The densities developed for each category were ranges, but the low end of the range seems most realistic in Region 4:

sparse = .001 lions per square mile (lpsm) X ~200 square miles multiple bag area (mba) = .2

low = .005 lpsm X ~1000 square miles in the mba = 5

medium = .01 lpsm X ~380 square miles in the mba = 3.8

Total = 9 lions X 50% = 4.5 or 4 lions

GMU 44A is shown to contain a total of 2363 square miles of habitat; 400.4 sq mi of sparse lion range, 1482 sq mi of low lion range, and 480.3 sq mi of medium range.

A harvest objective of 50 % of the population estimate would be 4.

We propose a multiple bag structure be instituted in a portion of Unit 44A with a harvest objective of 4 lions.

The rest of the unit would be designated with the Standard lion hunt.

Unit(s): 44B

Species: Mountain Lion

Year: 2009/10

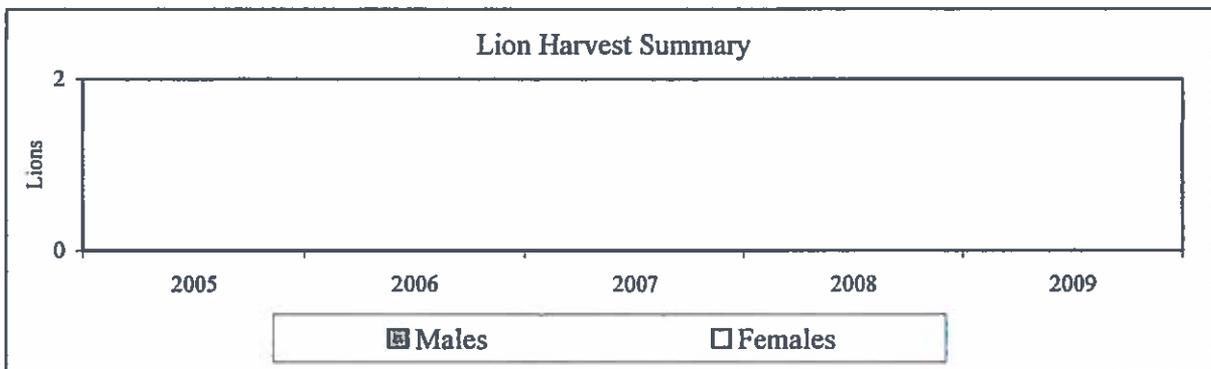
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005			0		#DIV/0!	#DIV/0!
2006			0		#DIV/0!	#DIV/0!
2007			0		#DIV/0!	#DIV/0!
2008			0		#DIV/0!	#DIV/0!
2009			0		#DIV/0!	#DIV/0!
2-Year Mean					#DIV/0!	#DIV/0!

Management Considerations:

#DIV/0!

#DIV/0!



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	Sept. 1, 2010 - May 31, 2011	Unit 44B	None	None

Submitted by: D. Pflieger, D. Conrad
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-8-10

Management Notes:

We have no records of any sport killed lions from this hunt unit.

The portion of the unit south of I-10 is subject to the Kofa Predation Mgt. Plan. As part of implementing the plan, a male lion (adult) was killed by Department personnel in June 2007 at Dripping Springs. Location data from this lion's GPS collar indicated that the portion of 44B south of I-10 was part of it's home range. When lethally removed the lion was near 2 bighorn ewes and one mule deer doe that had been killed and cached at Dripping Springs.

Camera traps were placed at Nugget Tank, Dripping Springs, Brintley Well and catchments #518 and #519 from June 2009 - Dec. 2009 and no lions were documented. In addition the Wildlife Manager has been actively searching for lion sign at all water developments throughout the unit since June of 2007 and no lion sign has been detected.

We continue to get persistent reports (this year and periodically over many years) of lion sightings from the public in the Bouse and Quartzsite areas but these reports have never been substantiated by the WM.

Unit(s): 28

Species: Mountain Lion

Year: 2009/10

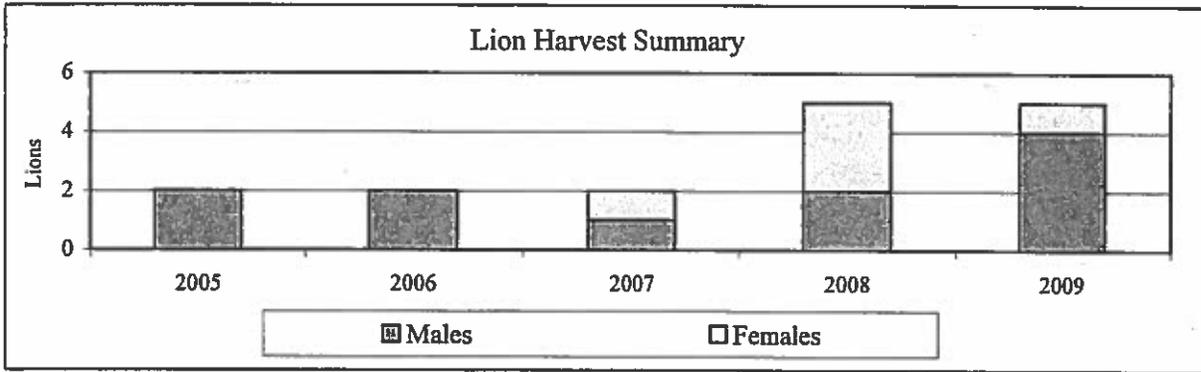
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	2	0	2	0	0%	NO
2006	2	0	2	0	0%	NO
2007	1	1	2	0	0%	NO
2008	2	3	5	3	60%	YES
2009	4	1	5			
2-Year Mean					30%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 28 Unit Wide	None	None
Multiple Bag Limit (MBL)	July 1, 2010 - June 30, 2011			
Multiple Bag Limit (MBL)	July 1, 2010 - June 30, 2011			

Submitted by: D Skinner
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-9-10

Management Notes:

**Please provide explanation and justification for recommendations outside of guidelines.*

**This section may be used to document management information that may be instructive to future wildlife managers.*

**This section may vary by region; some regions may have other required information for this section.*

The recommendation is to maintain the current mountain lion season and structure in Game Management Unit 28. The sport harvest does not seem to be having a detrimental impact on the lion population in Unit 28. The five year average harvest is 3 animals per year.

The 2 year average does not exceed the recommended 35% female harvest. It appears that the lion harvest in Unit 28 is fairly stable for the past 5 years.

It should be mentioned that depredating mountain lions are taken by USDA's Wildlife Services in Unit 28. The 5 year average depredation take has been 11.4 lions whereas the 5 year average sport take has been 3.2 lions. In 2009 a total of 14 lions were taken in Unit 28, in 2008 a total of 16 lions were harvested in Unit 28.

Unit(s): 29/30A

Species: Mountain Lion

Year: 2009/10

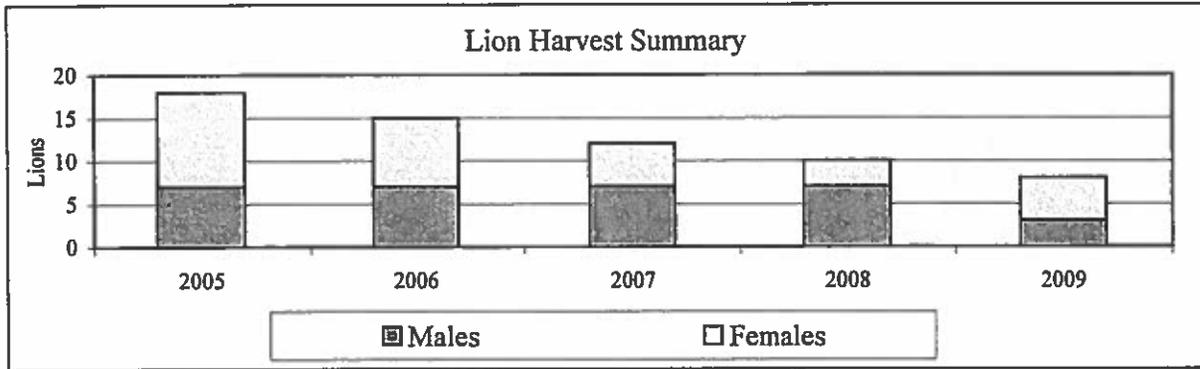
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	7	11	18	7	39%	YES
2006	7	8	15	10	67%	YES
2007	7	5	12	5	42%	YES
2008	7	3	10	2	20%	NO
2009	3	5	8			
2-Year Mean					31%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 29/30A-Unitwide	None	None

Submitted by: G.R.GONZALES
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:



Date: 3-9-10

Unit(s): 30B

Species: Mountain Lion

Year: 2009/10

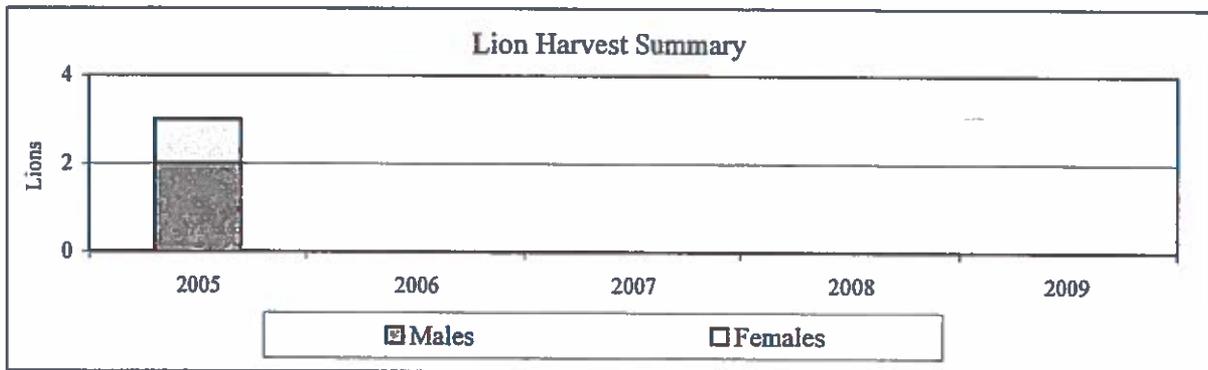
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	2	1	3	0	0%	NO
2006	0	0	0	0	#DIV/0!	#DIV/0!
2007	0	0	0	0	#DIV/0!	#DIV/0!
2008	0	0	0	0	#DIV/0!	#DIV/0!
2009	0	0	0			
2-Year Mean					#DIV/0!	#DIV/0!

Management Considerations:

#DIV/0!

#DIV/0!



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 30 - Unitwide	1	1

Submitted by: K. Klima
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:



Date: 3-9-10

Management Notes:

Since 2005, 4 lions were harvested in 30B. There were three harvested in 2005 by hunters and one "other" in 2008. The lion in 2008 did not have age or gender information associated with it. It could not be entered into this excel sheet. The addition of this lion would make the 2-year mean 0.5 lions. I recommend keeping the current bag limit of 1 mountain lion per year and do not recommend a multiple bag limit anywhere in the unit

Unit(s): 31

Species: Mountain Lion

Year: 2009/10

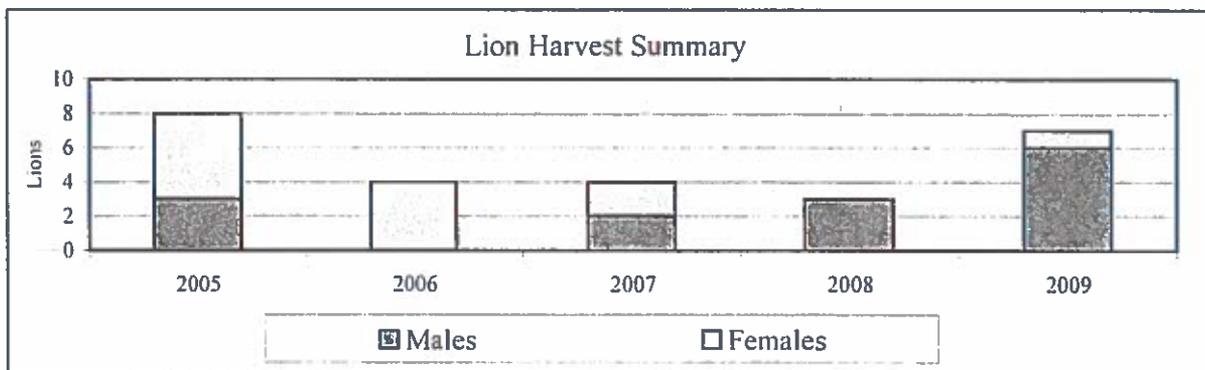
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	3	5	8	0	0%	NO
2006	0	4	4	2	50%	YES
2007	2	2	4	1	25%	NO
2008	3	0	3	0	0%	NO
2009	6	1	7			
2-Year Mean					13%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 31 - Unit wide	None	None

Submitted by: D.J. Aubuchon
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:



Date: 3-9-10

Management Notes:

**Please provide explanation and justification for recommendations outside of guidelines.*

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Precipitation for the area encompassed by Unit 31 averages 9.8 to 13.3 inches at lower elevations and up to 20 inches on Mt. Graham. Annual precipitation data ranged from one to eight inches on valley floors to 12-14.6 inches in the Pinaleno Mountains. All periods had below average precipitation, from 48 to 73% of normal (data from the National Weather Service website). For much of the southeastern part of the state it was the 4th driest year on record.

This year's hunter harvest in Unit 31 was 7 mountain lions, only one of which was a female. The 5-year average hunter harvest is 5.2 lions with 2.4 being females. Depredation harvest over the last five years is listed below, resulting in a total combined harvest of 13 lions this year and a 5-year average total harvest of 13.4 lions.

Past depredation harvest figures are:

<i>2005</i>	<i>11</i>
<i>2006</i>	<i>4</i>
<i>2007</i>	<i>7</i>
<i>2008</i>	<i>13</i>
<i>2009</i>	<i>6</i>

Regarding the age of female lions, we have only had one year when adult female harvest has been more than 35% of the total females harvested; however, no data is available for 5 of the female lions harvested since 2005 (3 in 2005, 1 in 2006 and 2007), so we only have information for 6 of the females harvested from 2005 to 2008. With age information on only 55% of the female lions killed, the confidence intervals associated with this information are not sufficient to draw any conclusions. The last two years however, the female harvest was not more than 14% of the total bag.

The take of 7 mountain lions this year is only slightly above the 5-year average for hunter harvest while the the one female lion comprised in this year's harvest is less than the 5-year average of 2.4. When including depredation harvest, the total number of lions taken this year, 13, is right at the 5-year average of 13.4 lions; therefore, I recommend no change in the management recommendation for mountain lion in Unit 31.

Unit(s): 32

Species: Mountain Lion

Year: 2009/10

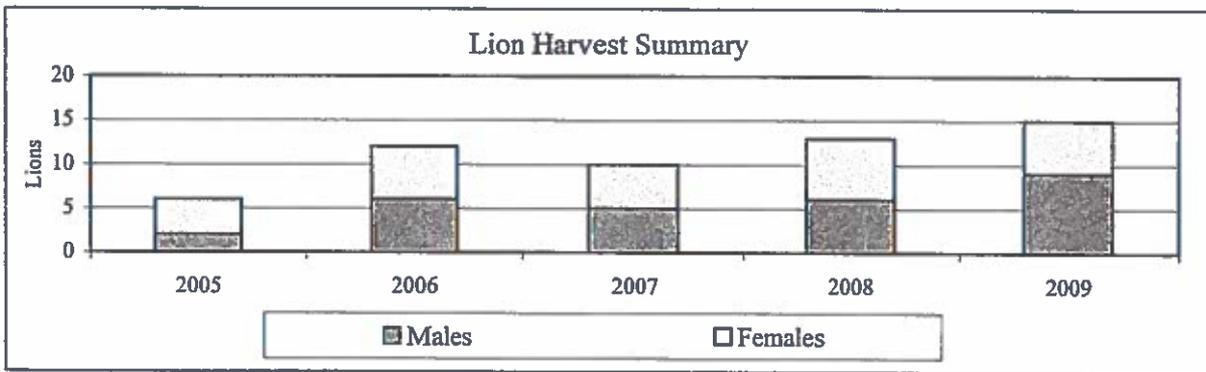
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	2	4	6	2	33%	NO
2006	6	6	12	1	8%	NO
2007	5	5	10	1	10%	NO
2008	6	7	13	4	31%	NO
2009	9	6	15			
2-Year Mean					20%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 32	None	None

Submitted by: J. Bacorn
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-9-10

Management Notes:

The hunter harvest in 2009 is similar to the 5 year average of 11. The adult female harvest did not exceed 35% of the hunter harvest and has not exceeded 35% of the hunter harvest in the last 5 years. The 2 year average adult female harvest is only 20% of total harvest, but total female harvest for 2009 accounted for 40% of the harvest and is 50% of the total lion harvest during the last 5 years.

It should be mentioned that depredating mountain lions are taken by USDA's Wildlife Services in these two units. The 5 year average depredation take has been 8 lions whereas the 5 year average hunter harvest has been 11 lions. Depredation take has accounted for an average of 40% of lions taken out of this unit in the last 5 years. In 2009 a total of 23 lions were taken out of this unit, 35% (8) were depredating lions.

GMU 32 Mnt Lion Hunter and Depredation Harvest

<u>Year</u>	<u>Hunter</u>	<u>Depredation</u>	<u>Total</u>	<u>Hunter</u>	<u>Depredation</u>
2005	6	4	10	60%	40%
2006	12	9	22	55%	41%
2007	10	4	14	71%	29%
2008	13	13	26	50%	50%
2009	15	8	23	65%	35%
Ave	11	8	19	59%	40%

The recommendation is to maintain the current mountain lion season and structure in GMU 32.

Unit(s): 33

Species: Mountain Lion

Year: 2009/10

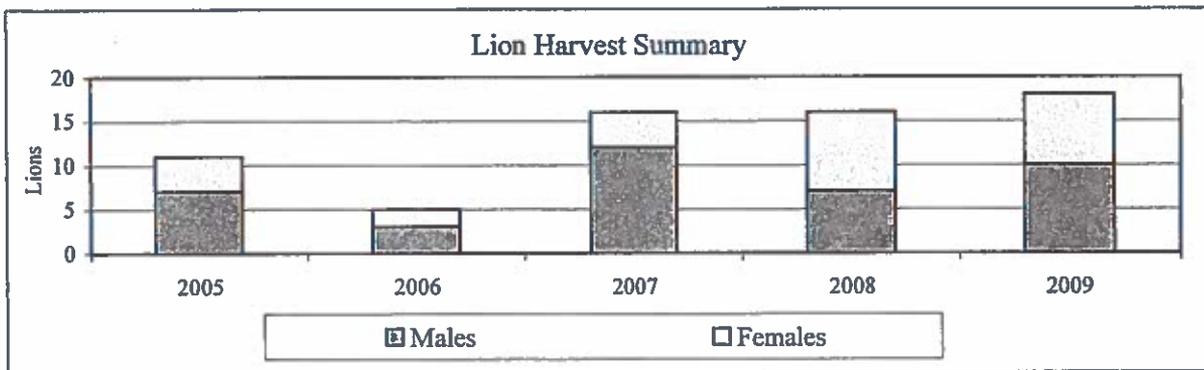
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	7	4	11	1	9%	NO
2006	3	2	5	1	20%	NO
2007	12	4	16	2	13%	NO
2008	7	9	16	2	13%	NO
2009	10	8	18			
2-Year Mean					13%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 33 - Unitwide		

Submitted by: M.Guerena, J.McGehee
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-9-10

Management Notes:

Mountain Lion Harvest in Unit 33 has increased substantially over the last 3 years. It has gone from an overall harvest of 5 mountain lions in 2006 to a total of 18 this year with an average of 17 over the last 3 years. Unit 33 contains one of the best whitetail deer populations in the state and has some of the best mountain lion habitat in the state. With very remote areas and non-huntable areas such as Saguaro National Park and Sabino Canyon Recreational Area, it has large refuge areas for mountain lions. We receive hundreds of nuisance mountain lion calls per year in the surrounding Tucson area.

Unit 33 is part of an urban mountain lion project with the University of Arizona and is looking at urban interface areas with Mt. lions. We have received some very valuable data with these collared lions and how they move throughout the mountain ranges surrounding the Tucson area, as well as their travel corridors throughout Southern and Central Arizona.

Unit(s): 34A & B

Species: Mountain Lion

Year: 2009/10

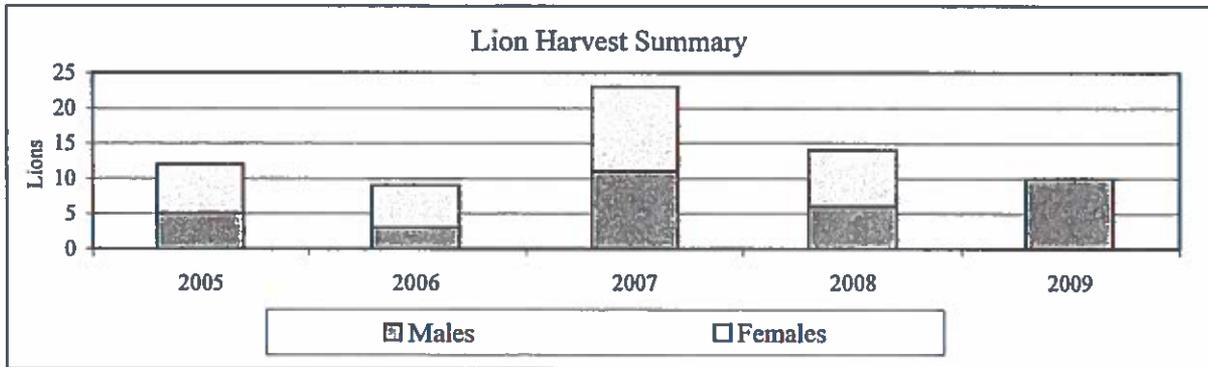
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	5	7	12	1	8%	NO
2006	3	6	9	2	22%	NO
2007	11	12	23	6	26%	NO
2008	6	8	14	2	14%	NO
2009	10	0	10			
2-Year Mean					20%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Units 34 A & B	None	None

Submitted by: M. Frieberg
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-9-10

Unit(s): 34A & B

Species: Mountain Lion

Year: 2009/10

Management Notes:

Hunt units 34A and B are deemed as a combined biological zone as they relate to Mountain lion distribution numbers throughout these mountain ranges. The two year mean female harvest does not comprise of more than 35% of the total harvest in this biological zone, therefore no female harvest limits are needed to reduce the overall take. Therefore the standard lion season and dates is prescribed for units 34A and B.

Unit(s): 35A

Species: Mountain Lion

Year: 2009/10

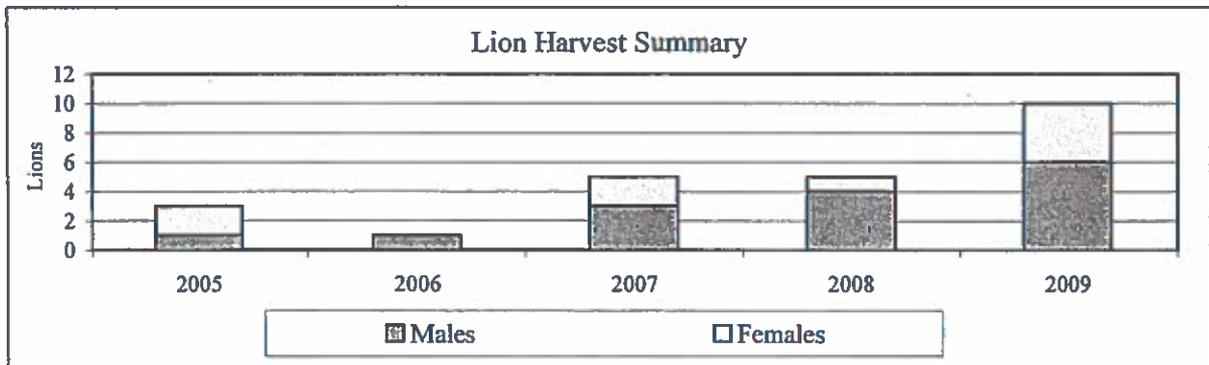
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	1	2	3	0	0%	NO
2006	1	0	1	0	0%	NO
2007	3	2	5	0	0%	NO
2008	4	1	5	1	20%	NO
2009	6	4	10			
2-Year Mean					10%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 35A - Unitwide	None	None

Submitted by: A. MILLER
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-9-10

Management Notes:

**Please provide explanation and justification for recommendations outside of guidelines.*

**This section may be used to document management information that may be instructive to future wildlife managers.*

**This section may vary by region; some regions may have other required information for this section.*

Unit(s): 35B

Species: Mountain Lion

Year: 2009/10

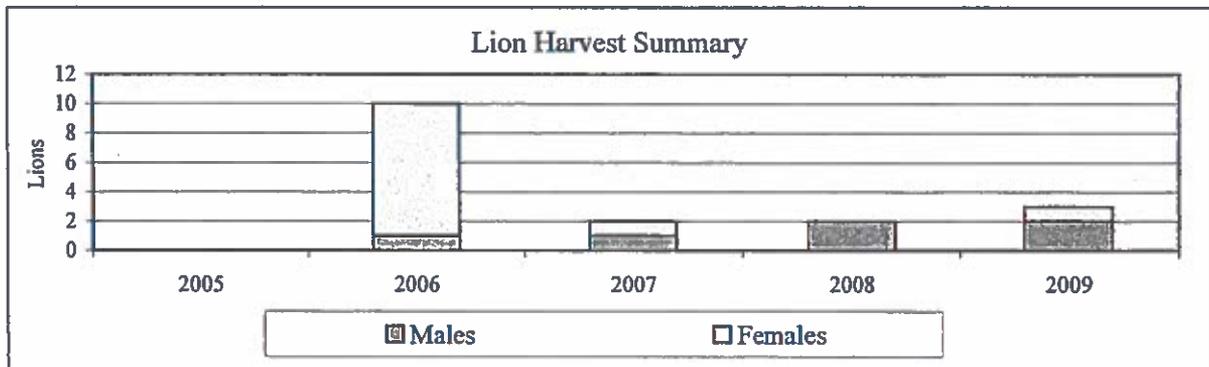
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	0	0	0	0	#DIV/0!	#DIV/0!
2006	1	9	10	0	0%	NO
2007	1	1	2	1	50%	YES
2008	2	0	2	0	0%	NO
2009	2	1	3			
2-Year Mean					25%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 35B - Unitwide	None	None

Submitted by: A. MILLER
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval: _____

Date: 3-9-10

Management Notes:

**Please provide explanation and justification for recommendations outside of guidelines.*

**This section may be used to document management information that may be instructive to future wildlife managers.*

**This section may vary by region; some regions may have other required information for this section.*

Unit(s): 36A,B & C

Species: Mountain Lion

Year: 2009/10

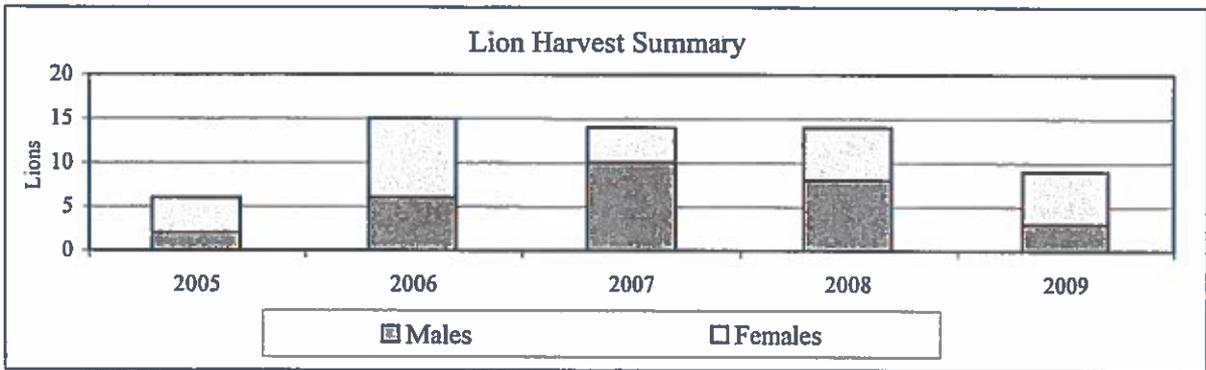
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	2	4	6	0	0%	NO
2006	6	9	15	6	40%	YES
2007	10	4	14	2	14%	NO
2008	8	6	14	2	14%	NO
2009	3	6	9			
2-Year Mean					14%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Units 36A, B, & C	None	None

Submitted by: M. Frieberg
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Handwritten Signature]

Date: 3-9-10

Unit(s): 36A,B & C

Species: Mountain Lion

Year: 2009/10

Management Notes:

Hunt Units 36A, B and C are deemed as a combined biological zone as they relate to Mountain lion distribution numbers throughout these mountain ranges. The two year mean female harvest does not comprise of more than 35% of the total harvest in this biological zone, therefore no female harvest limits are needed to reduce the overall take. Therefore the standard lion season and dates is prescribed for units. On a historical note, since 1982, Unit 36C had only had three years of no mountain lion harvest, which were 1992, 2005 and 2009. This data may be useful if harvest trends in the long term were to decrease substantially as this unit is on the extreme southwestern end of medium and high lion distribution and density within Arizona.

Unit(s): 37A

Species: Mountain Lion

Year: 2009/10

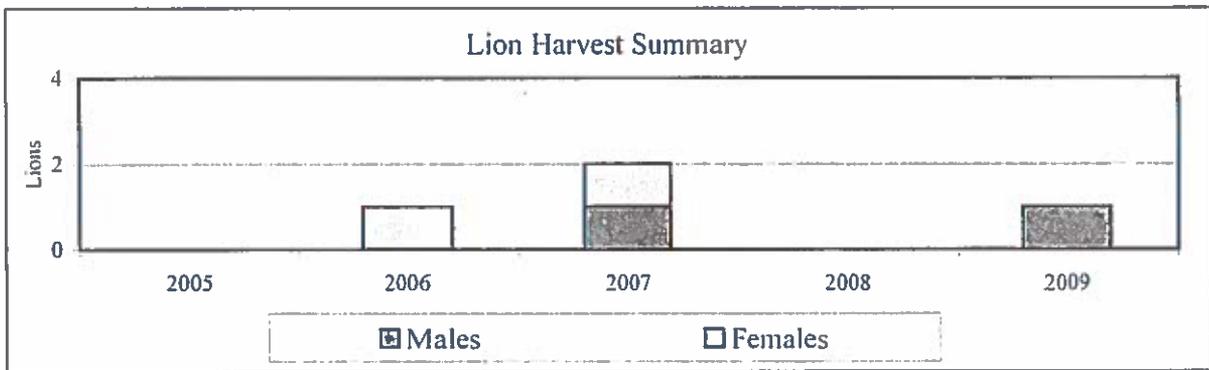
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005			0		#DIV/0!	#DIV/0!
2006		1	1		0%	NO
2007	1	1	2		0%	NO
2008			0		#DIV/0!	#DIV/0!
2009	1		1			
2-Year Mean					#DIV/0!	#DIV/0!

Management Considerations:

#DIV/0!

#DIV/0!



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 37A	none	none

Submitted by: Bob Lemons
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-9-10

Management Notes:

**Please provide explanation and justification for recommendations outside of guidelines.*

**This section may be used to document management information that may be instructive to future wildlife managers.*

**This section may vary by region; some regions may have other required information for this section.*

Mountain lions are not pursued much in Unit 37A with harvest being mostly 2 or less per year. The low harvest is due to a lack of interest in hunters, not a low lion population. It is recommended to continue the standard mountain lion season for Unit 37A.

Unit(s): 37B

Species: Mountain Lion

Year: 2009/10

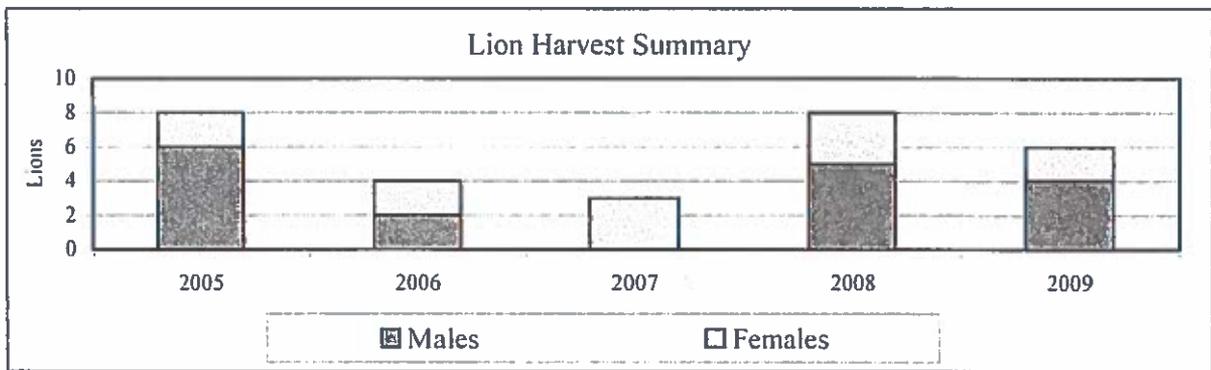
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	6	2	8	1	13%	NO
2006	2	2	4	0	0%	NO
2007	0	3	3	1	33%	NO
2008	5	3	8	2	25%	NO
2009	4	2	6			
2-Year Mean					29%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Multiple Bag Limit (MBL)	July 1, 2010 - June 30, 2011	Unit 37B - Unitwide	8	4

Submitted by: Ben Brochu
Wildlife Manager(s)

Amendments & Notes:

See end of Management Notes for amendment comments

Game Branch Approval:

Date: 3-9-10

Management Notes:

A multiple bag limit (MBL) for mountain lions is being proposed for Game Management Unit 37B for the reasons below. We propose the MBL run in conjunction with a Predation Management Plan developed cooperatively with the Game Branch.

Justification and supporting documentation to follow:

Goal 1: To increase the population of the recently translocated desert bighorn sheep herd in the Mineral Mountains by reducing potential predation by mountain lions. In doing this, our goal is to create a local sustainable source population of desert sheep, where predation is below compensatory mortality, to augment future and potential past translocation efforts regionally and statewide. Once targets have been achieved for which the MBL was established, the MBL hunt structure will be removed from GMU 37B.

Commission-Approved Director's Goals and Objectives as of 23 February 2009, Goal 9 - Evaluate the mountain lion and bear conservation strategies report using existing processes and implementation procedures, including: the hunt guidelines process, changes to season structures, bag limits, population management hunts, harvest limits, harvest age and sex composition, zone management, and human-wildlife conflict factors.

Commission Order 7: Bighorn Sheep

The Department's Bighorn Sheep Management Goals - To increase bighorn sheep populations and to provide diverse recreational opportunities, while avoiding adverse impacts to the habitat.

Commission Order 10: Mountain lion

Guideline #5 - Multiple bag limits may be offered in hunt units or a portion of a hunt unit to increase lion hunting opportunity. These should be designed to assist in achieving population objectives for another wildlife species. When targets have been achieved for which multiple bag limits were established, the multiple bag limit hunt structure should be removed from that unit.

Bighorn Sheep Management Guidelines

Goal - Increase bighorn sheep populations and provide diverse recreational opportunities.

Objective #6 - Maintain the existing range of all subspecies in Arizona, and repopulate historical range through translocations.

Species-Specific Strategy #2 - Establish self-sustaining populations at all new transplant sites.

Hunting and Recreational Opportunity Strategies, Mountain Lion

Strategy #1 - Maintain multiple bag limit areas where the objective is a reduction of mountain lion abundance. This will allow hunters to continue to participate in mountain lion hunting in areas that will benefit other wildlife species to meet specific management objectives.

Management Notes:**Wildlife Predation Strategies, Mountain Lion and Bear**

Strategy #1 - Continue to use site-specific predation management plans as directed through the Commission's Predation Management Policy to address situations where other wildlife species have been recently translocated or where the other wildlife species is below population management objectives.

Strategy #2 - Continue to use multiple bag limits to provide increased hunter opportunity within hunt areas where increased removal of mountain lions may benefit prey species that are below management objectives.

Goal 2: To increase hunter opportunity. A MBL in 37B will increase hunting opportunities, specifically with houndsmen, while accomplishing given objectives as stated in Goal 1. Currently, there are no MBL units available to houndsmen in Region 5.

Commission Order 10: Mountain lion

The Department's Lion Management Goal - to manage the mountain lion population, its numbers and distribution, as an important part of Arizona's fauna while providing maximum mountain lion hunting and other recreational opportunities.

Commission Order 10: Mountain lion

Guideline #5 - Multiple bag limits may be offered in hunt units or a portion of a hunt unit to increase lion hunting opportunity. These should be designed to assist in achieving population objectives for another wildlife species. When targets have been achieved for which multiple bag limits were established, the multiple bag limit hunt structure should be removed from that unit.

Wildlife Predation Strategies, Mountain Lion and Bear

Strategy #2 - Continue to use multiple bag limits to provide increased hunter opportunity within hunt areas where increased removal of mountain lions may benefit prey species that are below management objectives.

Goal 3: To reduce lion depredations on livestock. A MBL may reduce lion depredations on livestock thereby improving relationships with livestock operators. Also, houndsmen may be more likely to pursue depredating lions with a MBL in place, which will allow for an increase in bag limit and sport harvest of lions.

Livestock Depredation Strategies, Mountain Lion and Bear

Strategy #1 - Intensive harvest of female mountain lions in an area, even though they are responsible for comparatively fewer cattle depredations than are males, could theoretically reduce mountain lion depredations on cattle because male mountain lions may spend less time in areas with fewer breeding females.

Strategy #2 - Collaborate with Wildlife Services, guides, ranchers and the land

Management Notes:

management agencies where depredations of livestock by mountain lions and black bears occur to increase additional hunting and guiding opportunity under the current depredation law A.R.S. § 17-302 and associated Commission Rule A.A.C. R12-4-305(H).

Strategy #3 - When appropriate, use current hunt structures (limit, population management hunts, and multiple bag limits) to increase the harvest of mountain lions and bears in areas of high livestock depredation caused by mountain lion and black bear.

[end of recommendation]

Amendment:

The region is not recommending a Multiple Bag Limit (MBL) for lions in 37B. After a decade of use statewide, MBLs have not increased the harvest of mountain lions in any unit and thus have not benefitted any game populations. We have had MBLs in 37B (this unit) and 28 and failed to kill a single lion for the duration of the MBL. The AZ Desert Bighorn Sheep Society paid a houndman to hunt lions in our MBLs (including 37B) and failed to remove a single cat. MBLs were discontinued on both of our units because they did not accomplish what they were intended to do. At this time, given our experience with them in this GMU, there is no reason to believe it will benefit game populations if reinstated.

Lion MBL calculations for 37B			
		Estimated Lions/mi2 - Range	
Habitat Classification	Square Miles	Low	High
Sparce	52	0	0.005
Low	577.7	0.005	0.01
Medium	550.4	0.01	0.05
High	0	0.05	0.1
Total	1180.1		
Low Range Lion Population Estimate			
Sparce	52	0	0
Low	577.7	0.005	2.8885
Medium	550.4	0.01	5.504
High	0	0.05	0
Total			8.3925
High Range Population Estimate			
Sparce	52	0.005	0.26
Low	577.7	0.01	5.777
Medium	550.4	0.05	27.52
High	0	0.1	0
Total			33.557
Midpoint between 8.39 and 33.56 is 13			
Harvest Rates	Midpoint	Harvest	
60%	13	7.8	
75%	13	9.75	
Recommended MBL Target is 8.0 lions and a female limit of 4.0			

Management Notes:

Mountain Lion Recommendation – Unit 20B

Submitted by: R. Babel

Open Season Dates: August 20, 2010 – May 19, 2011

Open Areas: Unit wide

Legal Animal: Any Mountain Lion except spotted kittens or females accompanied by spotted kittens.

Number of Permits: Unlimited

Change from last year: Season Dates

Two (2) mountain lions were reported by sport harvest in 2009. The harvest comprised of 1 male lion and 1 female lion.

One (1) Mountain lion was taken because of depredation (Hozoni Ranch). The Williams Family Ranch, located on the Hassayampa River voiced concerns about livestock kills believed to be from Mountain lions but opted out of filing a depredation report. Several lions were taken in the vicinity of their Ranch on the 20C side of the River.

Unit(s): 21

Species: Mountain Lion

Year: 2009/10

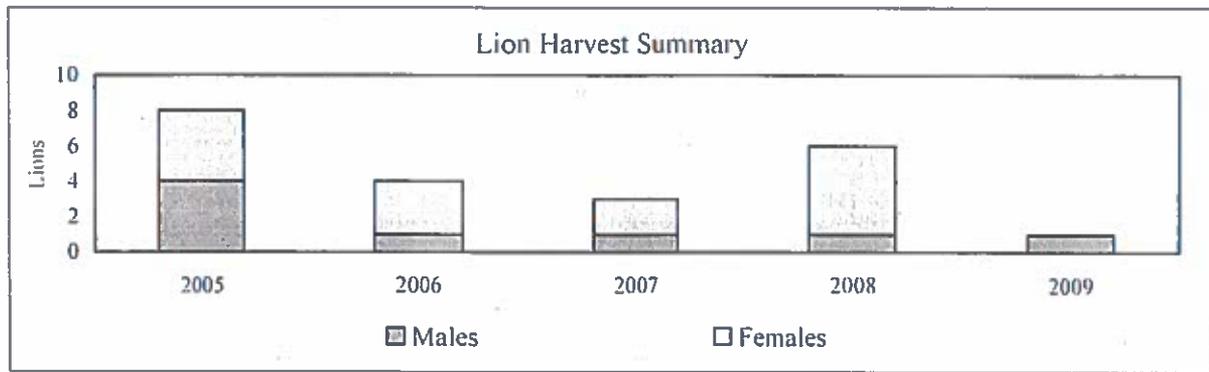
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	4	4	8	1	13%	NO
2006	1	3	4	0	0%	NO
2007	1	2	3	1	33%	NO
2008	1	5	6	1	17%	NO
2009	1	0	1			
2-Year Mean					25%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 21	None	None

Submitted by: WM K. Cooper 675
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-12-10

Unit(s): 20B

Species: Mountain Lion

Year: 2009/10

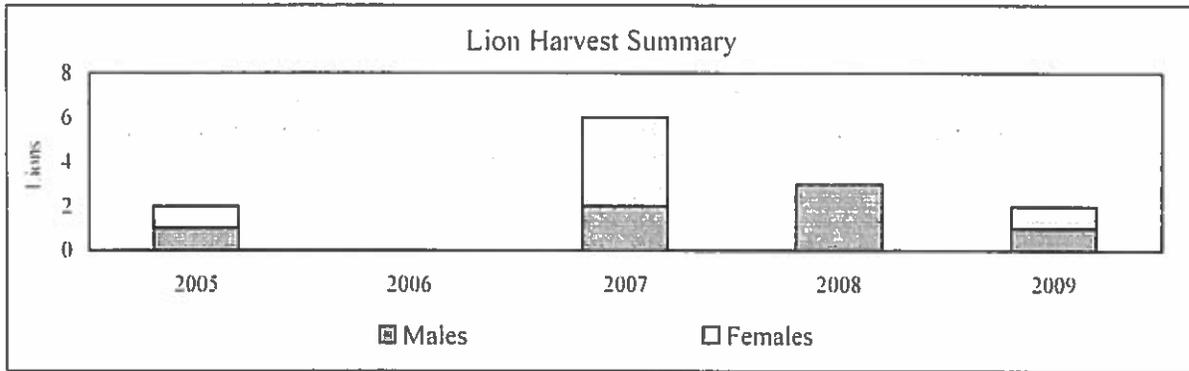
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	1	1	2	1	50%	YES
2006	0	0	0	0	#DIV/0!	#DIV/0!
2007	2	4	6	2	33%	NO
2008	3	0	3	0	0%	NO
2009	1	1	2			
2-Year Mean					17%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 20B - Unitwide	None	None

Submitted by: R. BABEL
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-12-10

Management Notes:

**Please provide explanation and justification for recommendations outside of guidelines.*

**This section may be used to document management information that may be instructive to future wildlife managers.*

**This section may vary by region; some regions may have other required information for this section.*

The 2009 harvest in unit 21 was one sport lion and no depredation reports. That one lion was a male. This was the lowest number of lions taken in the unit over the last 5 years. I do not believe this is a result of an unhealthy lion population. I spoke with several lion hunters this past season and all were not having problems locating lion tracks. One lion hunter I spoke with had treed several lions this past season but chose not to harvest the lion.

I recommend keeping the same hunt structure with the new season dates.

Unit(s): 22

Species: Mountain Lion

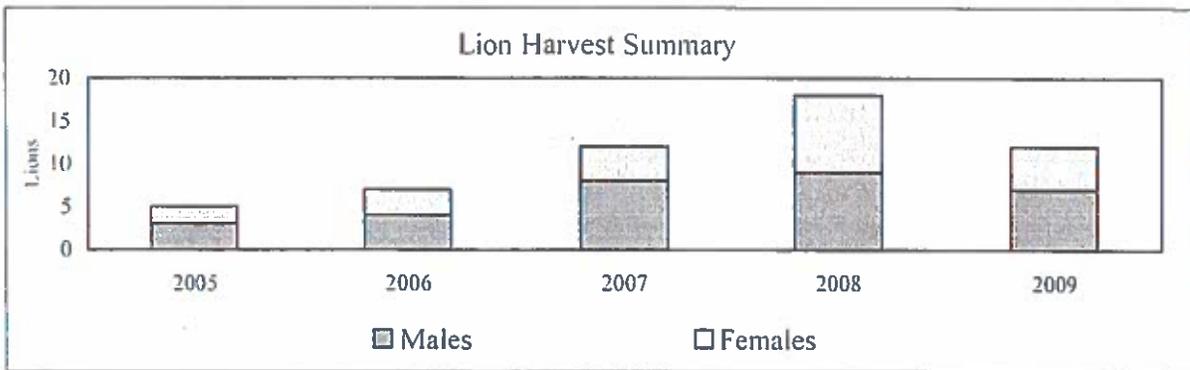
Year: 2009/10

Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	3	2	5	2	40%	YES
2006	4	3	7	2	29%	NO
2007	8	4	12	3	25%	NO
2008	9	9	18	3	17%	NO
2009	7	5	12			
2-Year Mean					21%	NO

Management Considerations:

- *Continue Single Unit Management
- *No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 22- Unit wide	None	None
<i>MBL</i>	<i>JUNE 1, 2010 JUNE 30, 2010</i>	<i>UNIT 22 SOUTH</i>	<i>12</i>	

Submitted by: B. Anthony
Wildlife Manager(s)

Amendments & Notes:

COMMISSION VOTED 3/2 TO
RETAIN THE UNIT 22 S MBL

Game Branch Approval:

[Signature]

Date: 3-12-10

Management Notes:

The mountain lion population in Unit 22 appears to be stable and healthy from the harvest information, therefore I recommend no change from the current standard hunt structure. I recommend that the harvest objective for 22S be removed because the current bighorn sheep survey triggers have been reached.

Desert bighorn sheep triggers:

If annual (fall) October helicopter survey efforts detect > 70 desert bighorn (09' 99 total sheep) (representing an increase to about 60% of 1994 peak counts) and when annual helicopter surveys indicate a lamb:100 ewes ratio of > 26 (Remington 1989) for two successive survey years. (06' 36 lambs:100 ewes, 09' 33 lambs :100 ewes) the mountain lion harvest objective will be discontinued.

In 2000 a multiple lion bag limit of 12 was initiated in Unit 22 south.

YEAR	UNIT 22 OBSERVED BIGHORNS	UNIT 24B OBSERVED BIGHORNS	UNIT 22 <u>south</u> LIONS REMOVED*	UNIT 24B LIONS REMOVED*
2000	25	51	4	3
2001	37	45	1	3
2002	58	42	2	5
2003	46	No survey	1	5
2004	No survey	No survey	3	6
2005	No survey	No survey	1	3
2006	54	49	1	3
2007	No survey	No survey	2	2
2008	No survey	No survey	4	7
2009	99	90	2	2
Total lions removed since 2000			21	39

*Calendar year

- In Unit 22 south, from the initiation of the multiple bag limit a minimum of 120 lions could have been removed. To date 21 lions have been removed. The average number of lions removed per year in this multiple bag unit has been 2.1.
- In Unit 24B, 39 lions have been removed during this same time period. The average number of lions removed per year in this unit has been 3.9.
- We cannot make a biological argument that the lion multiple bag limit has had any affect to the bighorn sheep population in Unit 22 south, but we can make an argument that the biological triggers that have been established for recovery of the bighorn sheep population have been reached.

- Of greater significance, due to unknown factors it should be noted that there was an increase in observed bighorn sheep numbers of 83% in both Unit 22 and Unit 24B from 2006 to 2009.

Evaluation of Factors Potentially Influencing a Desert Bighorn Sheep Population
McKinney, et al.

SUMMARY

We identified 2 proximate factors that likely acted or interacted within the same time frame to affect demographic patterns of the desert bighorn sheep population in Mazatzal Mountains: nutritional status (winter rainfall patterns [ultimate factor] were associated with differences in primary production, concentrations of minerals in forages, and quality of desert bighorn sheep diets) and predation by mountain lions.

We hypothesize that both nutritional status and mountain lion predation likely influenced demographic parameters of the desert bighorn sheep population in Mazatzal Mountains and that short term removal of mountain lions by lethal harvest contributed to higher growth and productivity of the small, isolated population, even during periods of drought.

Unit(s): 22

Species: Mountain Lion

Year: 2009/10

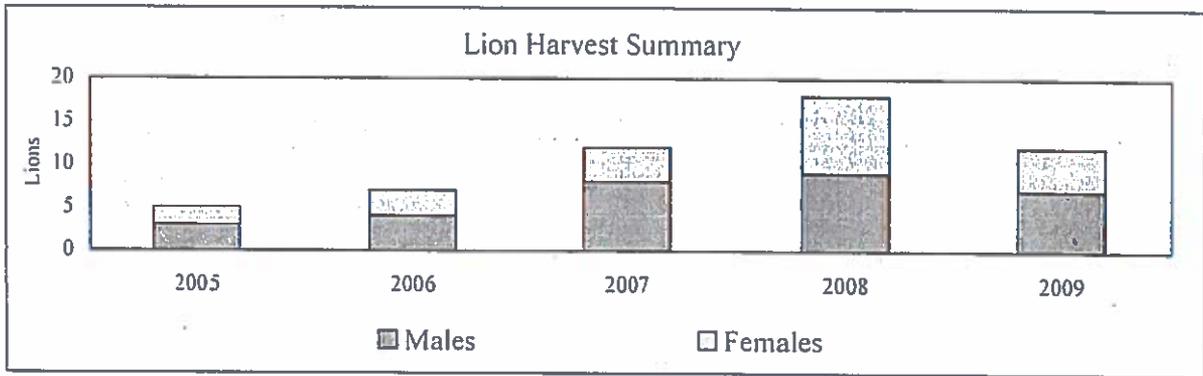
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	3	2	5	2	40%	YES
2006	4	3	7	2	29%	NO
2007	8	4	12	3	25%	NO
2008	9	9	18	3	17%	NO
2009	7	5	12			
2-Year Mean					21%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 22- Unit wide	None	None

Submitted by: B. Anthony
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-12-10

Management Notes:

The mountain lion population in Unit 22 appears to be stable and healthy from the harvest information, therefore I recommend no change from the current standard hunt structure. I recommend that the harvest objective for 22S be removed because the current bighorn sheep survey triggers have been reached.

Desert bighorn sheep triggers:

If annual (fall) October helicopter survey efforts detect > 70 desert bighorn (09' 99 total sheep) (representing an increase to about 60% of 1994 peak counts) and when annual helicopter surveys indicate a lamb:100 ewes ratio of > 26 (Remington 1989) for two successive survey years, (06' 36 lambs:100 ewes, 09' 33 lambs :100 ewes) the mountain lion harvest objective will be discontinued.

In 2000 a multiple lion bag limit of 12 was initiated in Unit 22 south.

YEAR	UNIT 22 OBSERVED BIGHORNS	UNIT 24B OBSERVED BIGHORNS	UNIT 22 <u>south</u> LIONS REMOVED*	UNIT 24B LIONS REMOVED*
2000	25	51	4	3
2001	37	45	1	3
2002	58	42	2	5
2003	46	No survey	1	5
2004	No survey	No survey	3	6
2005	No survey	No survey	1	3
2006	54	49	1	3
2007	No survey	No survey	2	2
2008	No survey	No survey	4	7
2009	99	90	2	2
Total lions removed since 2000			21	39

*Calendar year

- In Unit 22 south, from the initiation of the multiple bag limit a minimum of 120 lions could have been removed. To date 21 lions have been removed. The average number of lions removed per year in this multiple bag unit has been 2.1.
- In Unit 24B, 39 lions have been removed during this same time period. The average number of lions removed per year in this unit has been 3.9.
- We cannot make a biological argument that the lion multiple bag limit has had any affect to the bighorn sheep population in Unit 22 south, but we can make an argument that the biological triggers that have been established for recovery of the bighorn sheep population have been reached.

- Of greater significance, due to unknown factors it should be noted that there was an increase in observed bighorn sheep numbers of 83% in both Unit 22 and Unit 24B from 2006 to 2009.

Evaluation of Factors Potentially Influencing a Desert Bighorn Sheep Population

McKinney, et al.

SUMMARY

We identified 2 proximate factors that likely acted or interacted within the same time frame to affect demographic patterns of the desert bighorn sheep population in Mazatzal Mountains: nutritional status (winter rainfall patterns [ultimate factor] were associated with differences in primary production, concentrations of minerals in forages, and quality of desert bighorn sheep diets) and predation by mountain lions.

We hypothesize that both nutritional status and mountain lion predation likely influenced demographic parameters of the desert bighorn sheep population in Mazatzal Mountains and that short term removal of mountain lions by lethal harvest contributed to higher growth and productivity of the small, isolated population, even during periods of drought.

Unit(s): 23

Species: Mountain Lion

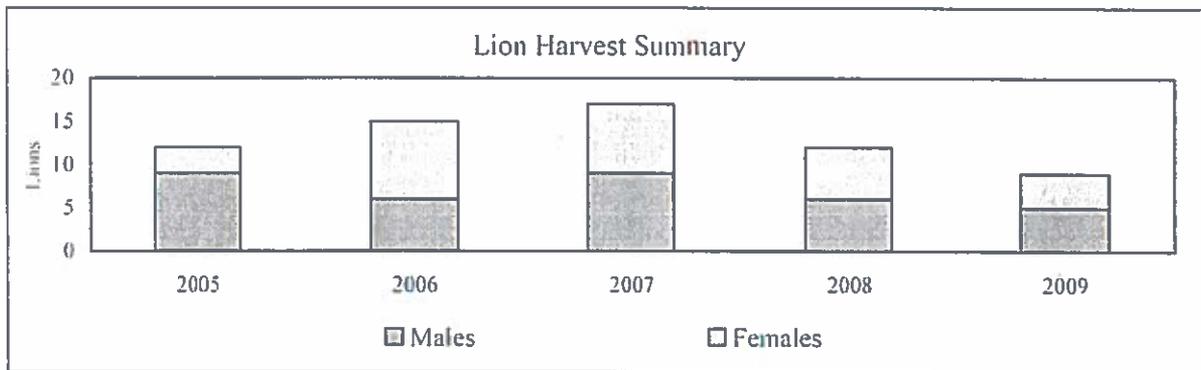
Year: 2009/10

Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (>3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	9	3	12	2	17%	NO
2006	6	9	15	1	7%	NO
2007	9	8	17	3	18%	NO
2008	6	6	12	2	17%	NO
2009	5	4	9			
2-Year Mean					17%	NO

Management Considerations:

- *Continue Single Unit Management
- *No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 23 - Unitwide	None	None

Submitted by: Dave Daniels
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-12-10

Management Notes:

Harvest Information: The three-year mean combined harvest of sport and depredation for Unit 23 is 13 mountain lions. Reported harvest last year was 9 mountain lions in Unit 23. Harvest in the past decade has fluctuated between 6 (1991) and 23 (1994), but is considered to be stable. Harvest the past five years was, 12 (2005), 15 (2006), 17 (2007), 12 (2008) and 9 (2009).

Track Counts: Track counts are no longer conducted to monitor the mountain lion population changes.

Conclusion: The mountain lion population in Unit 23 appears to be stable and healthy. The lion harvest appears to not need more restrictions on take at this time. This year's harvest included 4 female and 5 male lions. Field observations include recognition that more mountain lions are killed during periods of snow as hunters utilizing hounds are more predominant and successful. No change from the current hunt structure is recommended.

Unit(s): 24A

Species: Mountain Lion

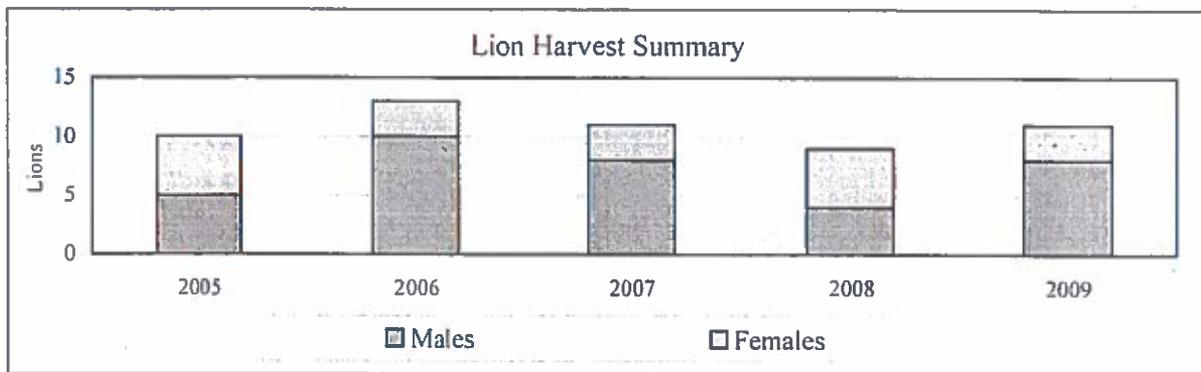
Year: 2010/11

Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	5	5	10	1	10%	NO
2006	10	3	13	0	0%	NO
2007	8	3	11	1	9%	NO
2008	4	5	9	3	33%	NO
2009	8	3	11			
2-Year Mean					21%	NO

Management Considerations:

- *Continue Single Unit Management
- *No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unitwide	None	None

Submitted by: Danny Rodriguez
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

[Signature]

Date: 3-12-10

Management Notes:

For 2009, a total of 11 lions were reported as sport harvest of which, 8 were males and 3 were females. In 2008, 4 males and 5 females were reported as sport harvest for a total of 9. In 2007, 8 males and 3 female lions were reported as sport harvest. In 2006, 13 lions were reported as sport harvested of which, 10 were males and 3 were females. In 2005, 10 lions were reported as sport harvested of which, 5 were males and 5 were females.

There is no tooth data available for lions harvested in 2009. Of the 9 lions harvested in 2008, tooth data was only available for 4 of them. The average age for lions harvested was 4 years old for males and 4.5 years old for females. The average age for lions harvested in 2007 is 2 years old for males and 3.5 years old for females. The average age for lions harvested in 2006 is 3 years old for males and 2 years old for females. In 2005, one lion was aged 3-4 years, one at 2-3 years, and two lions were 1-2 years old.

The unit is comprised of 810 square miles with 659 square miles classified as medium lion density and 162 miles as low mountain lion density. The population also fluctuates with the emigration-immigration of lions from San Carlos Reservation. Based on the age and harvest data, lion populations appear to be stable.

Unit(s): 24B

Species: Mountain Lion

Year: 2009/10

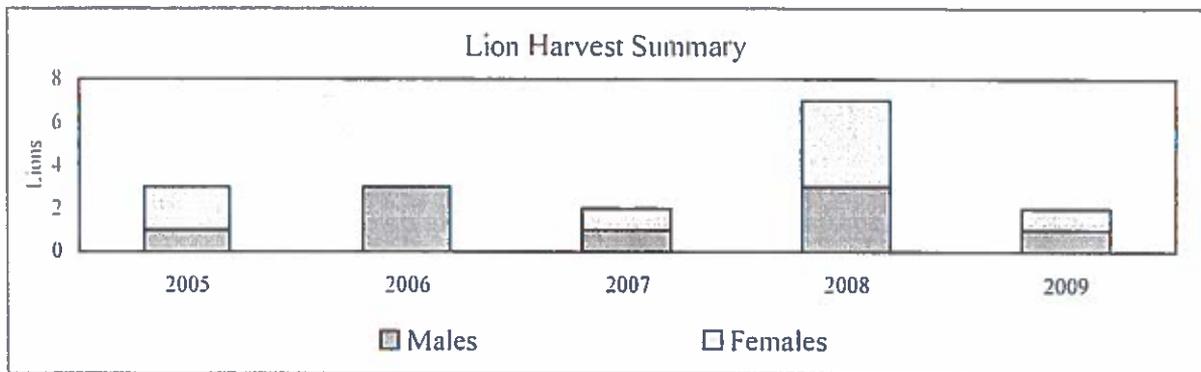
Harvest Summary:

Year	Male Harvest	Female Harvest	Total Harvest	Adult ♀ (≥3 yrs)	% Adult ♀ in Harvest	Adult ♀ Exceed 35% of Harvest?
2005	1	2	3	2	67%	YES
2006	3	0	3	0	0%	NO
2007	1	1	2	0	0%	NO
2008	3	4	7	2	29%	NO
2009	1	1	2			
2-Year Mean					14%	NO

Management Considerations:

*Continue Single Unit Management

*No Female Harvest Limit Indicated



Hunt Recommendation:

Season Type	Season Dates	Open Areas	MBL Target	Female Limit
Standard	August 20, 2010 - May 19, 2011	Unit 24B - Unit wide	None	None

Submitted by: D. McGehee
Wildlife Manager(s)

Amendments & Notes:

Game Branch Approval:

Date: 3-12-10