

Hunt Recommendations

Commission Order 10: Mountain Lion

General Mountain Lion

Open Areas do not include any area closed to hunting under A.R.S. sections 17-303 and 17-304 or Commission Rules R12-4-301, R12-4-801, R12-4-802 and R12-4-803.

Season Dates	Notes	Open Areas	Legal Wildlife	Multiple Bag Limit
Sep 1, 2009 - May 31, 2010	1,10,11,12,13	Statewide (except National Wildlife Refuges, Mohave County Park Lands and Units 11M, 25M, 26M, 38M, and 47M, and any hunt listed below in Commission Order 10 with a multiple bag limit)	Any lion except spotted kittens or females accompanied by spotted kittens	
Jul 1, 2009 - Jun 30, 2010	(2,11)	6A South	Any lion except spotted kittens or females accompanied by spotted kittens	15
Jul 1, 2009 - Jun 30, 2010	(2,5,6)	13B South	Any lion except spotted kittens or females accompanied by spotted kittens	10
Jul 1, 2009 - Jun 30, 2010	(2,14)	16A South and 18B South	Any lion except spotted kittens or females accompanied by spotted kittens	15
			Total	40

LAWFUL TAKING METHODS: Any firearm or bow and arrow as prescribed in R12-4-304.

LICENSE AND PERMIT REQUIREMENTS: Any valid hunting license (excluding Class H) plus Mountain Lion nonpermit-tag obtained from a license dealer as prescribed in R12-4-114.

Archery-Only Mountain Lion

Open Areas do not include any area closed to hunting under A.R.S. sections 17-303 and 17-304 or Commission Rules R12-4-301, R12-4-801, R12-4-802 and R12-4-803.

Season Dates	Notes	Open Areas	Legal Wildlife	Multiple Bag Limit
Sep 1, 2009 - May 31, 2010	(4,7,8)	11M, 25M, 26M, 38M, and 47M	Any lion except spotted kittens or females accompanied by spotted kittens	
			Total	

LAWFUL TAKING METHODS: Bow and arrow as prescribed in R12-4-304 and R12-4-318 and crossbow as prescribed in R12-4-216.

LICENSE AND PERMIT REQUIREMENTS: Any valid hunting license (excluding Class H) plus Mountain Lion nonpermit-tag obtained from a license dealer as prescribed in R12-4-114.

Notes:

1. Camp Navajo in Unit 6B is open for mountain lion hunting only to properly licensed hunters holding a valid Camp Navajo hunting permit. A hunter education course is required. For more information on Camp Navajo hunting opportunities go to www.campnavajo.com and select Hunting. Increases in Force Protection may result in hunt cancellations at any time with little or no prior notification. In the event a hunt is cancelled due to an increase in security, hunters holding these permits will not be reimbursed or otherwise compensated by the Arizona Game and Fish Department.
2. When the number of mountain lions equaling the multiple bag limit for a particular hunt has been reported, that hunt will revert to the statewide bag limit of one (1) lion per calendar year at sundown the Wednesday immediately following. Hunters are responsible for calling 1-877-438-0447 before hunting to determine if the multiple bag limit for their desired hunt unit is still in effect.

3. The U.S. Army Yuma Proving Ground is closed to mountain lion hunting, except those areas open in accordance with U.S. Army regulations to properly licensed hunters holding a valid Yuma Proving Ground Hunting Program Access permit. Occasionally, due to military activities, some affected hunting areas may be temporarily closed. For information write: U.S. Army Yuma Proving Ground- Bldg. 105, Attn: Hunting Program, 301 C. Street, Yuma, AZ 85365-9498 or call toll-free 1-877-788-HUNT (4868) or (928) 328-2148, or www.yuma.army.mil/hunting_program.htm.
4. Method of take may be further restricted by local government regulations.
5. The Grand Canyon-Parashant, Vermilion Cliffs, Sonoran Desert, Ironwood Forest, and Agua Fria National Monuments are open to hunting.
6. 13B South Hunt Unit - That portion of Unit 13B south of the following line: beginning at the junction of the Arizona/Nevada state line and county road 101. Northeast along county road 101 to county road 5. Southerly on county road 5 to county road 257. Southerly on county road 257 to BLM road 1045. Southerly on BLM road 1045 to the bottom of Whitmore Canyon. South in Whitmore Canyon to the Colorado River.
7. Hunting is not permitted in Unit 47M in the following described area: an unincorporated portion of land within the city of Mesa known as the Elliott and Hawes County Island in Section 16, Township 1 South, Range 7 East.
8. Hunting is not permitted in Unit 26M in the following described area: Those private lands lying just north of the Town of Cave Creek in Sections 10, 11, 12, 14 and 15 of Township 6 North, Range 4 East.
9. Bear Canyon Hunt Area in Unit 27 - That portion of Unit 27 beginning at the junction of U.S. Hwy 191 and FR trail 76 at Hannagan Meadow; east-northeast on FR trail 76 to FR trail 75; east on FR trail 75 through Grant Creek drainage to FR 281 (the Blue Road); north on FR road 281 to FR trail 52; east-southeast on FR trail 52, in Lanphier Canyon, to FR trail 55; south-southwest on FR trail 55 through Bear Valley to Blue River; north-northwest in Blue River to FR trail 20; west on FR trail 20 to U.S. Hwy 191; north on U.S. Hwy 191 to FR Trailhead 76 at Hannagan Meadow.
10. Pipestem Hunt Area in Unit 27 - That portion of Unit 27 beginning at the Junction of U.S. Hwy 191 and FR trail 20; east on FR trail 20 to Blue River; south in Blue river to FR trail 55; east-northeast on FR trail 55 to FR trail 41; east-southeast on FR trail 41 to the Arizona-New Mexico stateline; south on the Arizona-New Mexico stateline to the San Francisco River; west in the San Francisco River to Blue River; north in Blue River to FR 475 (the Juan Miller road); west on FR 475 to U.S. Hwy 191; north U.S. Hwy 191 to FR trail 20.
11. 6A South Hunt Unit - That portion of 6A east of I-17 and south of FR 213 (Stoneman Lake Road).
12. Entry into portions of Units 40A, 40B, 46A, and 46B is subject to military closure and requires coordination with the Barry M. Goldwater Range for hunting access. For specifics about accessing the Barry M. Goldwater Range refer to the Index: Hunting on Military Reservations.
13. The Florence Military Reservation (training areas B and D: the areas north and south of Cottonwood Canyon Road) in Unit 37B is subject to short term closures due to military operations, including live fire operations, and requires coordination with the Florence Military Reservation for hunting access. For specific closure dates or any other access concerns, contact the Florence Military Reservation at 602-267-2062. A map of the Florence Military Reservation is located on the Arizona Game and Fish Department's website, azgfd.gov (type Florence Military Reservation in the search box).
14. Unit 16A South and 18B South Hunt Unit – Those portions of Units 16A and 18B beginning in Wikieup at Chicken Springs Road and U.S. Hwy 93; north on U.S. Hwy 93 for 2.2 miles to Pump Station Road; east on Pump Station Road for 0.9 miles to Back Road; north on Back Road for 1.8 miles to Boner Canyon Road (unmarked); northeast on Boner Canyon Road to Bogles Ranch Road near SV Ranch headquarters (stay right at each road fork); south on Bogles Ranch Road for 3.5 miles to Black Canyon drainage; northeast in Black Canyon drainage to Francis Creek; southeast on Francis Creek to Burro Creek; northeast on Burro Creek to Conger Creek; southeast on Conger Creek to Conger Springhead; south on access road to Bozarth Mesa Road; east on Bozarth Mesa Road to Camp Wood (Yolo) Road, the Unit 17B-18B boundary; southwest on Camp Wood Road to AZ Hwy 96 in Bagdad; southeast on AZ Hwy 96 to the Santa Maria River; southwest along Santa Maria River to Alamo Lake; westerly along the north shore of Alamo Lake to Alamo Road; northwest on Alamo Road to Chicken Springs Road; southeast on Chicken Springs Road to U.S. Hwy 93.
15. The area within the fenced enclosure inside the loop formed by Tonto National Forest Road 647, also known as the Walnut Canyon Enclosure, is open to public entry and the taking of mountain lion during open season.

MOUNTAIN LION BAG LIMIT: One (1) mountain lion per calendar year statewide. In units with a multiple bag limit, hunters may take one (1) mountain lion per day until the multiple bag limit is reached. Once the multiple bag limit has been reached, the season will remain open and revert to calendar year bag limit of one (1) mountain lion. Mountain lions taken under the one (1) per day multiple bag limit do not apply towards the calendar year bag limit until the multiple bag limit is reached.

MOUNTAIN LION SPECIAL REGULATION: As prescribed in R12-4-308, all hunters must contact an Arizona Game and Fish Department office in person or by telephone at 1-877-438-0447 within 48 hours of taking a lion. The report shall include the hunter's name, hunting license number, tag number, sex of the lion taken, management unit where the lion was taken, and telephone number at which the hunter can be reached to obtain additional information. Within 10 days of taking a lion, the hunter shall present the lions skull, hide, and attached proof of sex for inspection. If a hunter freezes the skull or hide before presenting it for inspection, the hunter shall prop the jaw open to allow access to the teeth and ensure that the attached proof of sex is identifiable and accessible (pursuant to R12-4-308). A premolar tooth will be removed during the inspection. Successful hunters are encouraged to contact the nearest Department office by telephone to coordinate inspections.

MOUNTAIN LION SPECIAL NOTE: Hunters may encounter mountain lions wearing radio collars around Flagstaff, Prescott, Payson, and Tucson. The lions instrumented with these collars are part of several ongoing research projects. The collars are used to track lion movements as researchers try to learn how the lions use various habitat types and urban interface areas. The longevity of these lions is important to the ongoing research, and data collected will help to improve Arizona's management of lions in the future. If you would like more information about any of these research efforts please contact the Arizona Game and Fish Department Research Branch at (623) 236-7247. Also, if one of these animals is harvested, the hunter is asked to return the collar, as well as any other marking device, such as an ear tag, to a Department office or officer when doing the required physical check-in of the carcass parts.

MOUNTAIN LION SPECIAL NOTE: In accordance with R12-4-305(H), an individual may retain the carcass of a lion taken under ARS 17-302 when the season is closed.

Unit: 6A

Species: Mountain Lion

Year: 2009

MANAGEMENT RECOMMENDATION & NOTES:

During the 2008 hunting season, 6 lions were harvested by hunters in GMU 6AS (4 male, 2 female). There were an additional 4 lions harvested in 2006 and 4 in 2007. The average age of harvested lions in 2008 was 5.

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

- Radioed bighorn sheep experience an annual mortality of <10% and the number of bighorn sheep observed on routine surveys exceed 55 animals, or
- Bighorn sheep are not being monitored through radio-telemetry, or
- No lions are harvested within a 3-year period (lack of lion harvest may indicate a low population of lions).

I recommend that the multiple bag limit for lions in GMU 6AS stay in effect for the 2009 hunting season, based on the following information. Annual mortality for the last 3 years has equaled 10%. We assume that most of this mortality is related to predation. In November 2008, 43 sheep were counted during the first survey of the population, which is less than our objective of 55. Region II is currently monitoring radio-collared bighorn sheep in the area of West Clear Creek and in areas to the south. Radiocollars should continue to function for at least another 1-2 years. From 2006 to 2008, a total of 14 lions were harvested in Unit 6AS, indicating that the population of lions is doing well.

<u>Season Dates</u>	<u>Legal Wildlife</u>	<u>Multiple bag limit</u>
Jul 1, 2009 - Jun 30, 2010	Any lion except spotted kittens or females accompanied by spotted kittens	15

By: Erin Turnpaugh
Wildlife Manager

Approved: _____

ET
ET
3-11-09

Approved: _____

HARVEST DATA:

During the 2008 hunting season, 2 female lions were harvested by hunters in Unit 13BS. No hunters took multiple lions during the last 2 years in the Unit.

HUNT RECOMMENDATION:

Currently, a multiple bag limit of lions is in effect for Unit 13BS.

Region II will discontinue the multiple harvest objective for 13BS if:

1. No lions are harvested in three consecutive years; and
2. The five-year average lamb:ewe ratio is above what is recommended by Remington for a stable Arizona bighorn sheep population (22 lambs:100 ewes), based on survey data for two consecutive survey periods, and
3. There is an increase in class III and IV rams available for harvest, equal to 3 or more permits on the permit worksheet.

Although lions continue to be harvested in 13BS, we recommend discontinuing the multiple bag limit because the population objectives for bighorns have been in the Unit. Lamb:ewe ratios have averaged 38:100 for the last 5 years in the Unit, and the permit worksheet indicates that we can offer 3.25 permits for class III and IV ram.

<u>Season Dates</u>	<u>Legal Wildlife</u>	<u>Multiple bag limit</u>
Jul 1, 2009 - Jun 30, 2010	Any lion except spotted kittens or females accompanied by spotted kittens	10

By: Tom McCall Game Specialist Approved: OK Approved: _____

Amendments: BFW
3/11-09

Arizona Game and Fish Department, Region III Hunt Recommendation

Unit(s): 15BW, 15C, 15D Species: Mountain Lion Year: 2009-2010

TRIGGER	CURRENT YEAR
1) Sheep/hour observed in Unit 15CS reaches the 20-year average of 18.1 sheep/hr. 2) Average sheep observed in Unit 15CS reaches the 20-year average of ≥ 108 sheep.	1) 3.9 sheep/hr 2) 26 sheep observed

*20-year average calculated from 1981-2000

Hunt recommendation

The multiple bag limit for Units 15BW, 15C and 15D should be continued this fall. Five lions have been harvested since the inception; three lions were taken by sport hunters and two were removed by a contract hunter. Hunters with hounds have been the most successful, although harsh terrain and poor scenting conditions make this area extremely challenging for houndsman to track and capture lions.

Background

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.

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.

Hunt Type	Dates	2008 Multiple Bag Limit	2009 Multiple Bag Limit	Change	2008 Harvest	2009 Predicted Harvest
General	7/1/09 – 6/30/2010	10	10	0	0	1
TOTALS						

By: G. Erickson
Wildlife Manager

*OK
BFW
3-12-09*

Arizona Game and Fish Department, Region III Hunt Recommendation

Unit(s): 16AS, 18BS Species: Mountain Lion Year: 2009-2010

TRIGGER	OBJECTIVE SHOULD (increase, stay the same or decrease)
The bighorn sheep population reaches a self-sustaining level and less than 10% of bighorn mortalities can be attributed to mountain lion predation.	Close Season

Hunt recommendation

The region feels the population is doing well in the release area and may be approaching the lower end of the target population of 80-150 sheep. Lion predation does not appear to be a limiting factor for the population; 5% of the collared sheep mortality has been from documented lion predation. Therefore, the region recommends that the multiple bag limit hunt in Units 18BS and 16AS be closed for 2009-2010.

Background

In November 2006, 28 bighorn sheep were released in Hell's Half Acre; then another 27 were released in 2007. Surveys are planned for October 2009 and if a third release is needed; and bighorn sheep are available, a release will be planned for November 2010.

Lion track surveys indicated a high density of lions in portions of the units adjacent to the release site. Several local, skilled lion hunters also provided additional input about the lions. One local lion hunter described Burro Creek as the equivalent to I-40 for mountain lions moving in and out of the area. Burro Creek runs directly through the area currently inhabited by the released bighorn sheep. They are also exposed to dispersing lions.

To reduce potential impacts from mountain lion predation, a multiple bag limit structure for mountain lion hunting was recommended until sheep become established in the area. This measure would allow hunters to temporarily reduce the lion population in the vicinity of the sheep population, and when combined with selective removal of offending animals, would reduce the likelihood of predation becoming a limiting factor (Pebworth 2007).

Monitoring

There were collars placed on 20 of the bighorn sheep; 16 ewes and 4 rams. These are monitored by aerial and ground telemetry monthly. Of the collared bighorn sheep there have been 6 mortalities (30%); one lion predation was documented (5%). It was difficult to verify that any of the other mortalities were due to lion predation, because in most cases the mortality was not recent (due to the timing of the telemetry).

While initially the bighorn sheep remained close to the release location; incidental sightings and ground telemetry have shown the sheep spread north, east and west from Hell's Half Acre. The majority of the collared sheep now reside at Hell's Half Acre, Negro Ed and Elephant Mountain. Spring ground surveys were done in both 2007 & 2008 and although no quantifiable number was determined, reproduction was documented in both years. During these surveys, other ground telemetry and an aerial survey in September 2008 the region has also observed bighorn sheep without ear tags. It is assumed that these sheep are migrating in and out of the release area and picking up bighorn sheep from Unit 16A. In 2007, an average of 4 un-collared bighorn sheep per collared sheep was being observed. With the documented reproduction and ingress of sheep the region believes the population is approaching the lower end of the target population of 80-150 sheep.

By: M. White, L. Antolik
Wildlife Managers

O K BK
3-12-09

Region VI Mountain Lion Management Recommendations 2009 Game Management Unit 20B

Mountain Lion Recommendation – Unit 20B

Submitted by: R. Babel

Open Season Dates: September 1, 2009 – May 31, 2010

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: None

Two (2) mountain lions were reported by sport harvest in 2008. The harvest comprised of 2 male lions.

No Mountain lion depredation reports were submitted by livestock operators in Unit 20B nor were there any complaints or concerns voiced to the Wildlife Manager about mountain lion problems.

OK
BFW
3-9-09

Region VI Mountain Lion Management Recommendations 2009/2010

Mountain Lion Recommendations - Unit 21

Submitted By: Kyle Cooper

Open Season Dates: September 1, 2009 – May 31, 2010

Open Areas: Unit wide

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

Total Permits: Unlimited non-permit tags

Change From Last Year: None

Justification for Hunt:

The 2008 lion harvest in GMU 21 consisted of one (1) male and five (5) females being removed from the population.

I received no complaints from ranchers about lion depredation on livestock. .

The lion population may be somewhat lower than it was historically due to lower big game population numbers, but recent harvest data suggests GMU 21 still has a sustainable mountain lion population.

OK
HW
3-9-09

Region VI Mountain Lion Management Recommendations 2009

Mountain Lion Recommendations - Unit 22

Submitted By: B. Anthony

Open Season Dates: Sept. 1, 2009 – May 31, 2010, 22(south of AZ Hwy 87 and FR 143, and the west of Hwy 188) July 1, 2009 – June 30, 2010

Open Areas: Unit 22, 22S multiple bag limit

Legal Animal: Any lion except spotted kittens or females accompanied by spotted kittens

Number of Permits: Unlimited

Change From Last Year: No Change

Justification For Hunt:

OK
BY W
3-9-09

Harvest Information

In 2008, 14 lions (7 males, 7 females) were reported in the sport harvest for Unit 22 with no lions being taken under the depredation harvest. In 22-S (south of Hwy 87 and F.S. Road 143 and west of AZ Hwy 188) the annual harvest objective is 12 lions per year. In 2008, 4 lions were harvested in the study area.

Conclusion

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 hunt structure. The harvest objective will remain in place for 22S because the current bighorn sheep survey triggers have not been reached.

Triggers:

Unit 22 desert bighorn sheep:

If October helicopter survey efforts detect ≥ 70 desert bighorn (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, the mountain lion harvest objective will be discontinued.

Region VI Mountain Lion Management Recommendations 2009

Mountain Lion Recommendations - Unit 23

Submitted By: Dave Daniels

Open Season Dates: September 1, 2009 – May 31, 2010

Open Areas: All areas

Legal Animal: Any Mountain Lion except spotted kittens and females with spotted kittens.

Number of Permits: Unlimited

Change From Last Year: None

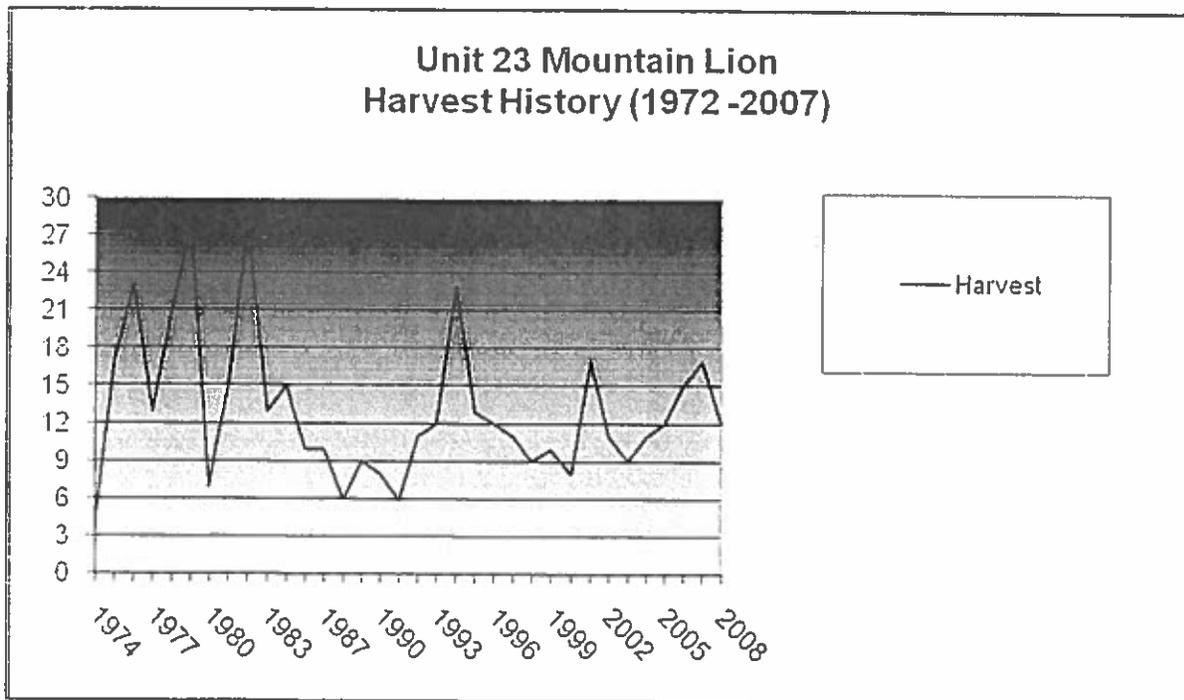
Justification for Hunt:

Harvest Information: The five-year mean combined harvest of sport and depredation for Unit 23 is 13 mountain lions. Reported harvest last year was 12 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, 11 (2004), 12 (2005), 15 (2006), 17 (2007) and 12 (2008).

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 6 female and 6 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.

*OK
3-9-09*



**Region VI Mountain Lion Management Recommendations
2009**

Mountain Lion Recommendations - Unit 24A

Submitted By: Danny Rodriguez

Open Season Dates: September 1, 2009 – May 31, 2010

Open Areas: Unit Wide

Legal Animal: Any Mountain Lion except females with cubs

Number of Permits: Unlimited

Total Permits: Unlimited

Change From Last Year: None

OK
BFW
3
98

Justification For Hunt:

For 2008, 4 males and 5 females were reported as sport harvest and one lion was killed by unknown means for a total of 10. In 2007, 8 male and 3 female lions were reported as sport harvest and one lion was taken by unknown means for a total of 12. In 2006, 15 lions were harvested, 11 in 2005, and 7 in 2004.

Currently there is no age data for 2008. 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.

I recommend no changes be made for the 24A lion hunt in 2009-10.

Region VI Mountain Lion Recommendations 2009

Mountain Lion Recommendations – Unit 24B

Submitted By: D. McGehee

Open Season Dates: September 1, 2009 – May 31, 2010

*OK BFW
7-9-09*

Open Areas: All areas

Legal Animal: Any lion except spotted kittens or females accompanied with spotted kittens

Number of Permits: Unlimited

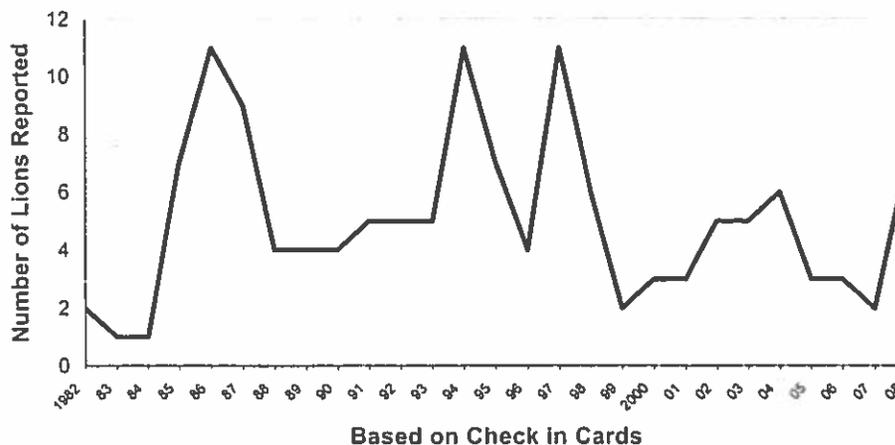
Total Permits: N/A

Change from Last Year: 0

Justification for Hunt:

1. 24B continues to maintain a viable lion population. Although lion route surveys were discontinued in the Region in 1999, lion tracks and scats are observed throughout the unit, and reports of lion sightings are also common. Ranchers, hunters, and AGFD personnel commonly report lion sign and activity within the unit. (Continued on following page)
2. Seven lions (three males and four females) were reported taken by sport hunting during 2008 in 24B. This is the highest number of lions taken during the previous 10 years. It is also above the twenty-five year average of 5 lions taken. Most lions were taken during between January and March.

MOUNTAIN LION HARVEST - UNIT 24B



Unit: 27

Species: Mountain Lion

Year: 2008/09

MANAGEMENT RECOMMENDATIONS & NOTES:

Hunt Recommendation Synopsis:

- 1) **Maintain current hunt structure of September 1, 2009 – May 31, 2010 season dates with bag limit of one mountain lion per year for the entire unit.**
- 2) **Maintain a multiple bag lion hunt for the Pipestem bighorn sheep transplant area with a season date of July 1, 2009 – June 30, 2010.**
- 3) **Eliminate the Bear Canyon multiple bag lion hunt.**

MANAGEMENT SUMMARY:

The current hunt structure in GMU 27 is an open season from September 1st through May 31st 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 eliminate the Bear Canyon multiple bag hunt due to the triggers being met. In 2008 47 sheep were surveyed in the Bear Canyon area with an estimated population of 59. Additionally, the lamb:ewe ratio in 2008 was 50:100. We will continue to monitor this population and if we again fall below these triggers we will look at reestablishing the multiple bag area in this area.

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%.

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. A lion population estimate for this areas is based on historic research information deriving lion population density maps. The Pipestem site, as delineated below, has a lion population of range of 10-20 lions. At a recommended harvest level of 50 to 75% the harvest objective is 10 lions.

Pipestem Multiple Bag Hunt Area – Beginning in that portion of Unit 27 at the Junction of AZ Hwy 191 and F.S. trail 20, east to the Junction of F.S. trail 20 and Blue River, south in Blue river to the Junction of Blue river and F.S. trail 55, east-northeast on F.S. trail 55 to the junction of F.S. trail 55 and F.S. trail 41, east-southeast on F.S. trail 41 to the Arizona Stateline, south on the Stateline to the junction of the Stateline and the San Francisco River, west in the San Francisco River to the junction of the San Francisco river and Blue River, north in Blue River to the junction of Blue River and F.S. road 475, the Juan Miller road, west on F.S. road 475 to the junction of F.S. road 475 and AZ Hwy 191, north on AZ Hwy 191 to the junction of AZ Hwy 191 and F.S. trail 20. 200

Recommended Hunt Dates: September 1, 2009 – May 31, 2010 – For all of Unit 27
 July 1, 2009 – June 30, 2010 – For the Pipestem area of Unit 27

Recommended Permit Numbers: Unlimited Non-Permit tags and Multiple bag hunt structure

Predicted Removal: 20-30 mountain lions per year (includes sport harvest and depredation)

Multiple bag hunt structure: Pipestem release site as defined above – harvest object of 10 lions

Predicted Hunter Success: N/A

By: Aaron Hartzell
 Wildlife Manager

Approved: OK
 BHW
 3-16-09

Unit (s) 40A

Species Mountain Lion

Year 2008-2009

Mountain Lion – Unit 40A

Background:

A harvest objective of 4 lions was set in 2006. A trigger was set for when to discontinue the harvest objective. The one trigger is when the bighorn population reaches a self-sustaining level of 200 bighorn sheep within the unit. The 1998 BS surveys of GMUs 40AS and 40AN resulted with population estimates of 95 and 55, respectively. The following BS surveys in 2001 indicated both populations declined, especially 40AS by nearly 50%. The 2001 survey population estimates for units 40AS and 40AN were 44 and 40, respectively. Unit 40A has excellent bighorn sheep habitat and should sustain hundreds of sheep. Although the entire unit 40A in 1998 had an estimated 150 sheep, the population was unable to sustain itself. Therefore the population trigger was set at 200 sheep.

Results:

In year 2008, no lions were taken in unit 40A.

Recommendation:

Hunters have not taken any lions since this harvest objective was set. Based on the 2007 survey the population estimate was 22 bighorn sheep.

I recommend continuing the harvest objective of 4 lions.

Unit (s) 42

Species Mountain Lion

Year 2008-2009

2008 -2009 Mountain Lion – Unit 42

Background:

Mountain lion management in Game Management Unit 42 is closely tied to the management of the remnant desert bighorn sheep population in the unit. A total of 39 bighorn sheep (31 with radio collars) have been released into the Big Horn Mountains in two separate releases (2005 and 2007) to supplement the remnant herd. Two of the collared sheep migrated to the Harquahala Mountains where one died of unknown causes. Twelve of the collared sheep in the Big Horn Mountains have died (1 capture related, 7 lion kills, and 4 unknown causes). Two sheep mortalities occurred in 2008 from unknown causes.

A harvest objective of 2 lions has been set for the Big Horn / Belmont Mountain complex for the past three years. No lions have been taken from this area since the objective was set. Triggers were set to discontinue the harvest objective. One objective is when the bighorn population reaches a self-sustaining level of 100 bighorns within the unit. The other is when less than 10% of radio-collared bighorn mortalities can be attributed to mountain lion predation.

Results

Telemetry flights continue to be flown for locating the collared sheep in the area. Several non-collared sheep have been located while tracking the collared sheep and the total bighorn population in the mountain range is estimated at 55 animals. This is below the projected self sustaining level of 100 sheep stated above.

In 2008 one dead sheep from the 2007 release was recovered. This sheep died of unknown causes and appeared not related to lion predation. Another sheep mortality remains in a rugged section of the mountain range difficult to access by foot.

Hunters have captured lions on trail cameras in the Big Horn Mountains (see photo below).



Unit(s) 42

Species Mountain Lion

Year 2008-2009

Recommendation:

Although no bighorn sheep mortalities in 2008 can be attributed to lion predation the sheep population remains low and susceptible to lion predation. No lions have been removed from the area through hunter harvest.

It is recommended to continue the harvest objective of 2 lions.

OK
BFW
3-10-09

Mountain Lion – Unit 44A

Background:

Unit 44A consists of broad alluvial valleys separated by several large desert insular mountain ranges including the Harquahala and Harcuvar/Granite Wash Mountains. The Little Harquahala Mountains lie to the west and provide a movement corridor between the Harquahala and Harcuvar Mountains for sheep, deer, and mountain lions. From 1994 until 2000, one hundred thirty-six desert bighorn sheep have been transplanted into this portion of 44A. Mountain lion predation has been documented as the primary cause of mortality for these transplanted bighorn sheep hindering the self-sustainability of the population.

Since 1994 one hundred and eleven desert bighorn sheep have been transplanted into 4 different locations in the Granite Wash and Harcuvar Mountains. See table 1 below for summary of transplant and lion depredation data. The Granite Wash/Harcuvar supplement has been the longest and the largest sheep augmentation in Arizona. The first supplement was in 1994 with 30 sheep coming from the Kofa Mountains, Arizona. The second was in 1995 with 26 sheep coming from the Kofa and Castle Dome Mountains, and the third was in 1998 with 30 sheep coming from the Maricopa, Gila Bend, and the Eagletail mountains. The last supplement occurred in 2001 with 25 sheep coming from the Kofa Mountains. Of these 111 total sheep 72 were fitted with radio telemetry collars (Telonics, Inc., Mesa, AZ) and were monitored with biweekly to monthly aerial telemetry flights though 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. Helicopter surveys were conducted in 2000, 2004 and 2007 to estimate the bighorn population size. The population has decreased from 68 in 2000 to 42 in 2007.

In 2000, twenty-five desert bighorn sheep were transplanted into the Harquahala Mountains. Of these 25 sheep, 13 were fitted with Telonics radio telemetry collars and were monitored with biweekly to monthly aerial telemetry flights though 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. Helicopter surveys were conducted in 2002, 2005 and 2008 to estimate bighorn population size. In 2002 the population estimate for the Harquahalas was 24 which have decreased to 13 by 2008.

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.

Table 1. Bighorn sheep transplant and mortality summary for GMU 44A.

Mountain Range	Sheep Transplanted	Documented Lion Depredations	% Mortalities Documented to Lions	Current Population: Desired Population
GW/ Harcuvar	111	23	49%	42: 300
Harquahala	25	8	89%	13: 100
Total	136	31	54%	55: 400

Although based on habitat scoring the maximum bighorn sheep populations are 740 in the Granite Wash and Harcuvar complex and 120 in the Harquahala, I think a more realistic desired population is 300 for the GW and 100 for the Harquahala 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 telemetered bighorn sheep between the Little Harquahala and Harquahala Mts. and between the Harquahala and Bighorn/Belmont Mts. (Krausman, Etchberger 1993). These mountain ranges are nearly contiguous (HMP, 1983).

Mountain lion sign and/or lion predations have been documented at almost every developed waterhole around these mountains. In 2008 five deer predations have been observed at one water development in the Granite Wash. In 2006, fifteen deer predations were observed at a water development in the Harcuvar Mountains.

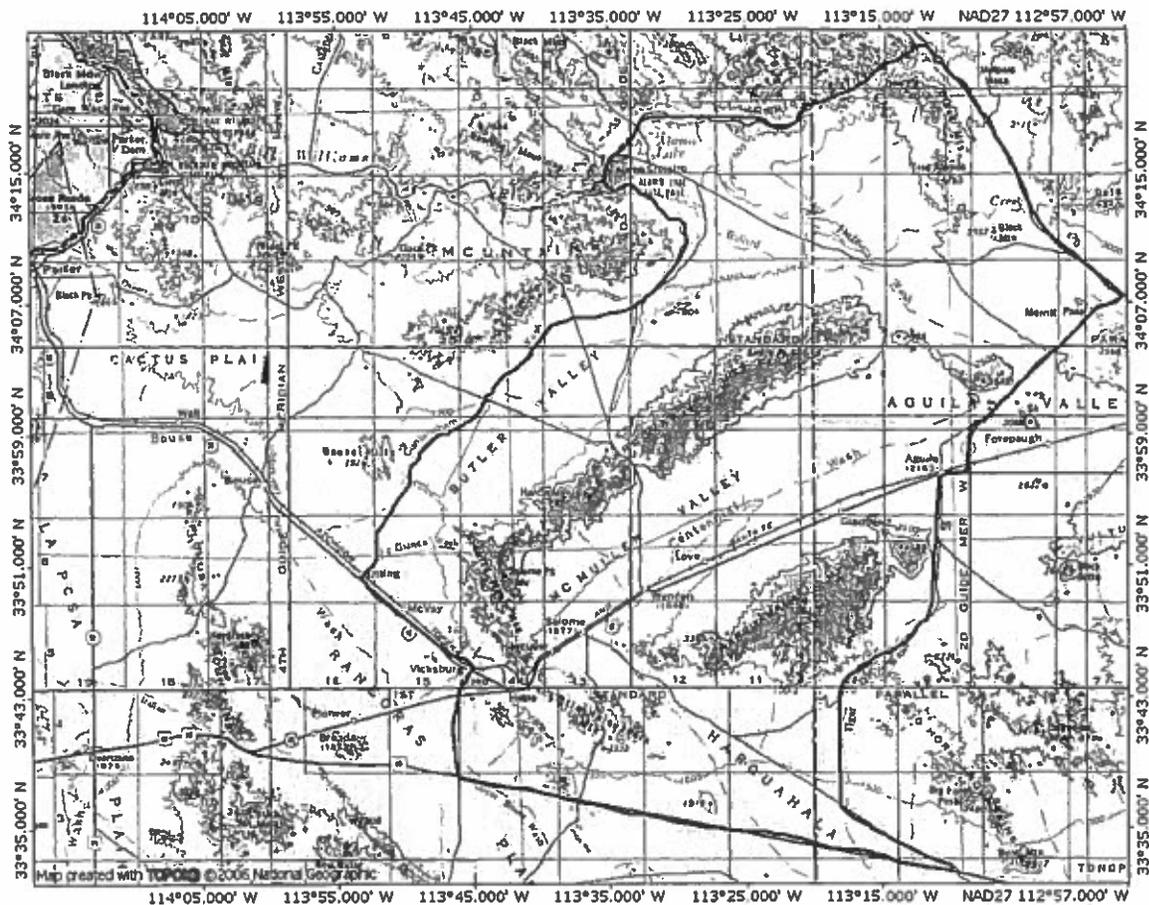
Recommendation:

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 may reduce predation on the sheep and help them to recover to a self-sustaining population level.

The harvest objective should be discontinued when the bighorn sheep population in Unit 44A reaches a self-sustaining level of 100. The current population is 55 animals.

Proposed GMU 44A Mountain Lion Management Area:

Boundaries: Beginning at Alamo Lake; southeasterly along the Wenden- Alamo Lake Road to Cunningham Wash, southwesterly along Cunningham Wash to McVay Road; southwesterly on McVay Road to AZ Hwy 72; southeasterly on AZ Hwy 72 to Vicksburg; south on the Vicksburg-Kofa National Wildlife Refuge 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;



44A Multiple bag Limit, Boundary

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:

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.

$$\begin{aligned}
 \text{sparse} &= .001 \text{ lions per square mile (lpsm)} \times \sim 200 \text{ square miles multiple bag area (mba)} = .2 \\
 \text{low} &= .005 \text{ lpsm} \times \sim 1000 \text{ square miles in the mba} = 5 \\
 \text{medium} &= .01 \text{ lpsm} \times \sim 380 \text{ square miles in the mba} = 3.8 \\
 \text{Total} &= 9 \text{ lions} \times 50\% = 4.5 \text{ or } 4 \text{ lions}
 \end{aligned}$$

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

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

