

**IDAHO DEPARTMENT OF FISH AND GAME**

**Virgil Moore, Director**

**Surveys and Inventories**

**Statewide Report  
Harvest Season 2016**



**MOUNTAIN LION**

July 1, 2016 to June 30, 2017

Prepared by:

Wayne Wakkinen.....	Panhandle Region
Clay Hickey .....	Clearwater Region
Rick Ward .....	Southwest Region
Daryl Meints .....	Magic Valley Region
Zach Lockyer .....	Southeast Region
Curtis Hendricks .....	Upper Snake Region
Greg Painter .....	Salmon Region
Summer Crea .....	Data Coordinator
David Smith .....	Grants Specialist
Debbie Hribik.....	Office Specialist

Compiled and edited by: Jim Hayden, Wildlife Staff Biologist

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## **STATEWIDE REPORT SURVEYS AND INVENTORY**

**JOB TITLE:** Mountain Lion Surveys and Inventories

**STUDY NAME:** Big Game Population Status, Trends, Use, and Associated Habitat Studies

**PERIOD COVERED:** 2016 Harvest Season, August 30, 2016 to June 30, 2017

### **STATEWIDE**

For analysis, Idaho's mountain lion management utilizes 18 Data Analysis Units (DAU) comprised of multiple game management units (GMUs; Figure 1). During 2016, 25,460 mountain lion tags were sold, showing a slight increase of 0.7% annually over the prior 10 years. However, additional mountain lion tags were included in each of 21,296 Sportsman's Packages sold in Idaho during 2016. It is unknown how many of these individuals hunted mountain lion. A total of 3,550 houndhunter permits were sold in 2016, with a 1.4% annual average increase over the prior 10 years.

Few significant changes to mountain lion harvest seasons were made during the report period. A second mountain lion in the bag was authorized for GMUs 4, 4A, 6, 7, 9, 10, 12, a portion of 16, 16A, 17, 19, 20, 20A, a portion of 21, 26, 27, 27, and a portion of 28. Seventy statewide nonresident houndhunter permits were authorized for 2016. Not counted in this limit were nonresidents who hunted solely in GMUs 10, 12, 20A, 26, and 27. An additional 40 nonresident houndhunter permits were authorized for GMUs 16A, a portion of 17, 19, and 20.

Mountain lion harvest data are summarized on the basis of the fiscal year (FY; July 1 – June 30). This report summarizes harvest data for FY2016 (July 1, 2016 – June 30, 2017) Hunters are required to report mountain lions harvested within 10 days of kill. Mountain lion harvest has increased an average of 1.2% annually during the past 10 years, with the FY 2016 harvest of 665 lions the highest during that period. The dominant method for hunting mountain lions is with the use of hounds (69% of the annual harvest, 2014–2016).

Harvest objectives are to maintain a mountain lion population capable of sustaining a harvest of at least 331 lions annually (the 1990–1992 average). This objective has been attained annually since 1991, with the most recent 3-year average of 665 lions 101% higher than the minimum.

Typically ranging between 40% and 50% in Idaho, the percentage of females in the harvest averaged 41% during FY2014-2016, the lowest average of the past 10 years (Figure 2). Typically ranging between 50% and 70%, the percentage of 3 year old and older lions within the male harvest averaged 52% for FY2013-2015, the most recent age data on record.

Idaho's mountain lion population has sustained a harvest above management plan levels for the past 26 years. Current information includes a recent increase in harvest levels, a recent decrease in the percentage of females in the harvest, and a slightly younger male age

structure. This combination of factors is consistent with a mountain lion population that has undergone a recent increase.

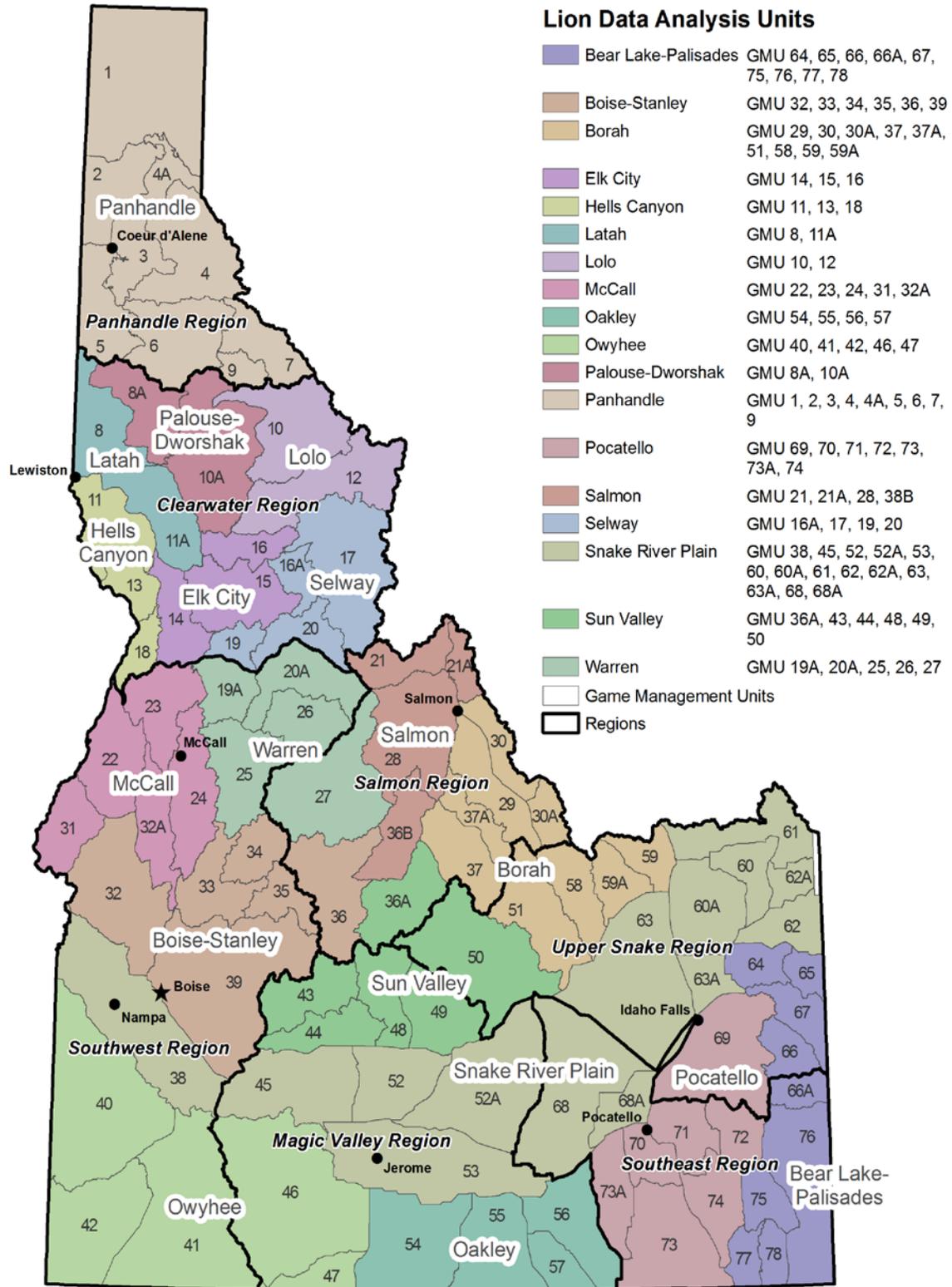


Figure 1 Statewide Mountain Lion Management Zones (DAUs).



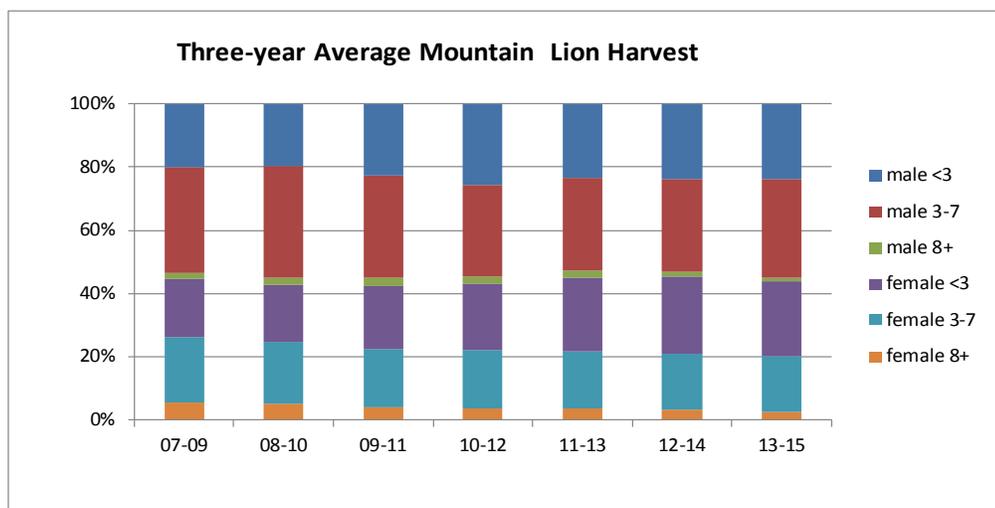
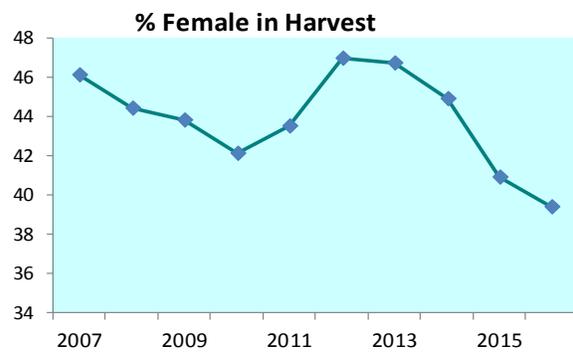
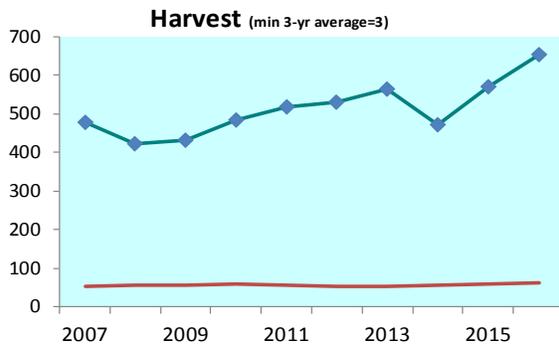
# Statewide

2016 Season (Fall 2016-Spring 2017)		
Square Miles: 3-Year Averages	Goal	
83,620	Annual Harvest	566
	Harvest per 100 mi <sup>2</sup>	0.7
	Males: Percent 3+ yrs *	57%

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>479</b>	<b>423</b>	<b>431</b>	<b>484</b>	<b>519</b>	<b>530</b>	<b>565</b>	<b>472</b>	<b>572</b>	<b>655</b>
<b>Males</b>	0-2 years	110	65	69	106	122	127	92	121	139	0
	3-7 years	119	139	144	148	131	128	175	117	165	0
	8+ years	8	6	10	11	10	7	13	2	3	0
	Unknown	21	25	19	15	30	19	21	20	31	397
	<b>Subtotal</b>	<b>258</b>	<b>235</b>	<b>242</b>	<b>280</b>	<b>293</b>	<b>281</b>	<b>301</b>	<b>260</b>	<b>338</b>	<b>397</b>
<b>Females</b>	0-2 years	75	68	78	70	112	113	117	119	111	0
	3-7 years	95	79	72	90	80	86	97	71	88	0
	8+ years	26	20	23	19	11	20	25	4	10	0
	Unknown	25	21	16	25	23	30	25	18	25	258
	<b>Subtotal</b>	<b>221</b>	<b>188</b>	<b>189</b>	<b>204</b>	<b>226</b>	<b>249</b>	<b>264</b>	<b>212</b>	<b>234</b>	<b>258</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 2. Statewide Mountain Lion Status and Objectives

Type	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Resident lion tags	20,899	21,784	22,416	22,596	22,406	21,662	21,574	21,675	21,589	22,546	22,966	24,081	24,827
Nonresident lion tags	795	699	786	761	695	526	463	444	528	546	551	558	633
<b>Total lion tags</b>	<b>21,694</b>	<b>22,483</b>	<b>23,202</b>	<b>23,357</b>	<b>23,101</b>	<b>22,188</b>	<b>22,037</b>	<b>22,119</b>	<b>22,117</b>	<b>23,092</b>	<b>23,517</b>	<b>24,639</b>	<b>25,460</b>
Resident houndhunter permits	2,982	2,945	2,904	2,943	2,844	2,894	2,886	2,863	2,858	3,039	3,145	3,340	3,436
Nonresident houndhunter permits	135	129	138	119	121	108	98	100	97	104	96	97	114
<b>Total houndhunter permits</b>	<b>3,117</b>	<b>3,074</b>	<b>3,042</b>	<b>3,062</b>	<b>2,965</b>	<b>3,002</b>	<b>2,984</b>	<b>2,963</b>	<b>2,955</b>	<b>3,143</b>	<b>3,241</b>	<b>3,437</b>	<b>3,550</b>

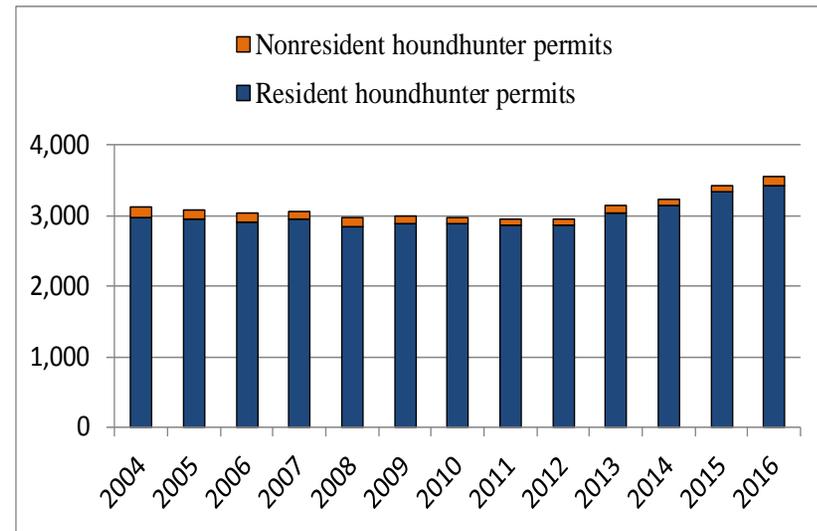
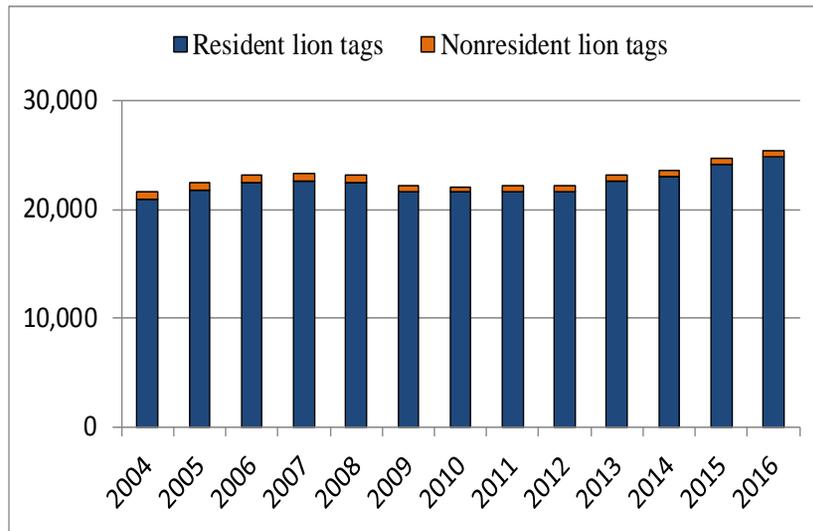


Figure 3. Mountain Lion Tag and Permit Status

## **PANHANDLE REGION**

### **Panhandle DAU (GMUs 1, 2, 3, 4, 4A, 5, 6, 7, 9)**

The 2016 mountain lion general season resulted in a harvest of 148 mountain lions. 3-year average was 145, well above the management objective of providing a harvest of at least 61 lions annually. Female mountain lion harvest made up 36% of the harvest in 2016 the 3-year average of female harvest was 42%. The harvest per 100 mi<sup>2</sup> was 2 lions in this DAU.

#### **Management Objectives**

The 2002–2010 Mountain Lion Species Management Plan states that initial harvest goals will be based on maintaining harvest levels on a 3-year running average that are at or above the 3-year average harvest for the 1990–1992 big game seasons (Figure 4) for each DAU, except in areas where other factors or circumstances justify a higher or lower goal (e.g., harvest seasons are deliberately liberalized to reduce the lion population or where the deliberate reduction of a lion population or maintenance at a lower level makes it untenable to continue to reach the harvest levels attained between 1990–1992). The objective for the Panhandle DAU is to maintain a harvest of at least 61 animals. Specific objectives regarding sex and age composition of the harvest will be developed in the future.

The Department will continue to gather harvest data via the mandatory check. Regulations will allow the use of training dogs and continue to protect young mountain lions and females accompanied by young-of-the-year.

#### **Historical Information**

The management of mountain lions has changed dramatically during the past 30 years. Through 1971, it was classified as a predator with a continuous open season and no bag limit, and in many years, a bounty was paid for dead mountain lions. With reclassification as a game animal in 1972, more conservative management was initiated to increase the mountain lion population.

The 1972 season for Panhandle DAU was open only September–December, with 1 mountain lion allowed per year. During the late 1970s and early 1980s, seasons remained relatively short, with some GMUs virtually closed. GMU 4, for example, was open for only 7 days in 1970, from 26 November through 2 December. Seasons closed generally at the end of December or in mid-January during most of the 1980s and early 1990s. Beginning in 1993, seasons were extended several times so that lion harvest in Panhandle DAU closed 31 March.

Prior to the 1995 season, this DAU was comprised of 3 separate areas made up of GMUs: 1-1 (GMUs 1, 2, 3, and 5), 1-2 (GMUs 4 and 4A), and 1-3 (GMUs 6, 7, and 9). Concurrent with the establishment of a single Panhandle DAU, seasons in some GMUs were extended to establish a single, DAU-wide season framework and to provide a larger annual sample size, although over a broader area.

#### **Season Structure**

Mountain lion seasons and statewide reporting are based on state fiscal years. In 2007 the season was shortened in response to apparent high harvest rates and a concern of low lion numbers by

lion hunters. The opening date was delayed 2 weeks to 15 September, resulting in a 153-day season, closing 16 February in all GMUs. In 2012, the season in GMUs 6, 7, and 9 was lengthened, starting on 30 Aug and ending 31 Mar. The seasons in GMUs 7 and 9 were further lengthened in 2013; the closing date is now 30 June. Additionally, a second mountain lion may be harvested in GMUs 4, 4A, 6, 7 and 9. The use of hounds is not allowed during general deer and elk rifle seasons. No female quotas apply in the Panhandle DAU.

### **Harvest Characteristics**

Harvest in 2016 was 148 mountain lions. This is a slight reduction from the 2015 season of 151 lions. The highest harvest on record occurred during the 1997 harvest season when 210 mountain lions were killed.

The percentage of females in the harvest, generally considered an indicator of mortality rates, decreased steadily from the early 1980s through 1993. Since 2006 the percentage has varied, with a low of 38% in 2007 and a high of 52% in 2013 (Figure 4). The 3-year average is 42% females in the harvest. The 2015 season percent of females in the harvest was 40%; in 2016 it dropped to 36%, which is the lowest since 2007. There is currently no established threshold for this metric.

### **Age Structure**

Age structure from harvested mountain lions in the 2016 season was not available at the time of this report. The most recent 3-year average (2012–2014) of males 3 years or older was 46% in the harvest.

The percent of females over 3 years of age in the harvest has stayed relatively the same since the 2006–2008 average of 19%. The 3-year average (2012–2014) of females 3 years or older was 18%.

### **Depredations**

There were no reported depredation kills in 2016.

### **Management Implications**

The current mountain lion plan indicates populations will be managed to maintain a 3-year average harvest at or above the 1990–1992 average harvest except in areas where other factors or circumstances justify a different goal. The 3-year average for this DAU from 1990–1992 is 61 mountain lions. The latest 3-year average of 145 harvested lions is well above the minimum criteria and has been at or near this level for the past 8 years. The percent of adult males in the harvest has remained relatively stable over the past 5 years and the percent adult females have decreased during this same time period. The Department will have more information to work with as new mountain lion population estimation techniques become available.



## Panhandle DAU

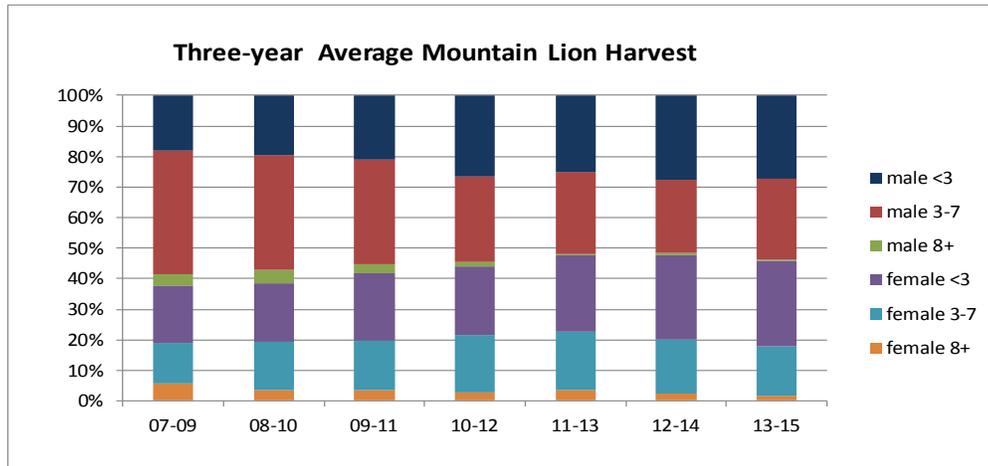
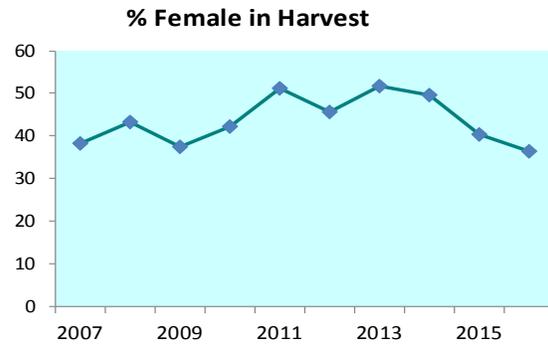
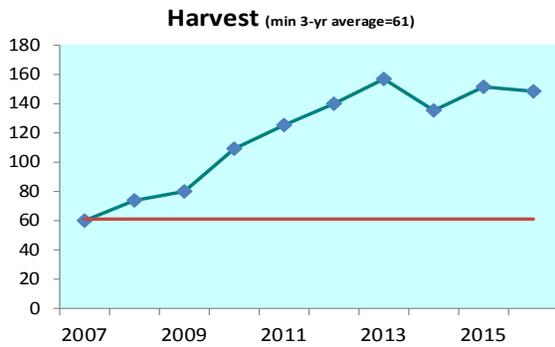
(GMUs 1, 2, 3, 4, 4A, 5, 6, 7, 9)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages	Goal	
7,779	Annual Harvest	145	61
	Harvest per 100 mi <sup>2</sup>	1.9	TBD
	Males: Percent 3+ yrs*	50%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>60</b>	<b>74</b>	<b>80</b>	<b>109</b>	<b>125</b>	<b>140</b>	<b>157</b>	<b>135</b>	<b>151</b>	<b>148</b>
<b>Males</b>	0-2 years	16	10	9	27	24	38	35	37	39	0
	3-7 years	19	24	36	29	32	33	39	24	44	0
	8+ years	0	2	5	3	1	1	0	1	1	0
	Unknown	2	6	0	4	4	4	2	6	6	94
	<b>Subtotal</b>	<b>37</b>	<b>42</b>	<b>50</b>	<b>63</b>	<b>61</b>	<b>76</b>	<b>76</b>	<b>68</b>	<b>90</b>	<b>94</b>
<b>Females</b>	0-2 years	10	14	12	19	32	25	39	46	28	0
	3-7 years	7	10	9	19	18	26	30	15	22	0
	8+ years	3	3	5	0	5	4	5	0	1	0
	Unknown	3	5	4	8	9	9	7	6	10	54
	<b>Subtotal</b>	<b>23</b>	<b>32</b>	<b>30</b>	<b>46</b>	<b>64</b>	<b>64</b>	<b>81</b>	<b>67</b>	<b>61</b>	<b>54</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 4 Panhandle DAU status and objectives

## **CLEARWATER REGION**

### **Latah DAU (GMUs 8, 11A)**

#### **Management Objectives**

The 2002–2010 Mountain Lion Management Plan directs the Department to maintain lions at or near their current distribution throughout the state. Harvest goals are based on trends from past harvest data, mountain lion population dynamics, harvest vulnerability, and the desired level and composition of harvest over a 3-year average. Initial harvest goals for a DAU will be designed to maintain harvest levels on a 3-year running average that are at or above the 3-year average harvest for the 1990–1992 mountain lion seasons.

#### **Historical Information**

Latah DAU GMUs are generally accessible to hunters during winter but support low numbers of mountain lions. Healthy white-tailed deer and elk populations, as well as some mule deer, provide a prey base. Habitats in this area are dominated by privately owned farmlands in upland prairies that are interspersed with coniferous forests leading to the Clearwater River and its tributaries. Canyon breaks leading to the Clearwater River provide quality habitat for many species of wildlife.

#### **Season Structure**

Mountain lion seasons and statewide reporting are based on state fiscal years. No change occurred to season structure for mountain lions in the Latah DAU for the 2014–2015 hunting seasons. There is no dog-training season for mountain lions and no female harvest quotas in this DAU.

#### **Harvest Characteristics**

Mountain lion harvest in Latah DAU GMUs has historically been light, although has increased in recent years, averaging 20 lions per season from 2014–2016. This level exceeds the 1990–1992 minimum harvest objective of 3 per year. A total of 19 and 21 lions were harvested in 2015 and 2016 respectively.

Harvest with hounds made up approximately half of the harvest and incidental harvest was approximately one third of the harvest for the 2015 and 2016 seasons.

The percentage of females in the harvest, generally considered an indicator of mortality rates, decreased steadily from the early 1980s through 1993. Since 2006, the percentage has varied between a low of 28% in 2012 and a high of 75% in 2007. The current 3-year average is 47% females in the harvest. The 2015 season percent of females in the harvest was 42%, increasing to 62% in 2016. There is currently no established threshold for this metric.

## **Age Structure**

Age structure from harvested mountain lions in the 2016 season was not available at the time of this report. The most recent 3-year average (2013–2015) of males 3 years or older was 47% of all males harvested, an increase over the 2010–2012 average of 41%.

The 3-year average of percent females over 3 years of age in the harvest has exhibited a declining trend, decreasing from 35% in 2006–2008 to 18% in 2013–2015.

## **Depredations**

Mountain lion depredations are usually very minor in the Clearwater Region. In 2016 there were 10 total kill permits issued and 5 lions were killed, which is an increase over the previous year, when 4 kill permits were issued and 2 lions were killed. Overall, an increasing trend in lion depredations might be due to a growing urban interface with lion-occupied range and an increase in white-tailed deer populations.

## **Management Implications**

Due to the increase in sightings and reports of encounters during the mid-1990s in this DAU, hunting seasons were liberalized. Harvest continued to increase and, during the 1997 and 1998 seasons, reached an all-time high for this DAU. It is likely that due to the dense white-tailed deer populations throughout much of this DAU, the mountain lion population expanded its range in response to the growth of this prey population. This would account for increased observations of mountain lions in this DAU during the mid-1990s. Despite the longer season, harvest has remained below the 1997 and 1998 record harvest.



# Latah DAU

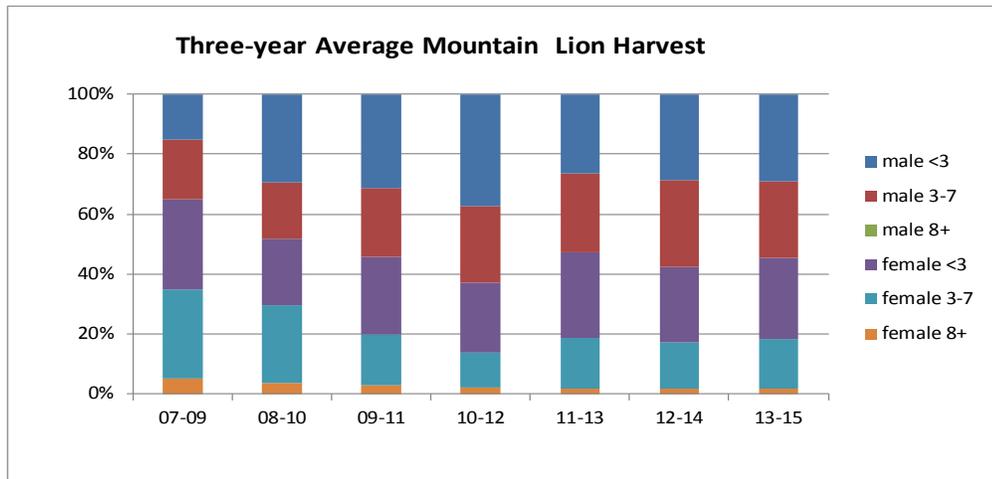
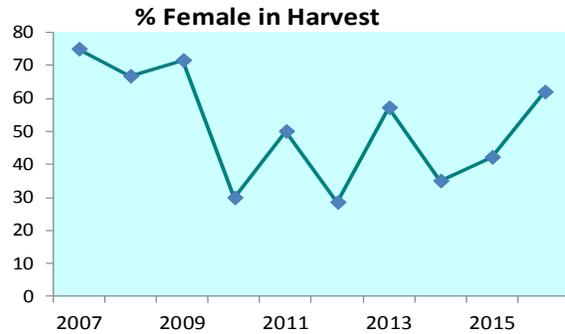
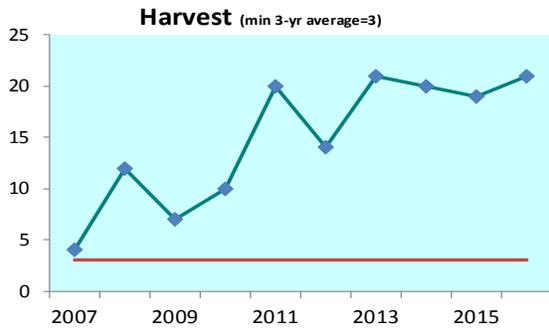
(GMUs 8, 11A)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages		Goal
1,608	Annual Harvest	20	3
	Harvest per 100 mi <sup>2</sup>	1.2	
	Males: Percent 3+ yrs*	47%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>4</b>	<b>12</b>	<b>7</b>	<b>10</b>	<b>20</b>	<b>14</b>	<b>21</b>	<b>20</b>	<b>19</b>	<b>21</b>
<b>Males</b>	0-2 years	0	2	1	5	5	6	3	6	7	0
	3-7 years	1	2	1	2	5	4	5	6	3	0
	8+ years	0	0	0	0	0	0	0	0	0	0
	Unknown	0	0	0	0	0	0	1	1	1	8
	<b>Subtotal</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>7</b>	<b>10</b>	<b>10</b>	<b>9</b>	<b>13</b>	<b>11</b>	<b>8</b>
<b>Females</b>	0-2 years	2	3	1	2	6	2	7	4	4	0
	3-7 years	0	4	2	1	3	1	5	2	2	0
	8+ years	0	0	1	0	0	1	0	0	1	0
	Unknown	1	1	1	0	1	0	0	1	1	13
	<b>Subtotal</b>	<b>3</b>	<b>8</b>	<b>5</b>	<b>3</b>	<b>10</b>	<b>4</b>	<b>12</b>	<b>7</b>	<b>8</b>	<b>13</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 5 Latah DAU status and objectives

## **Palouse-Dworshak DAU (GMUs 8A, 10A)**

### **Management Objectives**

The 2002–2010 Mountain Lion Management Plan directs the Department to maintain lions at or near their current distribution throughout the state. Harvest goals are based on trends from past harvest data, mountain lion population dynamics, harvest vulnerability, and the desired level and composition of harvest over a 3-year average. Initial harvest goals for a DAU will be designed to maintain harvest levels on a 3-year running average that are at or above the 3-year average harvest for the 1990–1992 mountain lion seasons.

### **Historical Information**

Timberlands owned by Potlatch Corporation, Idaho Department of Lands (IDL), and U.S. Forest Service (USFS) comprise 75% of the Palouse-Dworshak DAU. Timber harvest activity has created vast acreages of early successional habitat benefiting several ungulate prey species. The remaining one-fourth of the DAU is open or agricultural lands providing high-quality forage for deer and elk at certain times of the year. The area is bisected by canyons leading to the Palouse and Potlatch rivers (GMU 8A), Clearwater River, and lower North Fork of Clearwater River (GMU 10A). Both GMUs share a common border along the lower end of Dworshak Reservoir. Access is very good throughout the DAU where high open and closed road densities contribute to good opportunities for hunting mountain lions.

### **Season Structure**

No change occurred to season structure for mountain lions in the Palouse-Dworshak DAU for the 2016 hunting season. There is no dog-training season for mountain lions and no female harvest quotas in this DAU.

### **Harvest Characteristics**

Mountain lion harvest in the Palouse-Dworshak DAU averaged 42 lions for the 2014–2016 seasons; 41 and 50 lions were harvested during the 2015 and 2016 seasons, respectively. This is above the 1990–1992 minimum harvest objective of 21. Harvest has been highly variable, potentially due to varied hunting opportunity (i.e., weather conditions) between years but has generally increased since the late 2000s.

Harvest with the use of hounds accounted for 53% and 56% of the total harvest, respectively, for the 2015 and 2016 seasons. Incidental harvest made up 24% of the harvest in 2015 and 30% of the harvest in 2016.

The percentage of females in the harvest, generally considered an indicator of mortality rates, has varied, with a low of 34% in 2009 and a high of 61% in 2012. The 3-year average (2014–2016) was 45% females in the harvest. The 2015 and 2016 season percent of females in the harvest was 46%. There is currently no established threshold for this metric.

## **Age Structure**

Age structure from harvested mountain lions in the 2016 season was not available at the time of this report. The most recent 3-year average (2013–2015) of males 3 years or older was 53% of the total male harvest, a slight increase over the 2010–2012 average of 50%.

The percent of females over 3 years of age in the harvest has varied between 18% and 29% of total harvest based on a running 3-year average since 2007–2009. The most recent average (2013–2015) was 20%.

## **Depredations**

Mountain lion depredations are usually very minor in the Clearwater Region. In 2016 there were 10 total kill permits issued and 5 lions were killed, which is an increase over the previous year, when 4 kill permits were issued and 2 lions were killed. Overall, an increasing trend in lion depredations might be due to a growing urban interface with lion-occupied range and an increase in white-tailed deer populations.

## **Management Implications**

Due to the increase in sightings and reports of encounters during the mid-1990s in this DAU, hunting seasons were liberalized. Harvest continued to increase and, during the 1997 season, harvest reached an all-time high. It is likely that, due to the dense white-tailed deer populations throughout much of this DAU, the mountain lion population expanded its range into lower elevations and took advantage of the abundant whitetail population. This could potentially account for increased observations of mountain lions in lower-elevation whitetail habitat in this DAU during the mid-1990s. Recent research on cause-specific mortality for elk calves collared in GMU 10A from 2015–2017 reported that lions were the primary cause of death (37% of mortalities) for calves between January 1 and May 31, followed by malnutrition (26%), wolf predation (16%), and unknown predation (16%). Despite a longer season, harvest has remained below the 1997 peak and currently has stabilized at about half that level.

Harvest increased dramatically from 1991–1997 in GMU 10A and, although lion harvest has declined from a peak in 1997, the GMU retains a relatively high harvest level. It is unclear whether the current status is a result of a population change or variable hunting conditions.



# Palouse-Dworshak DAU

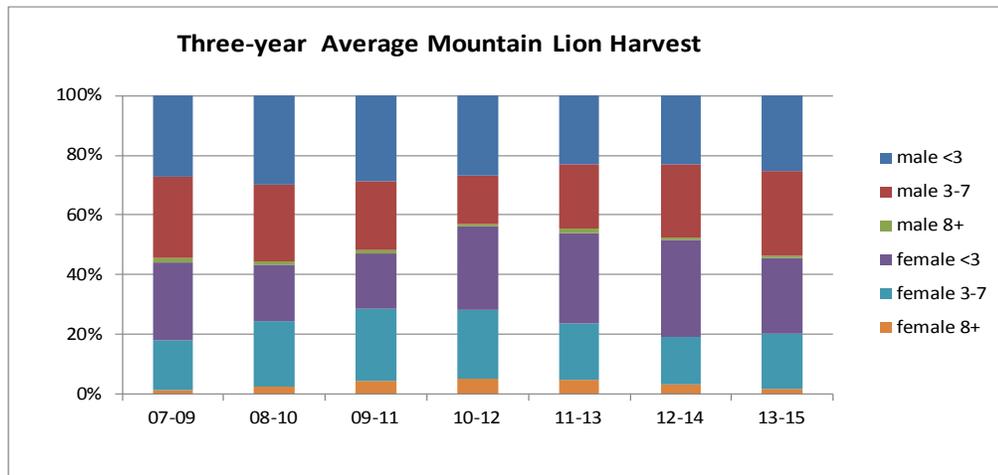
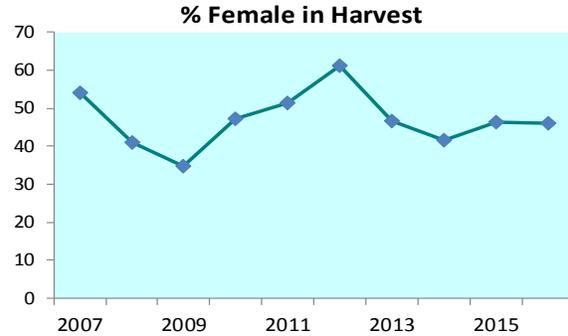
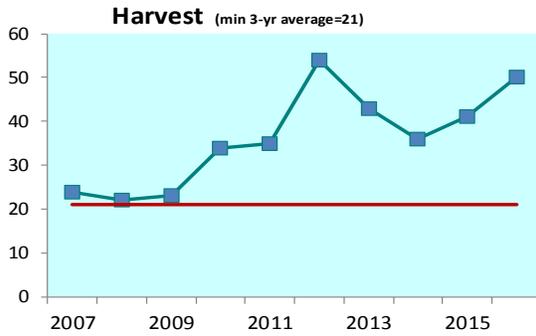
(GMUs 8A, 10A)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages	Goal	
2,310	Annual Harvest	42	21
	Harvest per 100 mi <sup>2</sup>	1.8	
	Males: Percent 3+ yrs*	53%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		24	22	23	34	35	54	43	36	41	50
<b>Males</b>	0-2 years	6	6	6	10	9	12	8	9	12	0
	3-7 years	4	5	9	5	6	8	13	10	9	0
	8+ years	0	1	0	0	1	0	1	0	0	0
	Unknown	1	1	0	3	1	1	1	2	1	27
	<b>Subtotal</b>	<b>11</b>	<b>13</b>	<b>15</b>	<b>18</b>	<b>17</b>	<b>21</b>	<b>23</b>	<b>21</b>	<b>22</b>	<b>27</b>
<b>Females</b>	0-2 years	8	4	5	5	6	21	11	9	9	0
	3-7 years	5	4	2	10	9	8	7	5	9	0
	8+ years	0	0	1	1	2	3	1	0	1	0
	Unknown	0	1	0	0	1	1	1	1	0	23
	<b>Subtotal</b>	<b>13</b>	<b>9</b>	<b>8</b>	<b>16</b>	<b>18</b>	<b>33</b>	<b>20</b>	<b>15</b>	<b>19</b>	<b>23</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 6. Palouse-Dworshak DAU status and objectives

## **Lolo DAU (GMUs 10, 12)**

### **Management Objectives**

The 2002–2010 Mountain Lion Management Plan directs the Department to maintain lions at or near their current distribution throughout the state. Harvest goals are based on trends from past harvest data, mountain lion population dynamics, harvest vulnerability, and the desired level and composition of harvest over a 3-year average. Initial harvest goals for a DAU will be designed to maintain harvest levels on a 3-year running average that are at or above the 3-year average harvest for the 1990–1992 mountain lion seasons.

### **Historical Information**

Lion hunter access to the Lolo DAU is extremely limited during winter months, except along State Highway 12 from Lowell to Lolo Pass and by snowmobile along the North Fork of the Clearwater River. Much of these 2 GMUs are difficult to access because of snow, mud, and steep, rugged terrain. Deer and elk populations throughout most of the DAU provide a considerable prey base; however, elk numbers have declined substantially over the past 2 decades. Habitat includes dense coniferous forest and mountains with relatively high precipitation. Land ownership is almost entirely public (USFS).

### **Season Structure**

Within the Lolo DAU, the take season began at the end of August and extended through 30 June. The 2-lion bag limit in GMUs 10 and 12 and the use of electronic calls for hunting lions in GMU 12 were discontinued with the 2006 season, but reinstated in 2010. This DAU does not have a dog-training season, and there is no female harvest quota.

### **Harvest Characteristics**

The remote nature and difficult access in this DAU result in a moderate harvest level. An average annual harvest of 15 lions occurred for the 2014–2016 seasons. Harvest has been trending upwards in recent years, with 23 lions harvested in 2016, compared to 15 in 2015, and only 8 in 2014. Lolo DAU hunter harvest has been below the 1990–1992 minimum harvest objective of 20. Since the 1990s, availability of mountain lions appears to be declining, potentially a result of the effects of substantial decreases in elk numbers over the past 2 decades and, to a lesser extent, additional lion hunting pressure from reduced nonresident tag costs and the 2-lion bag limit.

Harvest with the use of hounds accounted for 87% and 91% of the total harvest during the 2015 and 2016 seasons, respectively. In 2016, 70% of lions were taken with a rifle.

The percentage of females in the harvest, generally considered an indicator of mortality rates, has varied in recent years from a low of 27% in 2015 to a high of 55% in 2008. Females accounted for 37% of the harvest on average from 2014–2016. The 2016 season percent of females in the harvest was 39%, up from 27% the previous year. There is currently no established threshold for this metric.

## **Age Structure**

Age structure from harvested mountain lions in the 2016 season was not available at the time of this report. The most recent 3-year average (2013–2015) of males 3 years or older was 77% of total male harvest, up from the 2010–2012 average of 63%.

The percent of females over 3 years of age in the harvest has varied between 23% and 34% of total harvest based on a running 3-year average since 2007–2009. The most recent average (2013–2015) was 26%.

## **Depredations**

Mountain lion depredations are usually very minor in the Clearwater Region. In 2016 there were 10 total kill permits issued and 5 lions were killed, which is an increase over the previous year, when 4 kill permits were issued and 2 lions were killed. Overall, an increasing trend in lion depredations might be due to a growing urban interface with lion-occupied range and an increase in white-tailed deer populations.

## **Management Implications**

Mountain lion harvest in the Lolo DAU averaged 16 lions harvested per year over the past decade, but harvest as trended upwards in recent years with 23 lions harvested in 2016, which is the second highest harvest since 2007. Recent harvest trends followed a substantial decline in harvest since 2000, when harvest peaked at 54 lions. This decline in harvest may be an indication that efforts to increase harvest through liberal season regulations has been moderately affective, and that lion numbers have potentially adjusted to decreased prey availability. Also, anecdotal information suggests that lion hunters are less willing than in the past to turn hounds loose in areas with high wolf densities, which might account for reduced harvest since wolves became reestablished in the 2000s.



# Lolo DAU

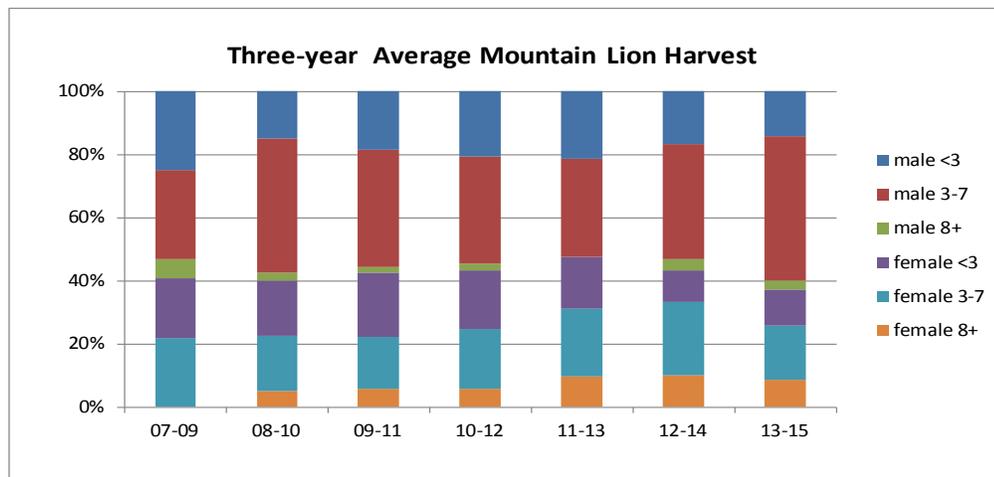
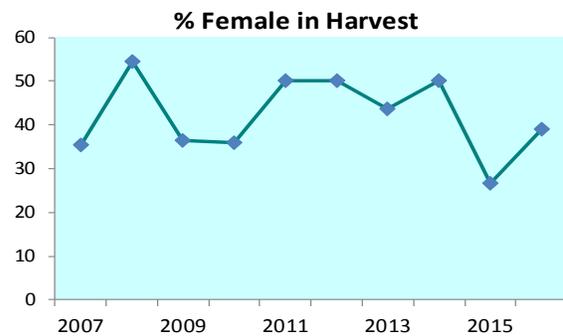
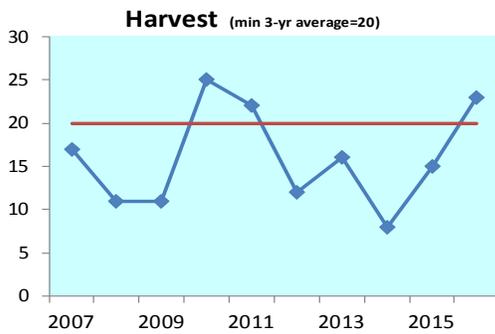
(GMUs 10, 12)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages		Goal
2,396	Annual Harvest	15	20
	Harvest per 100 mi <sup>2</sup>	0.6	
	Males: Percent 3+ yrs*	77%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>17</b>	<b>11</b>	<b>11</b>	<b>25</b>	<b>22</b>	<b>12</b>	<b>16</b>	<b>8</b>	<b>15</b>	<b>23</b>
<b>Males</b>	0-2 years	6	0	2	4	4	3	2	0	3	0
	3-7 years	3	1	5	11	4	3	6	2	8	0
	8+ years	2	0	0	1	0	0	0	1	0	0
	Unknown	0	4	0	0	3	0	1	1	0	14
	<b>Subtotal</b>	<b>11</b>	<b>5</b>	<b>7</b>	<b>16</b>	<b>11</b>	<b>6</b>	<b>9</b>	<b>4</b>	<b>11</b>	<b>14</b>
<b>Females</b>	0-2 years	2	2	2	3	6	1	0	2	2	0
	3-7 years	3	2	2	3	4	3	2	2	2	0
	8+ years	0	0	0	2	1	0	3	0	0	0
	Unknown	1	2	0	1	0	2	2	0	0	9
	<b>Subtotal</b>	<b>6</b>	<b>6</b>	<b>4</b>	<b>9</b>	<b>11</b>	<b>6</b>	<b>7</b>	<b>4</b>	<b>4</b>	<b>9</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 7. Lolo DAU status and objectives

## **Hells Canyon DAU (GMUs 11, 13, 18)**

### **Management Objectives**

The 2002–2010 Mountain Lion Management Plan directs the Department to maintain lions at or near their current distribution throughout the state. Harvest goals are based on trends from past harvest data, mountain lion population dynamics, harvest vulnerability, and the desired level and composition of harvest over a 3-year average. Initial harvest goals for a DAU will be designed to maintain harvest levels on a 3-year running average that are at or above the 3-year average harvest for the 1990–1992 mountain lion seasons.

### **Historical Information**

Wildlife habitat in Hells Canyon GMUs varies greatly across the DAU. Steep, dry, river-canyon grasslands give way to higher-elevation forests with greater precipitation. Road density is moderate, and access is restricted in many areas. This DAU contains large tracts of both privately and publicly owned land. GMU 11 is mostly private land except for the Craig Mountain Wildlife Management Area (83,000 acres). GMU 13 is primarily under private ownership and is managed mostly for agriculture and livestock production. GMU 18 is two-thirds public land, mostly in the Hells Canyon Wilderness and National Recreation Area. All 3 GMUs have borders along the Snake and Salmon rivers. Healthy mule deer and elk populations, as well as some white-tailed deer, provide a prey base for mountain lions.

### **Season Structure**

No change occurred to season structure for mountain lions in the Hells Canyon DAU for the 2017 and 2018 hunting seasons. There is no dog-training season for mountain lions and no female harvest quotas for this DAU.

### **Harvest Characteristics**

Mountain lion harvest in the Hells Canyon DAU has historically been moderate. During the 2014–2016 seasons, harvest averaged 24 lions per season, with 24 and 29 lions being harvested in 2015 and 2016, respectively. This level surpassed the 1990–1992 minimum harvest objective of 15 per year.

Similar to previous years, rifle was the most common weapon used (90% of harvested lions) and hunting with hounds was the most common method (62%), followed by incidental harvest (34%), during the 2016 season.

The percentage of females in the harvest, generally considered an indicator of mortality rates, has varied, with a low of 29% in 2007 and 2011 and a high of 61% in 2013. The 3-year average (2014–2016) was 42% females in the harvest. The 2015 season percent of females in the harvest was 46% and in 2016 it was 45%. There is currently no established threshold for this metric.

### **Age Structure**

Age structure from harvested mountain lions in the 2016 season was not available at the time of this report. The most recent 3-year average (2013–2015) of males 3 years or older was 62% of all males in the harvest, a decrease from 69% for 2010–2012.

The 3-year average (2013–2015) of the percent of females over 3 years of age in the harvest was 23%, and has varied between 15% and 25% since 2007–2009.

### **Depredations**

Mountain lion depredations are usually very minor in the Clearwater Region. In 2016 there were 10 total kill permits issued and 5 lions were killed, which is an increase over the previous year, when 4 kill permits were issued and 2 lions were killed. Overall, an increasing trend in lion depredations might be due to a growing urban interface with lion-occupied range and an increase in white-tailed deer populations.

### **Management Implications**

Little change in lion harvest has occurred in this DAU since 1998. Harvest has remained low except when favorable weather conditions have provided increased lion harvest opportunities. Wolf presence is minimal, especially in the northern portion of this DAU, which may draw hound hunters to this area, and could increase harvest in the future.



# Hells Canyon DAU

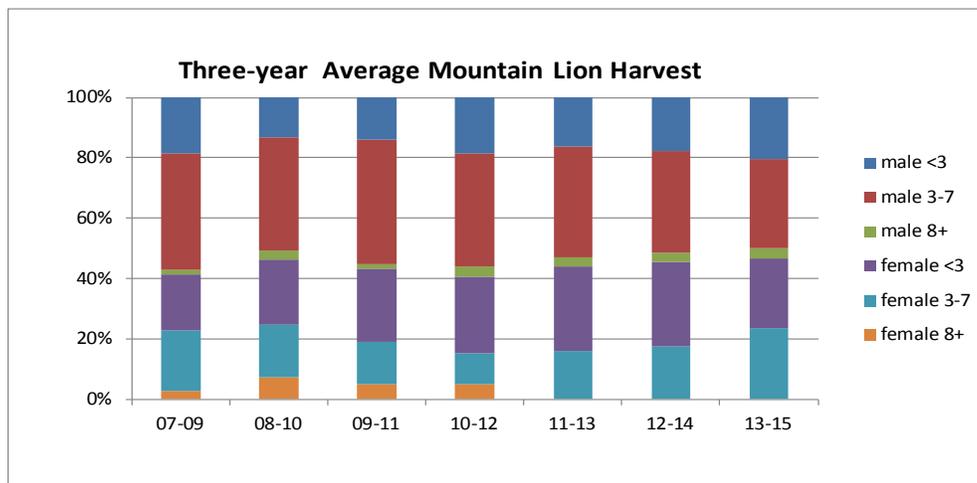
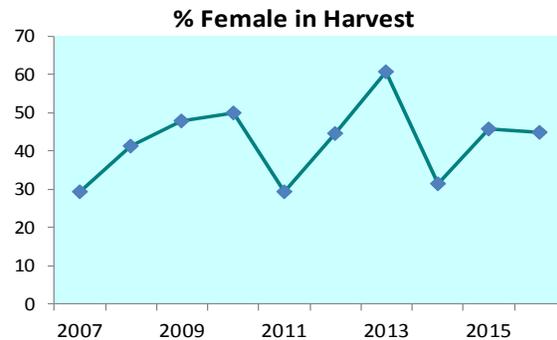
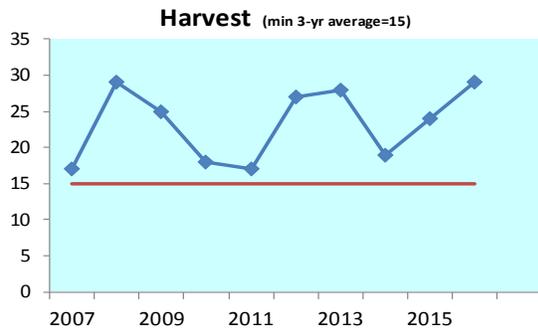
(GMUs 11, 13, 18)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages	Goal	
1,396	Annual Harvest	24	15
	Harvest per 100 mi <sup>2</sup>	1.7	
	Males: Percent 3+ yrs*	62%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		17	29	25	18	17	27	28	19	24	29
<b>Males</b>	0-2 years	6	4	3	2	3	6	2	4	7	0
	3-7 years	6	11	10	5	9	8	8	7	4	0
	8+ years	0	1	0	1	0	1	1	0	1	0
	Unknown	0	1	0	1	0	0	0	2	1	16
	<b>Subtotal</b>	<b>12</b>	<b>17</b>	<b>13</b>	<b>9</b>	<b>12</b>	<b>15</b>	<b>11</b>	<b>13</b>	<b>13</b>	<b>16</b>
<b>Females</b>	0-2 years	1	4	8	3	3	9	7	3	5	0
	3-7 years	4	6	4	2	2	2	7	3	5	0
	8+ years	0	2	0	3	0	0	0	0	0	0
	Unknown	0	0	0	1	0	1	3	0	1	13
	<b>Subtotal</b>	<b>5</b>	<b>12</b>	<b>12</b>	<b>9</b>	<b>5</b>	<b>12</b>	<b>17</b>	<b>6</b>	<b>11</b>	<b>13</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 8 Hells Canyon DAU status and objectives

## **Elk City DAU (GMUs 14, 15, 16)**

### **Management Objectives**

The 2002–2010 Mountain Lion Management Plan directs the Department to maintain lions at or near their current distribution throughout the state. Harvest goals are based on trends from past harvest data, mountain lion population dynamics, harvest vulnerability, and the desired level and composition of harvest over a 3-year average. Initial harvest goals for a DAU will be designed to maintain harvest levels on a 3-year running average that are at or above the 3-year average harvest for the 1990–1992 mountain lion seasons.

### **Historical Information**

Land ownership in Elk City DAU is 80% public and 20% private. Privately owned portions are at lower elevations along Clearwater and Salmon rivers. Approximately 8% of the DAU is within the Gospel Hump Wilderness. Most of the area is characterized by productive coniferous forests with intermixed grasslands. Logging and mining efforts have resulted in high open and closed road densities contributing to significant big game vulnerability during hunting season. Deer populations throughout most of the DAU are thriving, providing a substantial prey base; however, elk populations in GMUs 15 and 16 are likely in decline.

### **Season Structure**

No change occurred to season structure for mountain lions in the Elk City DAU for the 2017 and 2018 hunting seasons. This DAU does not have a dog-training season and there is no female harvest quota. The northern portion of GMU 15 was closed to mountain lion harvest from 1999 through the 2003 season for research purposes. Additional hunting opportunity has been offered with a 2-lion bag limit in that portion of GMU 16 north of the Selway River since 2000.

### **Harvest Characteristics**

Hunter access can be difficult in some portions of this DAU. During the 2015 and 2016 seasons, Elk City DAU hunters harvested 47 and 49 mountain lions respectively. The 1990–1992 minimum harvest objective of 40 lions has been met since 2013. Lion harvest peaked in 1996 and has decreased since that time, although harvest has recently increased. Some of the initial decline may be attributed to the lion harvest closure in the northern portion of GMU 15 from 1999 through the 2003 season.

Harvest with the use of hounds accounted for 64% and 80% of the harvest in 2015 and 2016, respectively, followed by incidental harvest at 26% (2015) and 18% (2016). Weapon type used for 2016 was predominately rifle (70%), but also included bow (14%) and handgun (14%).

The percentage of females in the harvest, generally considered an indicator of mortality rates, has varied between 38% and 60% annually, with 43% of the 2016 harvest comprised of females. The 3-year average (2014–2016) was 52% females in the harvest. The 2015 season percent of females in the harvest was 60%. There is currently no established threshold for this metric.

## **Age Structure**

Age structure from harvested mountain lions in the 2016 seasons was not available at the time of this report. The most recent 3-year average (2013–2015) of males 3 years or older was 57% of all males in the harvest, down slightly from the 2010–2012 average of 61%.

The percent of females over 3 years of age in the harvest has fluctuated between 20% and 28% since the 2006–2008 average.

## **Depredations**

Mountain lion depredations are usually very minor in the Clearwater Region. In 2016 there were 10 total kill permits issued and 5 lions were killed, which is an increase over the previous year, when 4 kill permits were issued and 2 lions were killed. Overall, an increasing trend in lion depredations might be due to a growing urban interface with lion-occupied range and an increase in white-tailed deer populations.

## **Management Implications**

A decline in total mountain lion harvest in Elk City DAU was to be expected after the northern portion of GMU 15 was closed from 1999–2003. However, an additional drop in the Elk City DAU harvest occurred in 2003. This may have been related to unfavorable weather conditions or the desire by hunters to pursue lions in areas known for greater lion densities. Also, lion hunters may have re-located hunting efforts to areas with lower wolf densities to avoid potential conflict with hounds. Annual harvest remained below the 3-year harvest goal of 40 lions until 2013, and has remained above objective since.



# Elk City DAU

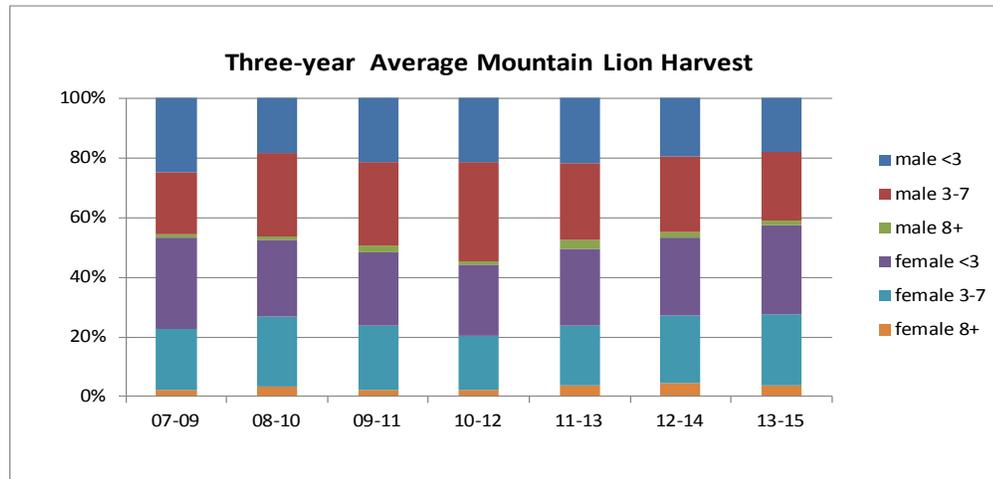
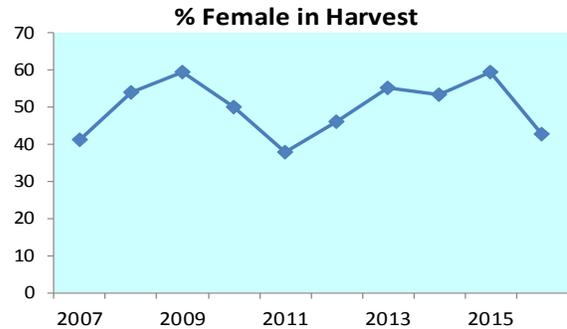
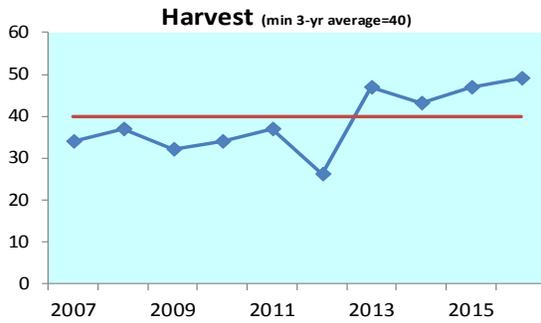
(GMUs 14, 15, 16)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages		Goal
1,857	Annual Harvest	46	40
	Harvest per 100 mi <sup>2</sup>	2.5	
	Males: Percent 3+ yrs*	57%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>34</b>	<b>37</b>	<b>32</b>	<b>34</b>	<b>37</b>	<b>26</b>	<b>47</b>	<b>43</b>	<b>47</b>	<b>49</b>
<b>Males</b>	0-2 years	10	7	6	4	10	5	7	9	7	0
	3-7 years	6	9	4	13	9	7	10	10	9	0
	8+ years	0	0	1	0	1	0	2	0	0	0
	Unknown	4	1	2	0	3	2	2	1	3	28
	<b>Subtotal</b>	<b>20</b>	<b>17</b>	<b>13</b>	<b>17</b>	<b>23</b>	<b>14</b>	<b>21</b>	<b>20</b>	<b>19</b>	<b>28</b>
<b>Females</b>	0-2 years	10	10	8	6	9	6	11	11	16	0
	3-7 years	4	7	8	7	5	4	11	9	10	0
	8+ years	0	1	1	1	0	1	3	1	1	0
	Unknown	0	2	2	3	0	1	1	2	1	21
	<b>Subtotal</b>	<b>14</b>	<b>20</b>	<b>19</b>	<b>17</b>	<b>14</b>	<b>12</b>	<b>26</b>	<b>23</b>	<b>28</b>	<b>21</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 9. Elk City DAU status and objectives

## **Selway DAU (GMUs 16A, 17, 19, 20)**

### **Management Objectives**

The 2002–2010 Mountain Lion Management Plan directs the Department to maintain lions at or near their current distribution throughout the state. Harvest goals are based on trends from past harvest data, mountain lion population dynamics, harvest vulnerability, and the desired level and composition of harvest over a 3-year average. Initial harvest goals for a DAU will be designed to maintain harvest levels on a 3-year running average that are at or above the 3-year average harvest for the 1990–1992 mountain lion seasons.

### **Historical Information**

GMUs within the Selway DAU are, in part, comprised of Selway-Bitterroot, Frank Church River-of-No-Return, and Gospel Hump Wilderness areas and large roadless areas that afford limited access for hunters during mountain lion season. Habitat within this DAU includes dense, coniferous forests within rugged mountainous terrain, as well as Ponderosa pine-savanna habitat with open understory, and steep open bunchgrass hillsides and brush fields along the Selway and Salmon River breaks. Although some white-tailed deer habitat occurs in these GMUs, the predominant ungulates are elk and mule deer.

### **Season Structure**

Within the Selway DAU, the mountain lion take season extended from 30 August–30 June. A bag limit of 2 lions has been allowed since 2000 and electronic calls are permitted. This DAU does not have a dog-training season and nor any female harvest quotas.

### **Harvest Characteristics**

Mountain lion harvest in the Selway DAU peaked in 2000 and 2001 (39 and 33, respectively), then declined to a recent 10-year average of 14 lions per year. Peak harvest was likely the result of several factors including the increased bag limit and season length, increased nonresident hound permits, outfitter efforts, and low snow pack. After peaking, harvest declined substantially in 2002 and has remained low since. Reduced harvest is likely due to a combination of factors including a substantial decline in the elk population, fewer hunters in some areas, and reluctance to release hounds in areas with high wolf densities. During the 2015 and 2016 seasons, Selway DAU hunters harvested 7 and 14 mountain lions, respectively. The 3-year average of 9 lions was below the 1990–1992 minimum harvest objective of 16. Because these are such large GMUs, with a moderate prey base, the mountain lion population is likely much greater than harvest indicates. This suggests an under-harvested, but evidently self-regulating population. The major obstacle to harvest in this DAU is difficult hunter access.

Harvest with the use of hounds accounted for 100% of the total harvest in 2015 and 2016. Seventy-nine percent of lions were harvested with a rifle in 2016 and a handgun was used for 14%.

The percentage of females in the harvest, generally considered an indicator of mortality rates, has varied, with a low of 38% in 2010 and a high of 80% in 2014. The 3-year average (2014–2016)

was 54% females in the harvest. The 2015 season percent of females in the harvest was 57% and in 2016 it was 43%. There is currently no established threshold for this metric.

### **Age Structure**

Age structure from harvested mountain lions in the 2016 season was not available at the time of this report. The most recent 3-year average (2013–2015) of males 3 years or older was 78% of all males in the harvest, up slightly from 74% for 2010–2012.

The 3-year average percent of females over 3 years of age in the harvest has slowly decreased since the 2007–2009 average, declining from 42% to 26% in 2013–2015.

### **Depredations**

Mountain lion depredations are usually very minor in the Clearwater Region. In 2016 there were 10 total kill permits issued and 5 lions were killed, which is an increase over the previous year, when 4 kill permits were issued and 2 lions were killed. Overall, an increasing trend in lion depredations might be due to a growing urban interface with lion-occupied range and an increase in white-tailed deer populations.

### **Management Implications**

The Selway DAU occupies a vast, remote area with high-quality big game range. Consequently, effects of hunting on mountain lion populations in the DAU are generally considered to be light except in those few areas with good road access or in areas where outfitters concentrate their hunting efforts.



## Selway DAU

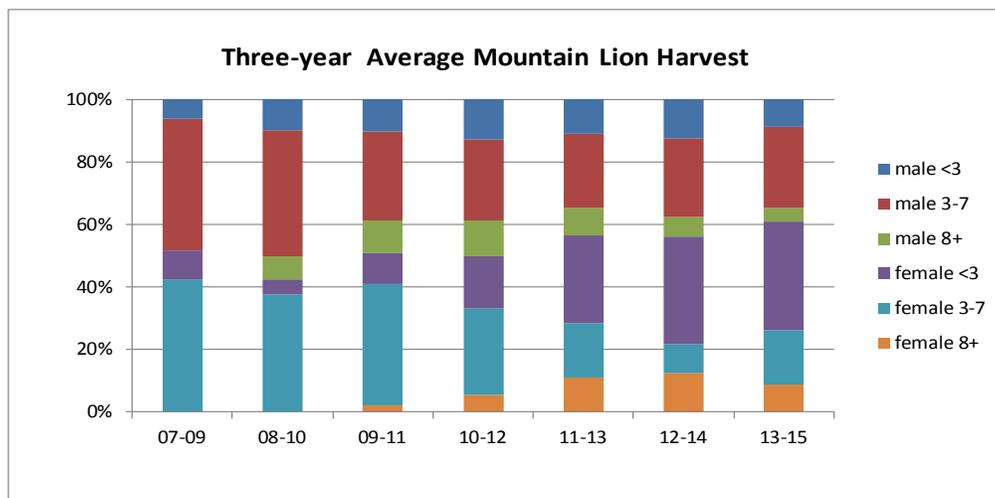
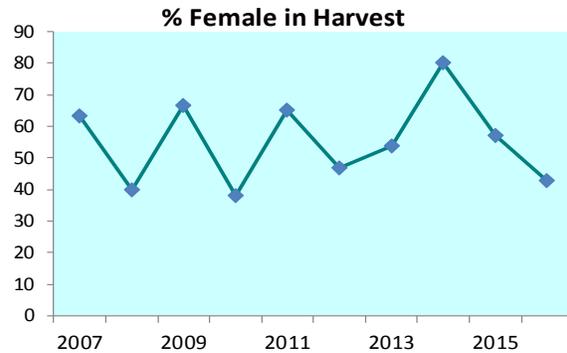
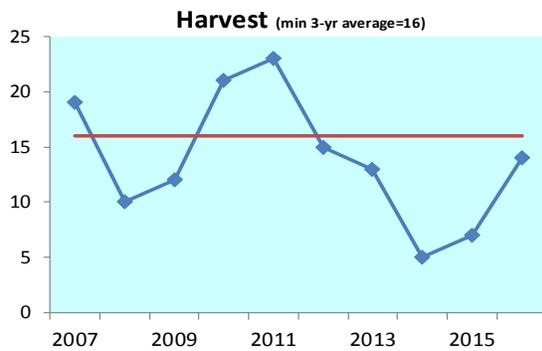
(GMUs 16A, 17, 19, 20)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages		Goal
2,551	Annual Harvest	9	16
	Harvest per 100 mi <sup>2</sup>	0.3	
	Males: Percent 3+ yrs*	78%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>19</b>	<b>10</b>	<b>12</b>	<b>21</b>	<b>23</b>	<b>15</b>	<b>13</b>	<b>5</b>	<b>7</b>	<b>14</b>
<b>Males</b>	0-2 years	1	0	1	3	1	3	1	0	1	0
	3-7 years	5	6	3	7	4	3	4	1	1	0
	8+ years	0	0	0	3	2	1	1	0	0	0
	Unknown	1	0	0	0	1	1	0	0	1	8
	<b>Subtotal</b>	<b>7</b>	<b>6</b>	<b>4</b>	<b>13</b>	<b>8</b>	<b>8</b>	<b>6</b>	<b>1</b>	<b>3</b>	<b>8</b>
<b>Females</b>	0-2 years	1	1	1	0	4	5	4	2	2	0
	3-7 years	7	3	4	8	7	0	1	2	1	0
	8+ years	0	0	0	0	1	2	2	0	0	0
	Unknown	4	0	3	0	3	0	0	0	1	6
	<b>Subtotal</b>	<b>12</b>	<b>4</b>	<b>8</b>	<b>8</b>	<b>15</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>4</b>	<b>6</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 10. Selway DAU status and objectives

## **SOUTHWEST REGION**

### **Warren DAU (GMUs 19A, 20A, 25, 26, 27)**

#### **Management Objectives**

Harvest objectives for the Warren DAU are designed to maintain 3-year average harvest at or above the 1990–1992 average harvest of 15 mountain lions. .

#### **Historical Information**

Warren DAU is characterized by limited access and rugged topography. Most of the DAU occurs within the Frank Church River-of-No-Return Wilderness. Research data from the early 1970's (Seidensticker et al. 1973) indicate mountain lion populations in this area are self-regulating, contributing emigrating animals to surrounding GMUs. The current structure of long seasons and 2-lion bag limits in GMUs 20A, 26, and 27 were implemented in response to sportsmen's concerns about declining ungulate recruitment.

#### **Season Structure**

Season changes include the extension of the take season in GMU 27 by two months (to 30 June) in the 2015 season. A female harvest quota is currently in place in GMU 25 to guard against over-harvest of the reproductive portion of the population, but harvest of males-only is permitted through the end of the season after the female harvest quota has been met. The use of dogs is prohibited during open firearm seasons for deer and elk in all GMUs in this DAU (Appendix A).

#### **Harvest Characteristics**

Fourteen mountain lions (13 males, one female) were harvested in Warren DAU during the 2016 (Figure 11). The female quota in GMU 25 was not met in the 2016 season. The 2016 harvest was 61% higher than the previous 3-year average harvest (2013–2015; 8.7). The 2014–2016 average harvest of 11 is 27% below the minimum 3-year average harvest objective of 15 for this DAU. The harvest trend remains below objective.

During the 2016 season, the majority of mountain lions harvested in the Warren DAU were taken with assistance of hounds (93%).

#### **Age Structure**

Age data for the 2016 harvest season are not yet available. Three-year average age data from the most current analyzed years (2013–2015) indicated that 50% of harvested males were in the  $\geq 3$ -year-old age class. The proportion of females in the harvest has varied dramatically in the last 10 years (range 0% – 64%), averaging 32% over the past three years (Figure 11). Three-year average (2013–2015) adult female harvest ( $\geq 3$  years old) was 75% of the total female harvest.

#### **Depredations**

No mountain lion depredations were reported in the Warren DAU in 2016.

### **Management Implications**

Three-year average harvest in the Warren DAU continues to be below the minimum objective of 15, consistent with the past 10 years. The remote nature of this DAU makes it unlikely that sport harvest can regulate lion population numbers. Prey populations and competition with wolves will likely have the greatest effect on lion populations in this area.



## Warren DAU

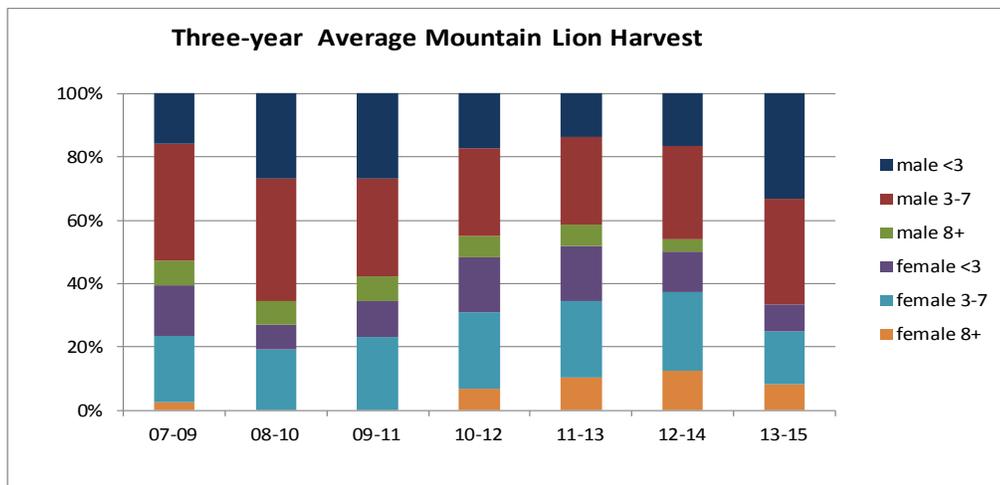
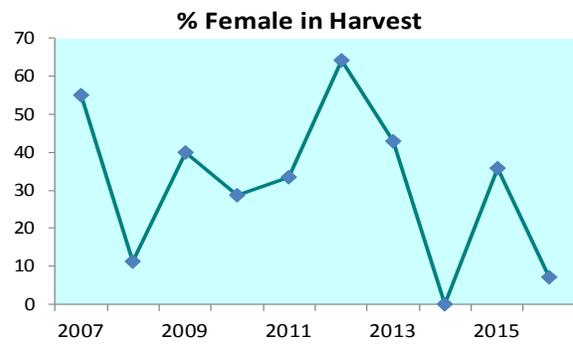
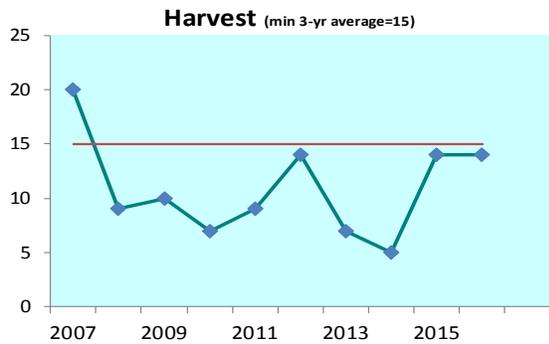
(GMUs 19A, 20A, 25, 26, 27)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages	Goal	
4,289	Annual Harvest	11	15
	Harvest per 100 mi <sup>2</sup>	0.3	
	Males: Percent 3+ yrs*	50%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>20</b>	<b>9</b>	<b>10</b>	<b>7</b>	<b>9</b>	<b>14</b>	<b>7</b>	<b>5</b>	<b>14</b>	<b>14</b>
<b>Males</b>	0-2 years	1	2	3	2	2	1	1	2	5	0
	3-7 years	7	5	2	3	3	2	3	2	3	0
	8+ years	1	1	1	0	1	1	0	0	0	0
	Unknown	0	0	0	0	0	1	0	1	1	13
	<b>Subtotal</b>	<b>9</b>	<b>8</b>	<b>6</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>9</b>	<b>13</b>
<b>Females</b>	0-2 years	5	1	0	1	2	2	1	0	1	0
	3-7 years	4	0	4	1	1	5	1	0	3	0
	8+ years	1	0	0	0	0	2	1	0	1	0
	Unknown	1	0	0	0	0	0	0	0	0	1
	<b>Subtotal</b>	<b>11</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>3</b>	<b>9</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>1</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 11. Warren DAU status and objectives

## McCall DAU (GMUs 22, 23 24, 31, 32A)

### Management Objectives

Harvest objectives for the McCall DAU are designed to maintain 3-year average harvest levels at or above the 1990–1992 average harvest of 20 mountain lions. Female harvest quotas are currently in place in all GMUs of this DAU to guard against over-harvest of the reproductive portion of the population, but harvest of males-only is permitted through the end of the season after the female harvest quota has been met.

### Historical Information

Approximately two-thirds of the McCall DAU is in public ownership, with most land managed by the USFS. Open, scattered shrub communities at lower elevations and mixed-conifer forests at mid to upper elevations characterize the habitat. The wide valley bottoms of the upper Little Salmon River, Weiser River, and North Fork Payette River are dominated by agri-business and housing developments. Moderate to high road densities exist in most of this DAU, with lower road densities on the eastern side of the DAU.

Lions were considered rare in these GMUs in the late 1970s and early 1980s. Like lion populations in other parts of the state, those in McCall DAU began increasing dramatically in the early 1990s. Subsequently, lion sightings, depredation occurrences, and sportsmen concerns for impacts on ungulates increased. Conservative seasons adopted in the 1980s were modified to the more liberal seasons currently in place (Appendix A).

### Season Structure

No changes occurred to season structure for mountain lions in the McCall DAU for the 2016 seasons. Female harvest quotas are currently in place in all GMUs of this DAU to guard against over-harvest of the reproductive portion of the population, but harvest of males-only is permitted through the end of the season after the female harvest quota has been met. The use of dogs is prohibited during open firearm seasons for deer and elk in all GMUs in this DAU (Appendix A).

### Harvest Characteristics

Thirty-four mountain lions (18 males, 16 females) were harvested in the McCall DAU during the 2016 season (Figure 11). The female quota was reached in GMU 23 during the 2016 season. The 2016 harvest was 29% above the previous 3- year average harvest (2013–2015; 26.3). The 2014–2016 average harvest of 28 is 40% above the minimum harvest objective of 20 for this DAU. The harvest trend has been above objective for the past 7 years.

The majority of mountain lions harvested in the McCall DAU during the 2016 season were taken with assistance of hounds (80%).

### Age Structure

Age data for 2016 harvest seasons are not yet available. Three-year average age data from the most current analyzed years (2013–2015) indicated that 68% of harvested males were in the  $\geq 3$ -year-old age class. Percent females in the harvest averaged 50% over the last three years (2014–

2016). Three-year average (2013–2015) adult female harvest ( $\geq 3$  years old) was 50% of the total female harvest (Figure 12).

### **Depredations**

No mountain lion depredations were reported in the McCall DAU in 2016.

### **Management Implications**

Current 3-year average harvest in the McCall DAU is above the minimum objective. Due to the high accessibility to lion habitat in this DAU, harvest restrictions such as female harvest quotas are necessary to maintain viable populations and subsequent hunter satisfaction.



# McCall DAU

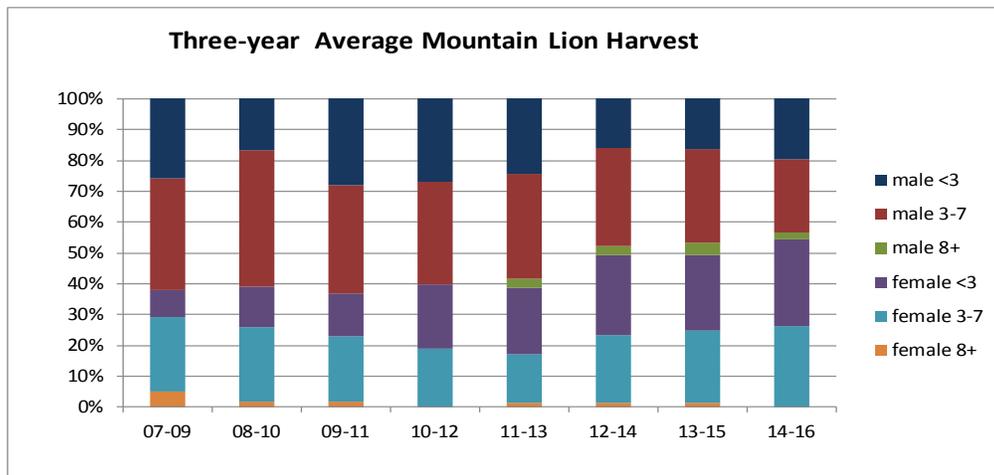
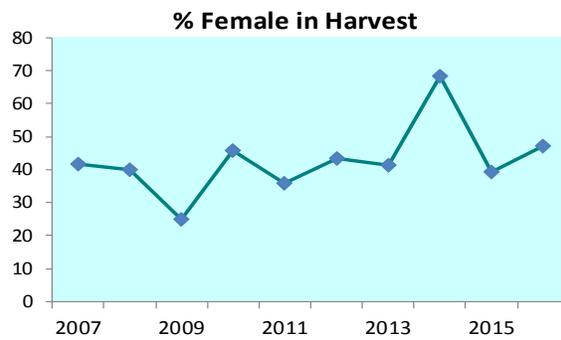
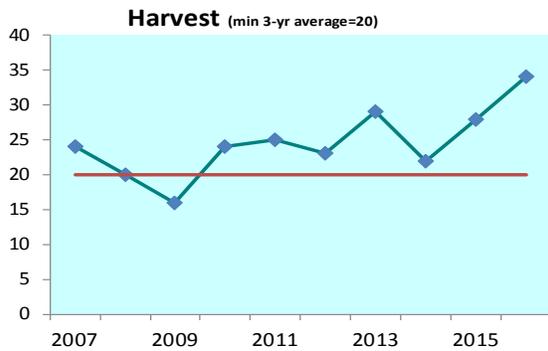
(GMUs 22, 23, 24, 31, 32A)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages		Goal
3,101	Annual Harvest	28	20
	Harvest per 100 mi <sup>2</sup>	0.9	
	Males: Percent 3+ yrs*	68%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>24</b>	<b>20</b>	<b>16</b>	<b>24</b>	<b>25</b>	<b>23</b>	<b>29</b>	<b>22</b>	<b>28</b>	<b>34</b>
<b>Males</b>	0-2 years	9	2	4	3	9	5	3	3	6	0
	3-7 years	5	9	7	8	5	8	11	3	8	0
	8+ years	0	0	0	0	0	0	2	0	1	0
	Unknown	0	1	1	2	2	0	1	1	2	18
	<b>Subtotal</b>	<b>14</b>	<b>12</b>	<b>12</b>	<b>13</b>	<b>16</b>	<b>13</b>	<b>17</b>	<b>7</b>	<b>17</b>	<b>18</b>
<b>Females</b>	0-2 years	1	4	0	3	5	5	5	8	5	0
	3-7 years	7	4	3	6	3	3	5	7	5	0
	8+ years	2	0	1	0	0	0	1	0	0	0
	Unknown	0	0	0	2	1	2	1	0	1	16
	<b>Subtotal</b>	<b>10</b>	<b>8</b>	<b>4</b>	<b>11</b>	<b>9</b>	<b>10</b>	<b>12</b>	<b>15</b>	<b>11</b>	<b>16</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 12 McCall DAU status and objectives

## **Boise-Stanley DAU (GMUs 32, 33, 34, 35, 36, 39)**

### **Management Objectives**

Harvest objectives for the Boise-Stanley DAU are designed to maintain 3-year average harvest levels at or above the 1990–1992 average harvest of 30 mountain lions.

### **Historical Information**

The majority of the Boise-Stanley DAU is forested public land administered by the Boise, Challis and Sawtooth National Forests. However sections of private agricultural also exist in the valley bottoms. A portion of the Treasure Valley-Idaho's largest metropolitan area-is also found in this DAU. Open, scattered shrub communities at lower elevations and mixed-conifer forests at mid to upper elevations characterize the habitat. Access within the Boise-Stanley DAU ranges from heavily roaded urban areas to roadless wilderness areas.

Lions occurred in lower densities in these GMUs in the late 1970s and early 1980s. Like lion populations in other parts of the state, lion numbers in Boise-Stanley DAU began increasing dramatically in the early 1990s, likely in response to increasing deer and/or elk populations in much of the area. Subsequently, lion sightings, depredation occurrences, and sportsmen concerns for ungulates increased. Conservative seasons adopted in the 1980s were modified to the more liberal seasons currently in place (Appendix A).

### **Season Structure**

No changes occurred to season structure for mountain lions in the Boise-Stanley DAU for the 2016 season. Female harvest quotas are currently in place in these GMUs (with the exception of GMU 36) to guard against over-harvest of the reproductive portion of the population, but harvest of males-only is permitted through the end of the season after a female harvest quota has been met. GMU 36 contains higher elevation mountainous terrain and has comparatively few wintering ungulates to maintain mountain lions during winter months. The use of dogs is prohibited during open firearm seasons for deer and elk in all GMUs in this DAU (Appendix A).

### **Harvest Characteristics**

Thirty-five mountain lions (20 males, 15 females) were harvested in the Boise-Stanley DAU during the 2016 season (Figure 13). The female harvest quota was met in GMU 39 in the 2016 season. The 2016 harvest was 33% above the previous 3-year average harvest (2013–2015; 26.3). The 2014–2016 average harvest of 29 is 3% below the minimum objective of 30 for this DAU. The overall harvest trend has been stable over the past 10 years.

Age data for the 2016 harvest season are not yet available. Three-year average age data from the most current analyzed years (2013–2015) indicated that 82% of harvested males were in the  $\geq 3$ -year-old age class. Percent females in the harvest averaged 45% over the last 3 years (2014–2016). Three-year average (2013–2015) adult female harvest ( $\geq 3$  years old) was 39% of the total female harvest (Figure 13).

The majority of mountain lions harvested in the Boise-Stanley DAU during the 2016 season were taken with assistance of hounds (71%).

## **Depredations**

One probable mountain lion-caused livestock depredation was reported in the Boise-Stanley DAU in 2016 (one calf, GMU 36). No mountain lions were removed in response to the depredation.

## **Population Surveys**

During winter of 2016–2017, IDFG implemented a pilot study in GMUs 33 and 35 to test the effectiveness of using remote cameras to monitor mountain lion populations. Approximately 70 trail cameras were deployed on predicted elk winter range in the Garden Valley to Lowman area. Cameras were active from October 2016 to May/June of 2017. Non-invasive genetic sampling of mountain lions was also conducted in the study area (biopsy darting and backtracking) with the assistance of local houndsmen and contractors, and used for comparison with the trail camera results. The data is currently being analyzed at the University of Montana, as part of a graduate project.

## **Management Implications**

Current 3-year average harvest in the Boise-Stanley DAU is slightly below the minimum objective. Harvest trends over the past 10 years appear stable. Quotas on female lion harvest, implemented to skew lion harvest toward the male component, probably have little effect in most of the GMUs of this DAU because they are rarely reached.



# Boise-Stanley DAU

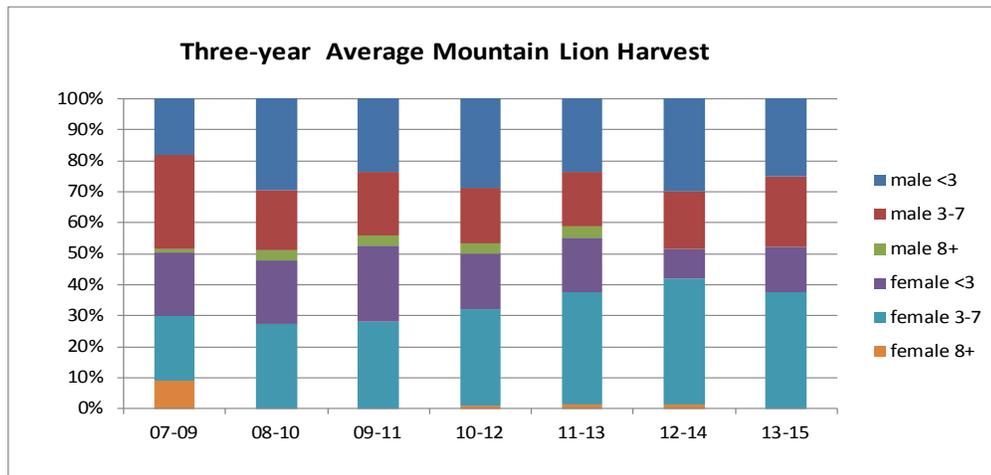
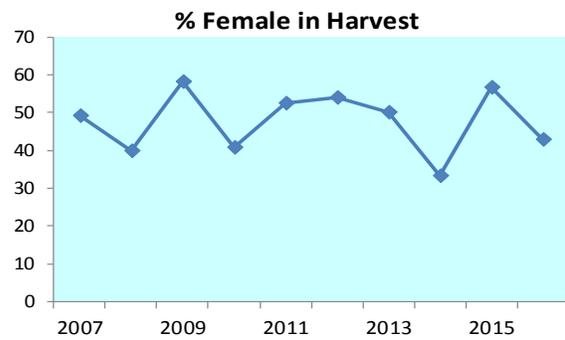
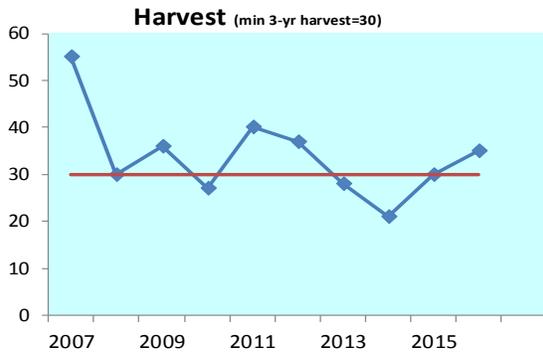
(GMUs 32, 33, 34, 35, 36, 39)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages		Goal
6,489	Annual Harvest	29	30
	Harvest per 100 mi <sup>2</sup>	0.4	
	Males: Percent 3+ yrs*	82%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>55</b>	<b>30</b>	<b>36</b>	<b>27</b>	<b>40</b>	<b>37</b>	<b>28</b>	<b>21</b>	<b>30</b>	<b>35</b>
<b>Males</b>	0-2 years	12	4	4	6	9	8	0	6	1	0
	3-7 years	14	12	8	9	8	9	12	8	10	0
	8+ years	0	1	0	0	0	0	1	0	0	0
	Unknown	2	1	3	1	2	0	1	0	2	20
	<b>Subtotal</b>	<b>28</b>	<b>18</b>	<b>15</b>	<b>16</b>	<b>19</b>	<b>17</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>20</b>
<b>Females</b>	0-2 years	7	5	11	5	11	6	10	3	9	0
	3-7 years	12	5	6	5	7	7	3	4	7	0
	8+ years	6	1	3	0	0	3	0	0	0	0
	Unknown	2	1	1	1	3	4	1	0	1	15
	<b>Subtotal</b>	<b>27</b>	<b>12</b>	<b>21</b>	<b>11</b>	<b>21</b>	<b>20</b>	<b>14</b>	<b>7</b>	<b>17</b>	<b>15</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 13 Boise-Stanley DAU status and objectives

## Owyhee DAU (GMUs 40, 41, 42, 46, 47)

### Management Objectives

Harvest objectives for the Owyhee DAU are designed to maintain 3-year average harvest levels at or above the 1990–1992 average harvest of 20 mountain lions.

The management direction for this DAU is to encourage sport harvest of mountain lions in GMUs where there is a concern about the impacts of lion predation on California bighorn sheep herds while maintaining a viable mountain lion population throughout the area. Liberal seasons are offered (Appendix A), particularly in GMUs 41 and 42, where there is some concern about the impacts of mountain lions on bighorn sheep.

### Historical Information

Owyhee DAU encompasses the southwest portion of Idaho. The habitat is largely open sagebrush desert with interspersed canyon lands ranging to dry forested mountains. The remoteness of the area and general scarcity of trees and presence of cliffs, caves, and other rocky features in parts of these GMUs make mountain lions more difficult to capture with hounds than in many other areas of Idaho. Deer are the primary big game prey species for mountain lions in most of the DAU. Downward trends in California bighorn sheep populations in the Jacks Creek drainages in GMU 41 and the Owyhee River drainage in GMU 42 prompted the initiation of research on bighorn sheep survival in the Little Jacks and Big Jacks Creek drainages in 2002. Results suggest mountain lions may have contributed to the decline of sheep in this system. The sheep population seems to have stabilized in recent years, and a study initiated in 2011 did not indicate that mountain lions were significantly impacting sheep in these GMUs.

Because of the concern about the impacts of lion predation on bighorn sheep, the Idaho Fish and Game Commission passed regulations to legalize the use of electronic calls as an aid to harvest mountain lions in GMUs 41 and 42 in 2000.

### Season Structure

No changes occurred to season structure for mountain lions in the Owyhee DAU for the 2016 season. Female harvest quotas are currently in place in some GMUs (40, 46, 47) to guard against over-harvest of the reproductive portion of the population, but harvest of males-only is permitted through the end of the season after a female harvest quota has been met (Appendix A). There has been no female quota in GMUs 41 or 42 since the 2006 season. The use of electronic calls is permitted in GMUs 41 and 42. The use of dogs is prohibited during open firearm seasons for deer and elk in all GMUs in this DAU (Appendix A).

### Harvest Characteristics

Thirty-six mountain lions (22 males, 14 females) were harvested in the Owyhee DAU during the 2016 season (Figure 13). No female harvest quotas were reached in the 2016 season. The 2016 harvest was 29% above the previous 3-year average harvest (2013–2015; 28). The 2014–2016 average harvest of 30 exceeds the minimum objective of 20 for this DAU. The overall harvest trend shows an increase in harvest over the past five years, with 2016 harvest the highest in at least 10 years.

Age data for the 2016 harvest season are not yet available. Three-year average age data from the most current analyzed years (2013–2015) indicated that 53% of harvested males were in the  $\geq 3$ -year-old age class. Percent females in the harvest averaged 40% over the last three years (2014–2016). Three-year average (2013–2015) adult female harvest ( $> 3$  years old) was 59% of the total female harvest (Figure 14).

The majority of mountain lions harvested in the Owyhee DAU during the 2016 season were taken with assistance of hounds (72%).

### **Depredations**

No mountain lion depredations were reported in the Owyhee DAU in 2016.

### **Management Implications**

Current 3-year average harvest in the Owyhee DAU meets the minimum objective. Quotas on female lion harvest, implemented to skew lion harvest toward the male component, probably have little effect in most of the GMUs of this DAU because they are rarely reached.



## Owyhee DAU

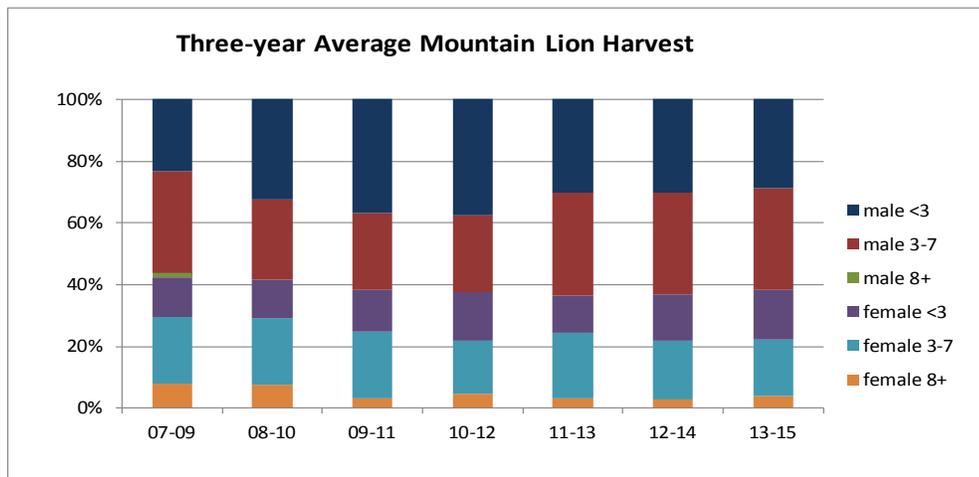
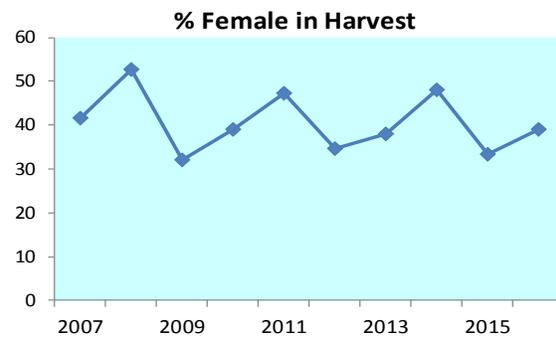
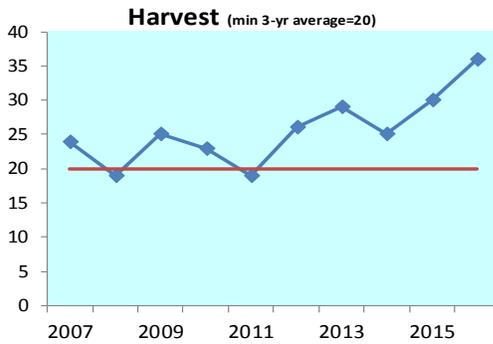
(GMUs 40, 41, 42, 46, 47)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages		Goal
9,106	Annual Harvest	30	20
	Harvest per 100 mi <sup>2</sup>	0.3	
	Males: Percent 3+ yrs*	53%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>24</b>	<b>19</b>	<b>25</b>	<b>23</b>	<b>19</b>	<b>26</b>	<b>29</b>	<b>25</b>	<b>30</b>	<b>36</b>
<b>Males</b>	0-2 years	4	2	9	10	5	9	6	7	9	0
	3-7 years	8	5	8	4	4	8	10	6	9	0
	8+ years	1	0	0	0	0	0	0	0	0	0
	Unknown	1	2	0	0	1	0	2	0	2	22
	<b>Subtotal</b>	<b>14</b>	<b>9</b>	<b>17</b>	<b>14</b>	<b>10</b>	<b>17</b>	<b>18</b>	<b>13</b>	<b>20</b>	<b>22</b>
<b>Females</b>	0-2 years	3	2	3	3	3	4	1	6	5	0
	3-7 years	4	5	5	4	5	2	7	5	2	0
	8+ years	2	3	0	2	0	1	1	0	2	0
	Unknown	1	0	0	0	1	2	2	1	1	14
	<b>Subtotal</b>	<b>10</b>	<b>10</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>11</b>	<b>12</b>	<b>10</b>	<b>14</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 14. Owyhee DAU status and objectives

## MAGIC VALLEY REGION

### Sun Valley DAU (GMUs 36A, 43, 44, 48, 49, 50)

#### Management Objectives

Broad harvest management goals for all DAUs were developed in the 2002–2010 Mountain Lion Management Plan to maintain current lion population levels, maintain a diversity of sport harvest opportunities, be responsive to human conflicts, and develop better lion population monitoring tools. Specific harvest goals for Sun Valley DAU are currently limited to maintaining a 3-year average minimum harvest of 13 lions. The 3-year average harvest for 2014–2016 for the Sun Valley DAU was 14.

#### Historical Information

Sun Valley DAU has accounted for an average of 36% of the mountain lion harvest in Magic Valley Region over the last 10 years. Prior to 1994, most mountain lion depredations on livestock occurred in these GMUs. However, in recent years, depredations have been rare.

#### Season Structure

#### Harvest Characteristics

The season structure has remained constant in recent years with a season length of 214 days beginning 30 August (Appendix A). Fourteen mountain lions were harvested in the Sun Valley DAU during the 2016 season (Figure 15). The current 3-year average harvest of 14 lions is slightly above the 1990–1992 minimum season harvest objective of 13. The female quota of 6 lions was not met in GMUs 43, 44, 48, or 49 during this performance period. There are currently no female quotas in place for GMUs 36A and 50.

While the percentage of females in the harvest has remained relatively consistent since 2001, age data from the 2007–2016 seasons indicate that the proportion of adult lions ( $\geq 3$  years old) in the harvest has remained steady in the last two years. The 3-year mean percent of adult lions in the harvest has moved from the low fifties, with a low of 50% in the 2003–2005 mean, to a peak of 82% in the 2007–2009 mean, remained in the high 70s, then dropped to the mid-40s in the last three years. The 3-year average of adult males  $\geq 3$  year of age (2013–2015 was 70% (Figure 15). Ages for 2016 were not available at this time.

#### Depredations

Mountain lion depredations are uncommon in the Sun Valley DAU with an average of  $< 1$  depredation per year since 2000. Wildlife services reported that there were 2 lion depredations on cattle in unit 49 during the month of July.

#### Management Implications

Total harvest in this DAU remains relatively stable, with a peak of 22 in 2007 and a subsequent low of 6 in 2013. The 2014, 2015, 2016, 3-year averages of 14 lions is slightly above the minimum harvest objective for this DAU. The recent trend has been for an increasing proportion

of adults in the harvest. This may indicate a lack of immigration into the population as a result of relatively high densities.



## Sun Valley DAU

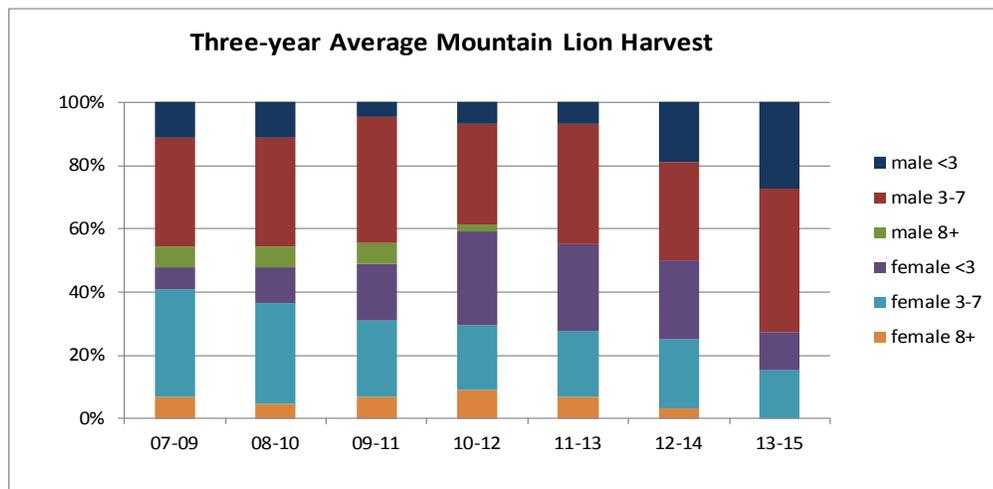
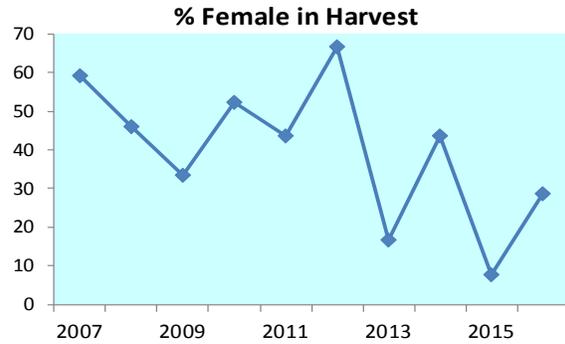
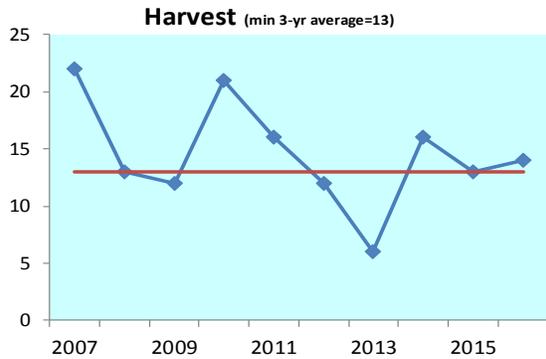
(GMUs 36A, 43, 44, 48, 49, 50)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages	Goal	
<b>5,114</b>	Annual Harvest	14	13
	Harvest per 100 mi <sup>2</sup>	0.3	
	Males: Percent 3+ yrs*	63%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>22</b>	<b>13</b>	<b>12</b>	<b>21</b>	<b>16</b>	<b>12</b>	<b>6</b>	<b>16</b>	<b>13</b>	<b>14</b>
<b>Males</b>	0-2 years	1	3	1	1	0	2	0	4	5	0
	3-7 years	7	3	5	7	6	1	4	5	6	0
	8+ years	1	0	2	1	0	0	0	0	0	0
	Unknown	0	1	0	1	3	1	1	0	1	10
	<b>Subtotal</b>	<b>9</b>	<b>7</b>	<b>8</b>	<b>10</b>	<b>9</b>	<b>4</b>	<b>5</b>	<b>9</b>	<b>12</b>	<b>10</b>
<b>Females</b>	0-2 years	3	0	0	5	3	5	0	3	1	0
	3-7 years	5	6	4	4	3	2	1	4	0	0
	8+ years	3	0	0	2	1	1	0	0	0	0
	Unknown	2	0	0	0	0	0	0	0	0	4
	<b>Subtotal</b>	<b>13</b>	<b>6</b>	<b>4</b>	<b>11</b>	<b>7</b>	<b>8</b>	<b>1</b>	<b>7</b>	<b>1</b>	<b>4</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 15. Sun Valley DAU status and objectives

## **Oakley DAU (GMUs 54, 55, 56, 57)**

### **Management Objectives**

Broad harvest management goals for all DAUs were developed in the 2002–2010 Mountain Lion Management Plan to maintain current lion population levels, maintain a diversity of sport harvest opportunities, be responsive to human conflicts, and develop better lion population monitoring tools. Specific harvest goals for Oakley DAU are currently limited to maintaining a 3-year average minimum harvest of 12 lions. The 3-year average harvest for 2014–2016 for the Oakley DAUs was 356.

### **Historical Information**

GMUs in Oakley DAU have accounted for an average of 62% of the mountain lion harvest in Magic Valley Region during the last 10 years. GMU 54 consistently has the highest annual mountain lion harvest of any management GMU in the region.

Most of the GMUs within this DAU have had female quotas since the 1980s. Therefore, female harvest in these GMUs has generally been very conservative. However, it should be noted that female quotas increased regularly during the early 1990s, and regrouping of GMUs has taken place numerous times. There is currently a quota of 6 females each for GMUs 54 and 55. A historical perspective of female quotas and grouping of GMUs can be found in the 2001–2002 report.

### **Season Structure**

#### **Harvest Characteristics**

The season structure has remained constant in recent years with a season length of 214 days beginning 30 August (Appendix A). The female quota of 6 lions was met in GMU 55 during this reporting period. Fifty-one mountain lions were harvested in the Oakley DAU during the 2016 season. These levels exceeded the 1990–1992 minimum harvest objective of 12 (Figure 16).

Total lion harvest has remained relatively constant over the past 10 years, with the exception of 2015 having a 46% increase in total harvest and 2016 having a 36% increase. The 3 year average of male lions  $\geq 3$  year of age (2013–2015) was 59%. Ages for 2016 were not available. Males continue to constitute the majority of the mountain lion harvest in this DAU (Figure 16).

#### **Depredations**

Mountain lion depredations are uncommon in the Oakley DAU with an average of <1 depredation per year since 2000. There were no depredations during this reporting period.

#### **Management Implications**

Current harvest strategies in this DAU resulted in slightly decreased annual harvest from 1997 through 2000, but annual harvest has remained relatively unchanged through 2014, and still well above the minimum objective average harvest of 12. The increased harvest observed in 2015 and 2016 may indicate a rising population due to the last three winters being relatively mild resulting

in growing populations of prey species; specifically mule deer. As prey numbers fluctuate, harvest levels may need to be manipulated in order to continue to meet established objectives.

Distribution of males and females in the harvest fluctuated in the late 1990s through the mid-2000s. However, these fluctuations have moderated over the past 5 years. In general, males have comprised the majority of the harvest; indicative of light harvest pressure



# Oakley DAU

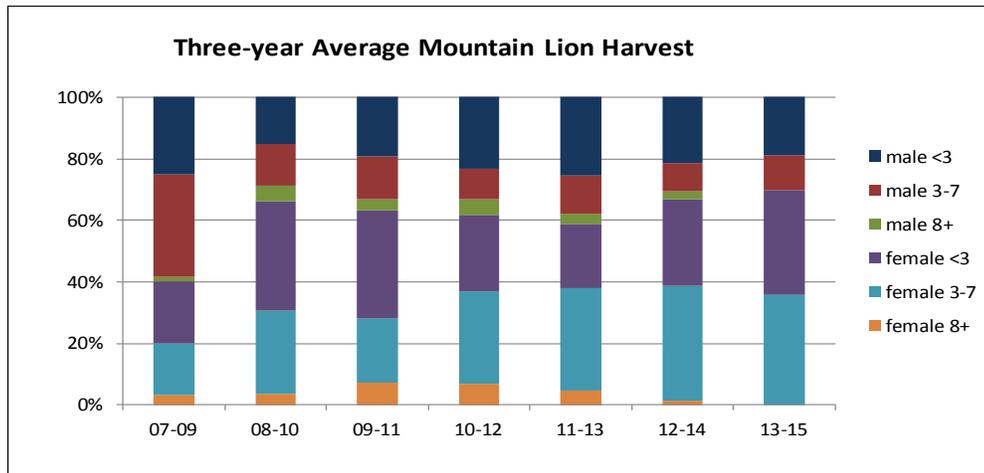
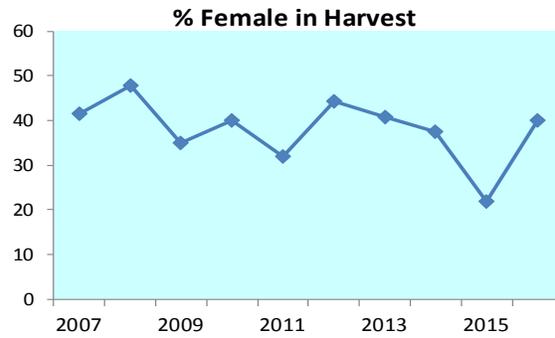
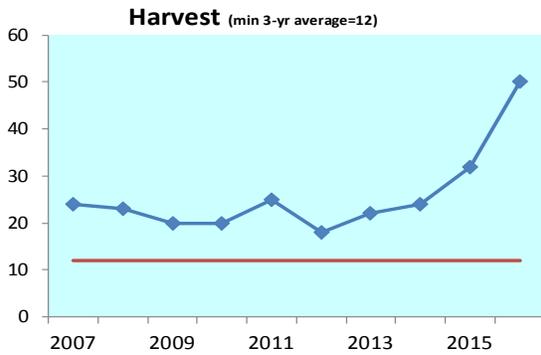
(GMUs 54, 55, 56, 57)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages	Goal	
3,675	Annual Harvest	35	12
	Harvest per 100 mi <sup>2</sup>	1.0	
	Males: Percent 3+ yrs*	58%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		24	23	20	20	25	18	22	24	32	50
<b>Males</b>	0-2 years	8	4	3	8	10	2	3	8	10	0
	3-7 years	4	7	9	3	4	5	9	7	12	0
	8+ years	1	0	0	1	1	2	1	0	0	0
	Unknown	1	1	1	0	2	1	0	0	3	30
	<b>Subtotal</b>	<b>14</b>	<b>12</b>	<b>13</b>	<b>12</b>	<b>17</b>	<b>10</b>	<b>13</b>	<b>15</b>	<b>25</b>	<b>30</b>
<b>Females</b>	0-2 years	2	7	3	3	3	5	6	5	5	0
	3-7 years	6	1	3	3	2	3	1	4	2	0
	8+ years	0	1	1	1	1	0	2	0	0	0
	Unknown	2	2	0	1	2	0	0	0	0	20
	<b>Subtotal</b>	<b>10</b>	<b>11</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>7</b>	<b>20</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 16 Oakley DAU status and objectives

## SOUTHEAST REGION

### Pocatello DAU (GMUs 69, 70, 71, 72, 73, 73A, 74)

#### Management Objectives

The Department's Mountain Lion Management Plan was rewritten in 2002. Management policy and strategy calls for maintaining viable populations of lions in Idaho while maintaining harvest at levels at or above those of the early 1990s where appropriate. Harvest levels in that period were significantly lower than those of the mid-to late 1990s and early 2000s.

#### Historical Information

The mountain lion was first classified as a big game species in Idaho in 1972. Mountain lion tags have been required since 1975. Mountain lion numbers are believed to have been low in the Southeast Region during the 1950s and 1960s when annual harvest in eastern Idaho averaged from 2 to 4 animals. Population information is sparse; however, increased sightings, increased depredations, and increased harvest all suggest that mountain lion populations have increased over recent historic levels. Populations of the main prey species, mule deer, fluctuate widely and are currently at moderate levels. A large livestock industry in southeastern Idaho and the concern for depredations has and will probably continue to influence mountain lion populations and management.

From 1991–1997 and again from 1999–2000, the region was divided into a west district (GMUs 70, 71, 73, 73A, 74) and an east district (GMUs 66A, 72, 75, 76, 77, 78) with a female harvest quota for each district. In 1999, GMU 74 was moved from the western to eastern quota district. Quotas varied from 2 females per district to 15 in the west and 5 in the east district.

GMU's 70, 71, 73, and 73A served as 'mountain lion harvest treatments' for the mule deer research project conducted from 1998 through 2003. Management was intended to maintain relatively higher harvest compared to adjacent 'control' GMU's with lower harvest levels (Hurley et al. 2011).

Due to pressure from sportsmen's groups and a commitment to the Mule Deer Initiative, the Department initiated a general lion season with no female quotas across the Southeast Region for the 2005–2009 mountain lion seasons. Starting for the 2010 Big Game Season, a female quota of 22 was established for the entire southeast region which includes GMUs from the Pocatello DAU (70, 71, 72, 73, 73A, 74), the Snake River DAU (68, 68A), and the Bear Lake-Palisades DAU (66A, 75, 76, 77, 78).

Mountain lion harvest opportunity within the southeast region ceases once the female quota has been reached or at the closing date for that hunting season, whichever occurs first. If the female quota is reached prior to the closing date, pursuit-only opportunity is allowed until the close of the season. It is mandatory that all mountain lions harvested by hunters are checked and pelts tagged by the Department. Harvest data and characteristics are taken from these mandatory checks.

## **Season Structure**

The fall 2016–spring 2017 mountain lion take season was from 30 August through 31 March (Appendix A). Dogs remained prohibited from 1 October to 30 November in all of the Pocatello DAU. The female harvest quota remained set at 22 for the entire southeast region.

## **Harvest Characteristics**

Reported harvest of lions from the Pocatello DAU for the fall 2016–spring 2017 season was 37; 28 males and 9 females (Figure 17). The 3 year average (2013–2015) of male's  $\geq 3$  year of age was 34%. Ages were not available for 2016 at the time of this report.

Hound hunting comprised 84% of the harvest this reporting period. Incidental harvest (generally lions taken while deer or elk hunting), still/stalk, and predator calling accounted for the remainder.

## **Depredations**

Wildlife Services responds to mountain lion depredation issues in concert with the Department. One male mountain lion was removed by Wildlife Services for depredations during the reporting period.

## **Management Implications**

During the period 1981–1990, the annual harvest of mountain lions in southeast Idaho was low (0–10). Seventeen mountain lions were reported harvested in 1990, prompting the establishment of a female quota beginning in 1991. As the quotas gradually increased during the 1990's, the harvest increased significantly, reaching a high of 94 females in 1998.

Male/female ratios in the harvest have generally ranged between 1:1 and 2:1. Females comprised 24.3 % of the harvest in fall 2016–spring 2017. Effects to the mountain lion population of recent record-level harvests are unknown. Tracking the age structure within the harvest to identify changes in mountain lion population structure will continue to be important.

Low deer populations in the mid-1990s prompted many hunters to suggest that lion predation was a significant limiting factor and to favor reducing lion populations through increased harvest. The Department implemented a deer research project in southeast Idaho in 1998 which, in part, looked at whether varying levels of lion harvest influenced deer population response. Increased lion harvest did show some short term positive effect on deer survival, but did not indicate any change in population trends (Hurley et. al. 2011).

Continuing concern for the Southeast Region's mule deer herd resulted in the removal of the female harvest quota in previous years. This, however, generated concern among lion hunters regarding healthy lion populations and opportunities for future trophy lion hunting.

During the season setting process in the spring of 2010, lion hunter comments unanimously favored some form of protection for the female portion of the lion population. As a result, in an effort to compromise between the lion hunting and mule deer hunting publics, a region wide female lion harvest quota was set at 22 females.



## Pocatello DAU

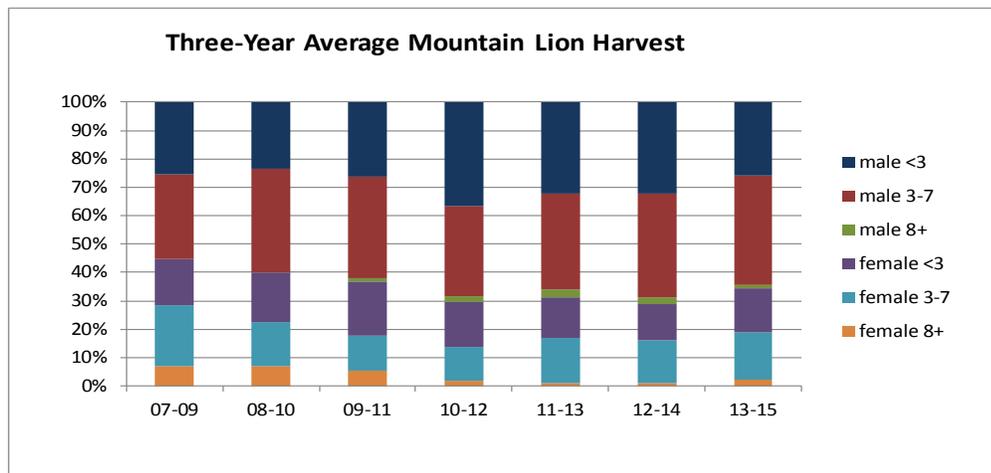
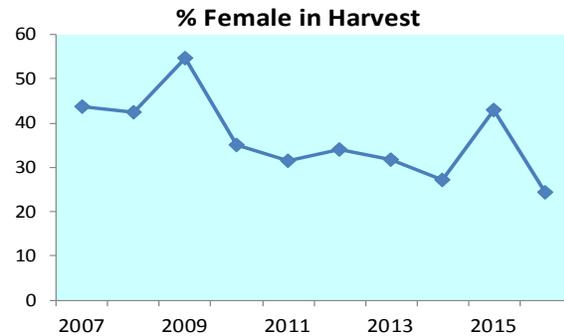
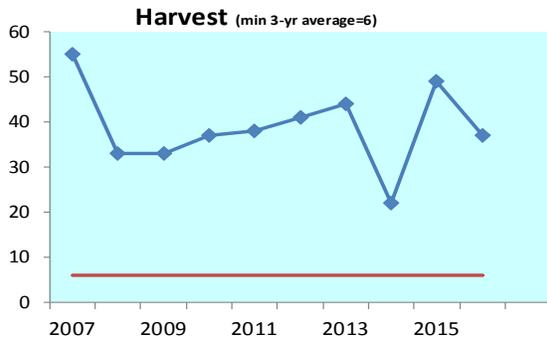
(GMUs 69, 70, 71, 72, 73, 73A, 74)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages		Goal
5,241	Annual Harvest	36	6
	Harvest per 100 mi <sup>2</sup>	0.7	
	Males: Percent 3+ yrs*	60%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>55</b>	<b>33</b>	<b>33</b>	<b>37</b>	<b>38</b>	<b>41</b>	<b>44</b>	<b>22</b>	<b>49</b>	<b>37</b>
<b>Males</b>	0-2 years	15	8	2	10	13	14	7	7	11	0
	3-7 years	11	7	11	13	10	9	17	6	14	0
	8+ years	0	0	0	0	1	1	1	0	0	0
	Unknown	5	4	2	1	2	3	5	3	3	28
	<b>Subtotal</b>	<b>31</b>	<b>19</b>	<b>15</b>	<b>24</b>	<b>26</b>	<b>27</b>	<b>30</b>	<b>16</b>	<b>28</b>	<b>28</b>
<b>Females</b>	0-2 years	6	4	6	5	7	4	4	3	8	0
	3-7 years	10	6	5	2	5	5	7	1	8	0
	8+ years	3	1	3	2	0	0	1	0	1	0
	Unknown	5	3	4	4	0	5	2	2	4	9
	<b>Subtotal</b>	<b>24</b>	<b>14</b>	<b>18</b>	<b>13</b>	<b>12</b>	<b>14</b>	<b>14</b>	<b>6</b>	<b>21</b>	<b>9</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 17. Pocatello DAU status and objectives

## UPPER SNAKE REGION

### **Snake River Plain DAU (GMUs 38, 45, 52, 52A, 53, 60, 60A, 61, 62, 62A, 63, 63A, 68, 68A)**

#### **Management Objectives**

Specific objectives regarding sex and age composition of the harvest have not been developed for this DAU. The current Mountain Lion Management Plan states that initial harvest goals will be to maintain harvest levels on a 3-year running average that are at or above the 3-year average harvest for the 1990–1992 lion seasons. From 2014–2016, harvest averaged 13 lions per year. This level is over 8 times higher than the 1990–1992 minimum harvest objective of 1.5.

#### **Historical Information**

In general, these GMUs have marginal lion habitat, lack year-round prey sources, and lie on the margins of areas with established lion populations. Lion presence tends to be occasional transient lions from other areas having established territorial lion populations.

#### **Season Structure**

Hunting seasons have varied from closed to 214 days with some having female quotas and others with no female quotas; however, none of these GMUs have had female quotas since the 2004 harvest season (Appendix A).

#### **Harvest Characteristics**

Harvest has been light but has increased since 2007. Harvest has varied in age and sex composition (Figure 18) and most occurs by the use of hounds. During the 2016 season, 46% of successful mountain lion hunters used hounds. Harvest has varied from 2–16 for the 1994–2013 seasons and has also varied from all male to all female. From 2000 to 2012, most (52%) reported lion harvest has occurred from GMU 45 while no lions were reported from GMUs 63, or 68. The 3 year average (2013–2015) of male's  $\geq 3$  years of age was 59%. Ages for 2016 were not available at the time of this report.

#### **Depredations**

No lion depredation complaints were verified during this reporting period.

#### **Management Implications**

GMUs included in this DAU are managed by the Southwest (GMU 38), Magic Valley (GMUs 45, 52, 52A, and 53), Upper Snake (GMUs 60, 60A, 61, 62, 62A, 63, and 63A) and Southeast (GMUs 68 and 68A) regions. As stated in the historical section, this DAU is basically a population sink area for several adjacent areas that act as source populations for lions harvested in this DAU. Prior to 2004, hunting season restrictions varied between these administrative regions. As of 2009 it varies again with a female quota of 22 spread throughout the Southeast region's GMU's. Hunter access, winter conditions, and vulnerability of lions to harvest also vary throughout this DAU. Therefore, it is difficult to manage lions in this DAU based on data collected. As long as harvest remains light and principally opportunistic, there is probably no need for more intense monitoring or management. Individual regions, especially Magic Valley

Region, will need to monitor harvest for their GMUs to ensure it is consistent with local public desires.

# Snake River Plain DAU

(GMUs 38, 45, 52, 52A 53, 60, 60A, 61, 62, 62A, 63, 63A, 68, 68A)

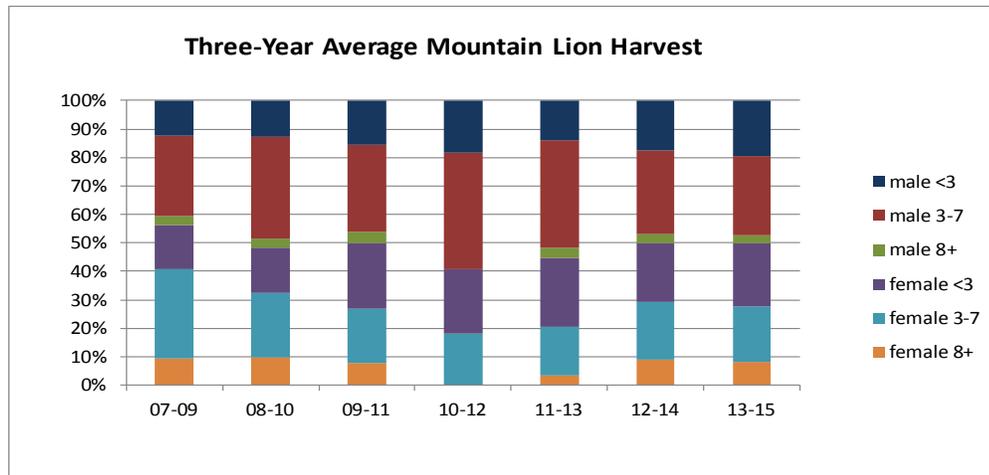
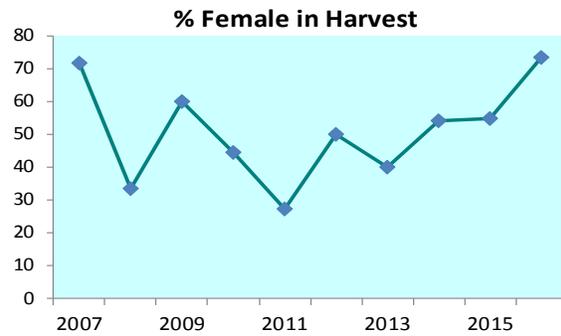
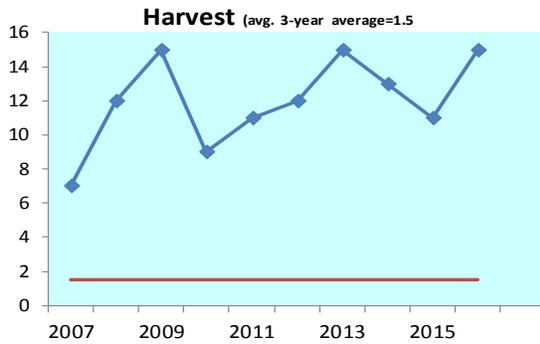


2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages		Goal
15,316	Annual Harvest	13	1.5
	Harvest per 100 mi <sup>2</sup>	0.1	
	Males: Percent 3+ yrs*	61%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		7	12	15	9	11	12	15	13	11	15
<b>Males</b>	0-2 years	1	1	2	1	1	2	1	3	3	0
	3-7 years	1	7	1	3	4	2	5	3	2	0
	8+ years	0	0	1	0	0	0	1	0	0	0
	Unknown	0	0	2	1	3	2	2	0	0	4
	<b>Subtotal</b>	<b>2</b>	<b>8</b>	<b>6</b>	<b>5</b>	<b>8</b>	<b>6</b>	<b>9</b>	<b>6</b>	<b>5</b>	<b>4</b>
<b>Females</b>	0-2 years	1	1	3	1	2	2	3	2	3	0
	3-7 years	4	2	4	1	0	3	2	2	3	0
	8+ years	0	1	2	0	0	0	1	2	0	0
	Unknown	0	0	0	2	1	1	0	1	0	11
	<b>Subtotal</b>	<b>5</b>	<b>4</b>	<b>9</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>6</b>	<b>11</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 18 Snake River Plain DAU status and objectives

## **Bear Lake-Palisades DAU (GMUs 64, 65, 66, 66A, 67, 75, 76, 77, 78)**

### **Management Objectives**

Specific objectives regarding sex and age composition of the harvest have not been developed for this DAU. The current Mountain Lion Management Plan states that initial harvest goals will be to maintain the harvest level on a 3-year running average at or above the 3-year average harvest for the 1990–1992 big game seasons. From 2014–2016, harvest averaged 32 lions per year. This level is more than 5 times higher than the 1990–1992 minimum harvest objective of 6 lions.

### **Historical Information**

This DAU lies along the Idaho-Wyoming state line from the Teton Valley south to the Utah state line and is managed by both Upper Snake (GMUs 64, 65, 66, and 67) and Southeast (GMUs 66A, 75, 76, 77, and 78) regions. Mountain lions in this area tend to be associated with lions from the Pocatello DAU and Utah but separated from other lion populations in Idaho and Wyoming. No data exists to determine if lions in this area comprise 1 population with different concentration areas or if several different semi-isolated populations exist.

### **Season Structure**

Hunting seasons have ranged from closed in some GMUs to liberal with no quotas in other GMUs. GMUs 64, 65, 66, and 67 did not have a female quota for the 2004 harvest season and none of the GMUs in the DAU have had a female quota since 2005. However, since 2010 the GMU's in the Southeast region have a combined female quota of 22 (Appendix A).

### **Harvest Characteristics**

Harvest has been quite variable and ranged from 12 in 1996 to 46 in 1998. Adult female harvest has averaged 22% since 2007. From 2013–2015, 28% of the harvest were male lions under 3 years old, 30% were male lions 3 years and older, 28% were females under 3 years old, and 14% were females 3 years and older (Figure 19). Age data for harvested lions in 2016 are not yet available.

During the 2016 season, 60 % of successful mountain lion hunters used hounds and 20% of take was incidental.

### **Management Implications**

GMUs within this DAU are managed by Upper Snake and Southeast regions and were previously parts of other DAUs. Consequently, hunting seasons have varied from area to area and from year to year. However, in 2005, GMUs within this DAU had the same lion season with no female quotas. It is desirable to maintain the same season for all GMUs within the DAU for 3 or more years to determine what direction the lion population(s) within the DAU is going. In 2010 there was a female quota applied to the GMUs in the Southeast Region.

There is a need to monitor the percentage of adult females harvested closely. Anderson and Lindzey (2005) found that when the adult ( $\geq 3$ -year-old) female harvest averaged 25% or greater,

the lion population declined. Our average harvest of adult females since 2007 (22%) is slightly below that number, and our latest 3 year average (14%) is well below that threshold.

### **Literature Cited**

Anderson, C. R. Jr., and F. G. Lindzey. 2005. Experimental evaluation of population trend and harvest composition in a Wyoming cougar population. *Wildlife Society Bulletin* 33(1):179–188.



## Bear Lake-Palisades DAU

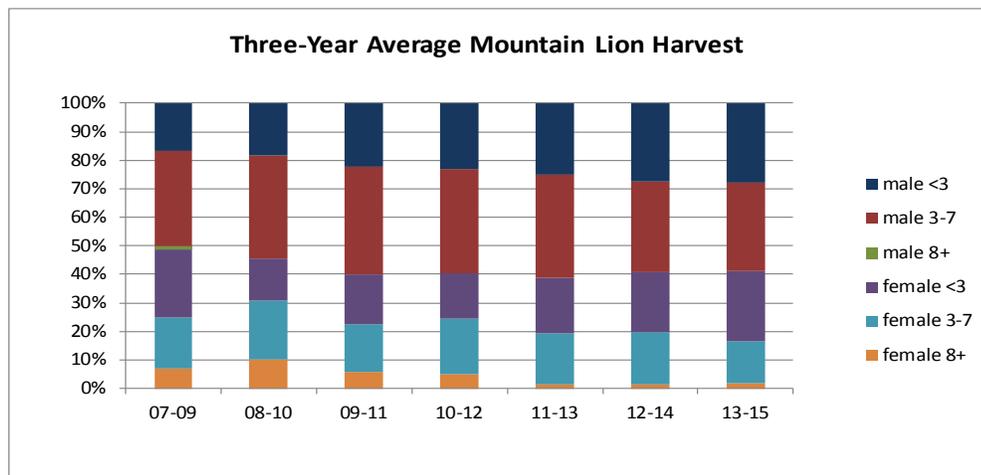
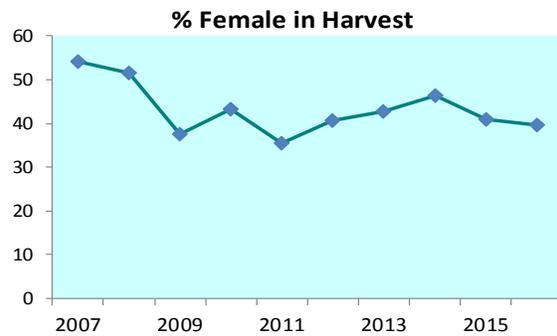
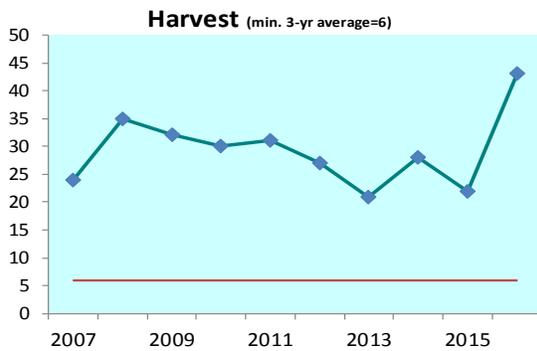
(GMUs 64, 65, 66, 66A, 67, 75, 76, 77, 78)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages	Goal	
3,928	Annual Harvest	31	6
	Harvest per 100 mi <sup>2</sup>	0.8	
	Males: Percent 3+ yrs*	53%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>24</b>	<b>35</b>	<b>32</b>	<b>30</b>	<b>31</b>	<b>27</b>	<b>21</b>	<b>28</b>	<b>22</b>	<b>43</b>
<b>Males</b>	0-2 years	4	4	6	6	7	6	5	7	5	0
	3-7 years	6	11	11	10	11	9	6	6	7	0
	8+ years	1	0	0	0	0	0	0	0	0	0
	Unknown	0	2	3	1	2	1	1	2	1	26
	<b>Subtotal</b>	<b>11</b>	<b>17</b>	<b>20</b>	<b>17</b>	<b>20</b>	<b>16</b>	<b>12</b>	<b>15</b>	<b>13</b>	<b>26</b>
<b>Females</b>	0-2 years	9	4	7	2	6	5	3	6	6	0
	3-7 years	3	9	3	6	5	5	3	4	2	0
	8+ years	1	4	1	4	0	0	1	0	0	0
	Unknown	0	1	1	1	0	1	2	3	1	17
	<b>Subtotal</b>	<b>13</b>	<b>18</b>	<b>12</b>	<b>13</b>	<b>11</b>	<b>11</b>	<b>9</b>	<b>13</b>	<b>9</b>	<b>17</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 19 Bear Lake Palisades DAU status and objectives

## **SALMON REGION**

### **Salmon DAU (GMUs 21, 21A, 28, 36B)**

#### **Management Objectives**

Objectives are to maintain the distribution of mountain lions and harvest at or above 1990–1992 levels as specified in the 2002–2010 Mountain Lion Management Plan. Specific objectives regarding sex and age composition of the harvest will be developed in the near future (e.g.,  $\leq 40\%$  females in the harvest,  $\geq 20\%$  of males  $\geq 5$  years old).

#### **Historical Information**

Salmon DAU is comprised primarily of drainages adjacent to the upper Salmon River. Elevations vary from 3,000 to 11,000 feet and include sagebrush grasslands, river breaks, mixed conifer forests, and sub-alpine habitats.

The DAU supports mountain lion populations that are generally accessible during winter. Both deer and elk are abundant prey species with bighorn sheep and mountain goats locally available. Salmon DAU mountain lion populations are likely partly sustained by immigration from adjacent, less-hunted wilderness populations (e.g., Warren DAU). During 1995 and 1996, wolves were reintroduced in Salmon and Warren DAUs. Wolves are well established within the DAU, and a harvest season was implemented beginning in 2009. Depredation problems are not a major concern in Salmon DAU.

#### **Season Structure**

During 1996–1997, the general mountain lion season in Salmon DAU was extended by 15 days from 31 January to 15 February. The 1999–2000 season was extended by another 60 days (30 Aug to 31 Mar) because of an apparent continued increase in mountain lion populations. With 16 days added to the beginning and 44 days at the end, total season length became 214 days. A female quota of 2 mountain lions was implemented for GMU 36B in this DAU beginning in the 2014 season. In general, dogs may be used when a firearm season for deer or elk is not open. Neither spotted young nor female mountain lions accompanied by young may be taken. There were no dog-training seasons in Salmon DAU GMUs.

#### **Harvest Characteristics**

Twenty mountain lions (14 males, 6 females) were harvested in the Salmon DAU during the 2015 season, and 18 mountain lions (14 males, 4 females) were harvested during the 2016 season (Figure 20). The female harvest quota of 2 mountain lions for 36B was met in both the 2015 and 2016 seasons. The 2015 harvest represented an 18% increase from the previous 3 year average harvest (2012–2014; 17). There was no change from the 2016 harvest and the previous 3 year average harvest (2013–2015; 18). The 2014–2016 average harvest of 16 is 7% above the minimum objective average harvest of 15. The overall harvest trend shows a moderate decline over the past 10 years, with the 3-year average dropping from 30 mountain lions in 2007–2009 to the present 16 for 2014–2016.

Age data for the 2016 harvest season are not yet available. Three-year average age data from the most current analyzed years (2013–2015) indicated that the  $\geq 3$  year-old male age class comprised 65% of the total male harvest, and 43% of the overall harvest. Percent females in the harvest averaged 27% over the last 3 years (2014–2016). Three-year average (2013–2015) adult female harvest ( $\geq 3$  years old) comprised 67% of the total female harvest, and 16% of the overall harvest.

During the 2015 and 2016 seasons, the majority of mountain lions harvested in the Salmon DAU were taken with assistance of hounds (70% and 67%, respectively). The remaining harvest was attributed to still hunting, incidental to other hunting, or predator calling.

### **Depredations**

There was one confirmed depredation of a domestic calf in 2016.

### **Management Implications**

While still meeting the DAU harvest objective of 15 mountain lions, the 3-year average harvest has steadily declined from 30 for the 2007–2009 harvest seasons to the current 16 for 2014–2016. Over this period (2007–2015), adult female ( $\geq 3$ ) harvest has averaged 22%, with 3-year averages ranging from 16–27%. Mountain lion populations are sensitive to female harvest (Jenks 2011), so harvest on this sex/age class may be a contributing factor in the reduction in harvest. A harvest rate of 24% adult females corresponded to a significant reduction in the study population in Wyoming (Anderson and Lindzey 2005). Continued declines in harvest in conjunction with relatively high adult female harvest that results in falling below DAU objectives may necessitate season changes to reduce female harvest.



## Salmon Zone DAU

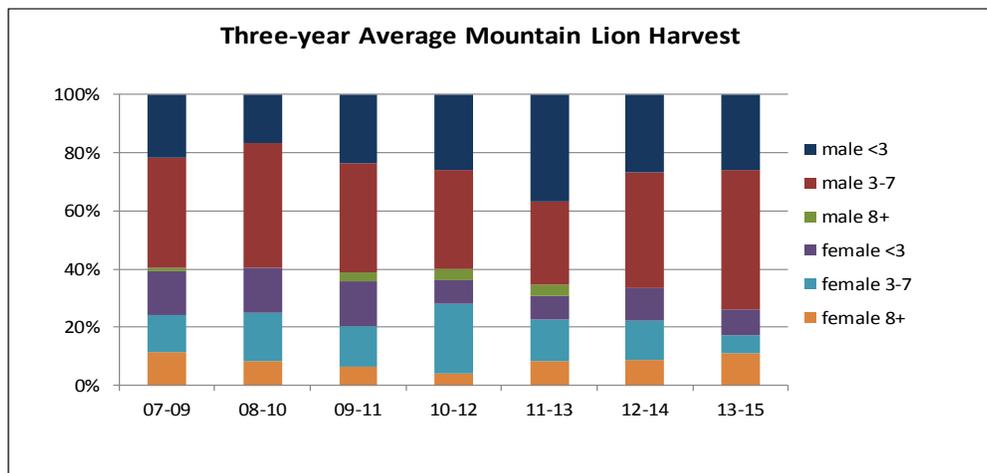
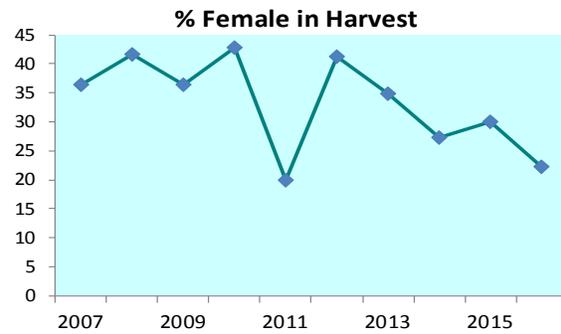
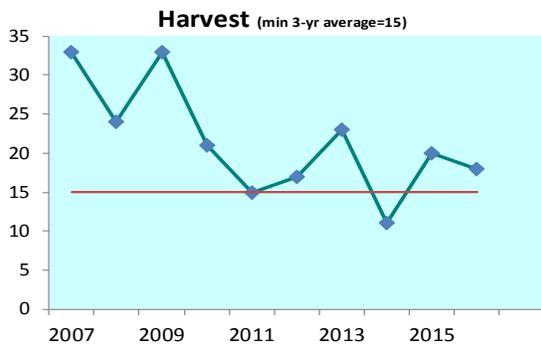
(GMUs 21, 21A, 28, 36B)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages	Goal	
2,678	Annual Harvest	16	15
	Harvest per 100 mi <sup>2</sup>	0.6	
	Males: Percent 3+ yrs*	65%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>33</b>	<b>24</b>	<b>33</b>	<b>21</b>	<b>15</b>	<b>17</b>	<b>23</b>	<b>11</b>	<b>20</b>	<b>18</b>
<b>Males</b>	0-2 years	6	5	6	1	8	4	6	2	4	0
	3-7 years	10	9	11	11	2	4	8	6	8	0
	8+ years	1	0	0	0	2	0	0	0	0	0
	Unknown	4	0	4	0	0	2	1	0	2	14
	<b>Subtotal</b>	<b>21</b>	<b>14</b>	<b>21</b>	<b>12</b>	<b>12</b>	<b>10</b>	<b>15</b>	<b>8</b>	<b>14</b>	<b>14</b>
<b>Females</b>	0-2 years	3	2	7	2	1	1	2	2	0	0
	3-7 years	4	4	2	6	1	5	1	0	2	0
	8+ years	4	2	3	1	0	1	3	0	2	0
	Unknown	1	2	0	0	1	0	2	1	2	4
	<b>Subtotal</b>	<b>12</b>	<b>10</b>	<b>12</b>	<b>9</b>	<b>3</b>	<b>7</b>	<b>8</b>	<b>3</b>	<b>6</b>	<b>4</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 20 Salmon DAU status and objectives

## **Borah DAU (GMUs 29, 30, 30A, 37, 37A, 51, 58, 59, 59A)**

### **Management Objectives**

Objectives are to maintain the distribution of mountain lions and harvest at or above 1990–1992 levels as specified in the 2002–2010 Mountain Lion Management Plan. Specific objectives regarding sex and age composition of harvested mountain lions will be developed in the near future (e.g.,  $\leq 40\%$  females in the harvest,  $\geq 20\%$  of males  $\geq 5$  years old).

### **Historical Information**

Borah DAU is comprised primarily of drainages east of the upper Salmon River and drainages from the Little Lost River east to I-15. Elevations vary from 4,000 feet to 12,000 feet and include high desert communities, mixed conifer forests, and sub-alpine habitats. This DAU receives much less precipitation, and therefore has less forest, than DAUs farther north and west. Borah DAU supports a mountain lion population of low to moderate density that is generally readily accessible during winter. Both deer and elk are common prey species with bighorn sheep and mountain goats locally available. Depredation problems are an uncommon concern in the Borah DAU.

### **Season Structure**

During 1996–1997, the general mountain lion season was extended from 31 January to 15 February in northern GMUs and to 31 March in southern GMUs. During 1999–2000, seasons throughout the DAU were extended to 30 August through 31 March (214 days) because of an apparent continued increase in mountain lion populations, to provide additional opportunity, and to allow archers to harvest mountain lions during standard deer and elk seasons. Female quotas were removed in southern GMUs starting fall 2003. There were no quotas or dog-training seasons in northern GMUs within the DAU. In general, dogs may be used when firearm seasons for deer or elk are not open. Neither spotted young nor female mountain lions accompanied by young may be taken.

### **Harvest Characteristics**

Nineteen mountain lions (13 males, 6 females) were harvested in the Borah DAU during the 2015 season, and 25 mountain lions (17 males, 8 females) were harvested during the 2016 season (Figure 21). The 2015 harvest represented a 12% increase from the previous 3-year average harvest (2012–2014; 17). The 2016 harvest represented a 39% increase from the previous 3-year average harvest (2013–2015; 18). The 2014–2016 average harvest of 21 is well above the minimum DAU objective average harvest of 7. The 3-year average harvest has shown an increasing trend since the 2012 season, going from an average of 13 mountain lions harvested in 2010–2012 to the current 21 mountain lions harvested.

Age data for the 2016 harvest season are not yet available. Three-year average age data from the most current analyzed years (2013–2015) indicated that the  $\geq 3$  year-old male age class comprised 61% of the total male harvest, and 38% of the overall harvest. Percent females in the harvest averaged 33% over the last 3 years (2014–2016). Three-year average (2013–2015) adult female harvest ( $\geq 3$  years old) comprised 50% of the total female harvest, and 17% of the overall harvest.

During the 2015 and 2016 seasons, the majority of mountain lions harvested in the Borah DAU were taken with assistance of hounds (74% and 80%, respectively). The remaining harvest was attributed to still hunting, incidental harvest, or predator calling.

### **Depredations**

Two domestic calves were confirmed killed and another domestic calf was probably killed by mountain lions in 2016.

### **Management Implications**

Annual mountain lion harvest in the Borah DAU has steadily increased over the last 6 seasons and is currently well above minimum harvest objectives. Sex/age composition of harvested animals in the DAU suggests that harvest rate may be high; the sex/age composition for the most recent 3-year average of known-age mountain lions (2013–2015) corresponds closely to the sex/age composition of a mountain lion population in Wyoming experiencing a 43% harvest rate (Anderson and Lindzey 2005). Alternatively, optimal hunting conditions over the prior two winters may have facilitated selectivity for older males, which would also resemble the age/sex composition for a heavy overall harvest documented in Wyoming. Monitoring future trends in harvest rate and sex-age composition will remain a high priority to better understand their relation to the mountain lion population in this DAU.



## Borah Zone DAU

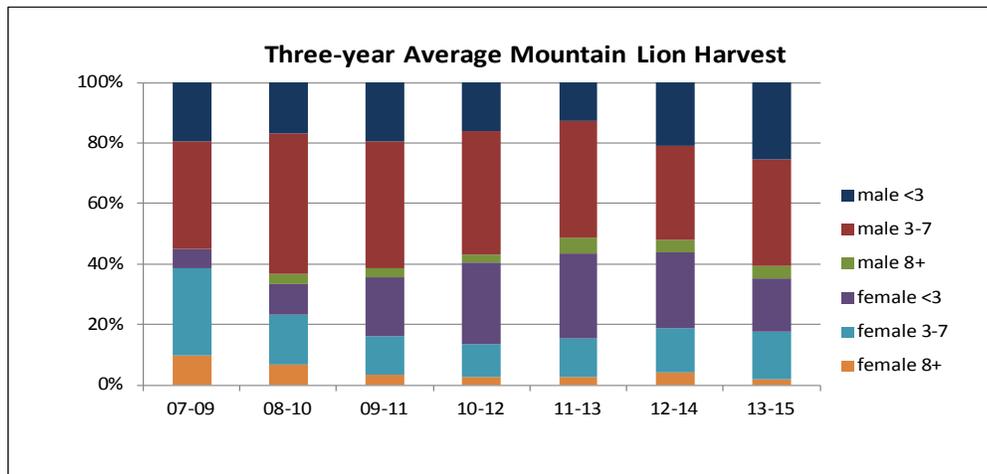
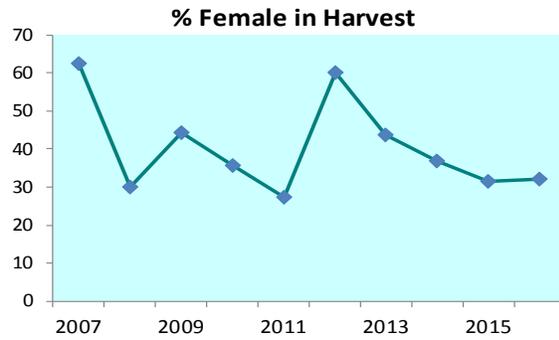
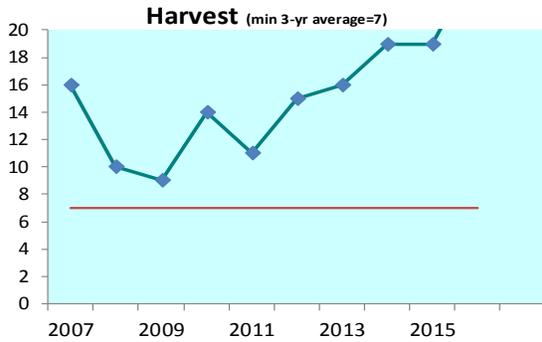
(GMUs 29, 30, 30A, 37, 37A, 51, 58, 59, 59A)

2016 Season (Fall 2016-Spring 2017)			
Square Miles:	3-Year Averages		Goal
4,786	Annual Harvest	21	7
	Harvest per 100 mi <sup>2</sup>	0.4	
	Males: Percent 3+ yrs*	61%	TBD

\* Within male harvest 2013-2015

Harvest Statistics		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Total</b>		<b>16</b>	<b>10</b>	<b>9</b>	<b>14</b>	<b>11</b>	<b>15</b>	<b>16</b>	<b>19</b>	<b>19</b>	<b>25</b>
<b>Males</b>	0-2 years	4	1	1	3	2	1	2	7	4	0
	3-7 years	2	6	3	5	5	5	5	5	8	0
	8+ years	0	0	0	1	0	0	2	0	0	0
	Unknown	0	0	1	0	1	0	0	0	1	17
	<b>Subtotal</b>	<b>6</b>	<b>7</b>	<b>5</b>	<b>9</b>	<b>8</b>	<b>6</b>	<b>9</b>	<b>12</b>	<b>13</b>	<b>17</b>
<b>Females</b>	0-2 years	1	0	1	2	3	5	3	4	2	0
	3-7 years	6	1	2	2	0	2	3	2	3	0
	8+ years	1	1	1	0	0	1	0	1	0	0
	Unknown	2	1	0	1	0	1	1	0	1	8
	<b>Subtotal</b>	<b>10</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>3</b>	<b>9</b>	<b>7</b>	<b>7</b>	<b>6</b>	<b>8</b>

Note: Lions in harvest year 2016 have yet to be aged



Note: Harvest does not include unknown aged lions. Lions in harvest year 2016 have yet to be aged.

Figure 21 Borah DAU status and objectives

# 2015 & 2016 BIG GAME Seasons & Rules



## Controlled Hunt Application Periods

Deer, Elk, Pronghorn & Fall Black Bear: May 1 – June 5  
Spring Black Bear: January 15 – February 15



First Edition, 2015

Deer, Elk, Pronghorn Seasons: August 2015 - February 2016 & August 2016 - February 2017  
Black Bear, Mountain Lion Seasons: August 2015 - June 2016 & August 2016 - June 2017  
Gray Wolf Seasons: July 2015 - June 2016 & July 2016 - June 2017  
*Including Controlled Hunts for Deer, Elk, Pronghorn and Black Bear*



## 2015-2016 & 2016-2017 Mountain Lion Hunting Seasons

### General Rules

**Kittens, Female With Young:** Neither spotted mountain lion young nor female mountain lions accompanied by spotted young may be taken.

**Evidence of Sex** must be left attached to the hide of any mountain lion taken. For mountain lions, external evidence of sex (either scrotum, penis, or testicles for males, or vulva for females) must be left naturally attached to the hide until the mandatory check requirement has been satisfied.

**Bag Limit:** No person may take more than one mountain lion per legal tag in his or her possession.

**Mandatory Check and Report:** Any hunter killing a mountain lion must, *within 10 days of the date of kill (Note: where there is a female quota, hunters must report within 5 days):*

- Present the skull and hide to an Idaho Fish and Game conservation officer, regional office or other official checkpoint for removal and retention of a premolar tooth and to have the hide tagged with an official state export tag. No person, who does not possess a fur buyer or taxidermist license with appropriate import documentation, shall have, except during the open season and for 5 days after the close of the season, any raw mountain lion pelt that does not have an official state export tag attached (either Idaho's or another state's official export documentation).
- A hunter may authorize another person to comply with the above requirements if that person possesses enough information to accurately complete the necessary form. Proxy statement required, see page 100.
- **Please thaw your mountain lion hide and skull before bringing it in for tagging or staff members may not be able to check a frozen hide or skull.**

Fish and Game's headquarters office is not equipped to check mountain lions. In the Boise area, these animals can be checked Monday through Friday, at the Fish and Game regional office in Nampa, 3101 S. Powerline Rd, 208-465-8465, between the hours of 8 a.m. and 5 p.m.; or by appointment at the Garden City facility, 109 W. 44th St., 208-327-7095.

**Capturing Mountain Lions:** No person may trap, snare or otherwise capture or hold any mountain lion.

**Big Game Feeding Sites:** It is unlawful to hunt or pursue mountain lions within one-half mile of any active Fish and Game big game feeding site.

### Female Mountain Lion Quota

To find out whether the quota on female mountain lions has been met and the season has been closed in a particular management unit, call 1-800-323-4334. For more information about the number of female lions harvested and reported for each management unit with a quota, visit <http://fishandgame.idaho.gov> or call a Fish and Game office.

### Hound Hunting

Please see the section on hound hunting rules on page 99.

### Discounted Nonresident Tags

Nonresidents may purchase two (2) reduced-price mountain lion tags for Units 4, 4A, 6, 7, 9, 10, 12, 16A, 17, 19, 20, 20A, 26, 27, that portion of Unit 16 north of the Selway River, and those portions of Units 21 and 28 within designated wilderness at the discounted price of \$41.75; or may purchase one (1) full priced mountain lion tag (\$186.00) to hunt mountain lion anywhere outside the areas listed above and one (1) reduced priced mountain lion tag valid in areas listed above.

**Nonresident Deer or Elk tags:** A nonresident deer or elk tag, **excluding** Nonresident Junior/Mentored/DAV deer and elk tags, may be used to tag a black bear, mountain lion or gray wolf. See page 110 for details.



Photo courtesy J. Caywood

Winter 2015 - 2016 & 2016 - 2017 Mountain Lion Seasons				
Units	Take Season	Dogs Prohibited	Female Quota	Notes
1	Aug 30 - Feb 16	Aug 30 - Dec 1 <i>Except</i> Priest River drainage: Dogs Prohibited Aug 30 - Dec 13		<i>Dog training season open Feb 17 - Mar 31</i>
2, 3, 5	Aug 30 - Mar 31	Oct 10 - Dec 1		
4, 4A, 6	Aug 30 - Mar 31	Oct 10 - Dec 1		<i>Second lion tag may be used, Electronic calls may be used</i>
7, 9	Aug 30 - June 30	Oct 10 - Dec 1		<i>Second lion tag may be used, Electronic calls may be used,</i>
8	Aug 30 - Mar 31	Oct 10 - Dec 1		
8A	Aug 30 - Mar 31	Aug 30 - Sep 14 Oct 10 - Dec 1		
10, 12	Aug 30 - June 30	Oct 10 - Oct 31		<i>Second lion tag may be used, Electronic calls may be used</i>
10A	Aug 30 - Mar 31	Aug 30 - Sep 14 Oct 10 - Dec 1		
11, 11A	Aug 30 - Mar 31	Oct 10 - Dec 1		
14, 15, 18	Aug 30 - Mar 31	Oct 10 - Nov 20		
13	Aug 30 - Mar 31	Oct 10 - Nov 3		
16	Aug 30 - Mar 31	Oct 10 - Nov 20		<i>Second lion tag may be used North of Selway River, Remainder of unit: 1 lion tag</i>
16A, 17 19, 20	Aug 30 - June 30	Sep 15 - Oct 31		<i>Second lion tag may be used, Electronic calls may be used</i>
19A	Aug 30 - Mar 31	Oct 1 - Nov 24		
20A, 26	Aug 30 - Apr 30	Sep 15 - Oct 31		<i>Second lion tag may be used, Electronic calls may be used</i>
21A	Aug 30 - Mar 31	Oct 10 - Nov 8		
21, 28	Aug 30 - June 30	Oct 10 - Nov 8		<i>Second lion tag may be used and electronic calls may be used in those portions of Units 21 and 28 within designated wilderness only. Remainder of units: 1 lion tag</i>
22	Aug 30 - Mar 31	Aug 30 - Nov 24	6	<i>See note 1, Page 74</i>
23	Aug 30 - Mar 31	Oct 1 - Nov 24	8	<i>See note 1, Page 74</i>
24	Aug 30 - Mar 31	Oct 5 - Nov 24	5	<i>See note 1, Page 74</i>
25	Aug 30 - Mar 31	Oct 5 - Nov 24	8	<i>See note 1, Page 74</i>
27	Aug 30 - June 30	Sep 15 - Oct 31		<i>Second lion tag may be used, Electronic calls may be used</i>
29, 30, 30A, 37, 37A	Aug 30 - Mar 31	Oct 1 - Nov 24		<i>See note 3, Page 74, Motorized Hunting Rule Applies, See Pages 101 - 103</i>
31	Aug 30 - Mar 31	Aug 30 - Nov 24	3	<i>See note 1, Page 74</i>
32	Aug 30 - Mar 31	Aug 30 - Nov 24	6	<i>See notes 1 &amp; 3, Page 74, Motorized Hunting Rule Applies, See Pages 101 - 103</i>

Winter 2015 - 2016 & 2016 - 2017 Mountain Lion Seasons				
Units	Take Season	Dogs Prohibited	Female Quota	Notes
32A	Aug 30 - Mar 31	Aug 30 - Nov 3 Nov 10 - Nov 24	5	See notes 1 & 3, Page 74, Motorized Hunting Rule Applies, See Pages 101 - 103
33, 34, 35	Aug 30 - Mar 31	Oct 5 - Nov 8	15	See note 1, Page 74
36	Aug 30 - Mar 31	Oct 5 - Nov 8		
36A	Aug 30 - Mar 31	Oct 1 - Nov 24	2	See notes 1 & 3, Page 74, Motorized Hunting Rule Applies, See Pages 101 - 103
36B	Aug 30 - Mar 31	Oct 10 - Nov 8	2	See note 1, Page 74
38	Aug 30 - Mar 31	Oct 5 - Nov 30		
39	Aug 30 - Mar 31	Oct 5 - Nov 9	10	See note 1, Page 74
40	Aug 30 - Mar 31	Oct 5 - Nov 24	10	See note 1, Page 74
41, 42	Aug 30 - June 30	Oct 5 - Nov 24		Electronic calls may be used
43, 44, 48, 49	Aug 30 - Mar 31	Oct 1 - Nov 30	6	See notes 2 & 3, Page 74, Motorized Hunting Rule Applies in Unit 49, See Pages 101 - 103
45, 50, 51, 52, 52A, 53, 58, 59, 59A	Aug 30 - Mar 31	Oct 1 - Nov 30		See note 3, Page 74, Motorized Hunting Rule Applies in Units 45, 50, 51, 52, 53, 58, 59 & 59A, See Pages 101 - 103
46, 47	Aug 30 - Mar 31	Oct 1 - Nov 30	6	See notes 2 & 3, Page 74, Motorized Hunting Rule Applies in Unit 47, See Pages 101 - 103
54	Aug 30 - Mar 31	Oct 1 - Nov 30	6	See note 2, Page 74
55	Aug 30 - Mar 31	Oct 1 - Nov 30	6	See note 2, Page 74
56, 57, 60, 60A, 61, 62, 62A, 63, 63A, 64, 65, 66, 67, 69	Aug 30 - Mar 31	Oct 1 - Nov 30		See note 3, Page 74, Motorized Hunting Rule Applies in Units 56, 66, & 69, See Pages 101 - 103
66A, 68, 68A, 70, 71, 72, 73, 73A, 74, 75, 76, 77, 78	Aug 30 - Mar 31	Oct 1 - Nov 30	22	See notes 2 & 3, Page 74, Motorized Hunting Rule Applies in Units 66A, 70, 72, 73, 75, 76, 77 & 78, See Pages 101 - 103

**Notes:**

1. The take season in this/these unit(s) will remain open for either sex until the female quota is reached or the take season ends. After the female quota has been reached, the take season in this/these unit(s) will remain open for males only.
2. The take season in this/these unit(s) will remain open until the female quota is reached, or the take season ends, whichever comes first. For these units, a dog training season opens upon the closure of the unit to harvest where a harvest quota is met. If opened, the training season in any of these units shall close March 31.
3. Motorized vehicle use as an aid to hunting for mountain lion is restricted **August 30 through December 31** to established roadways open to motorized vehicle traffic capable of travel by full-sized automobiles - any motorized vehicle with a gross vehicle weight of 1,500 pounds. See pages 101 - 103.

Submitted by:

Wayne Wakkinen  
Regional Wildlife Manager

Clay Hickey  
Regional Wildlife Manager

Rick Ward  
Regional Wildlife Manager

Regan Berkley  
Regional Wildlife Manager

Daryl Meints  
Regional Wildlife Manager

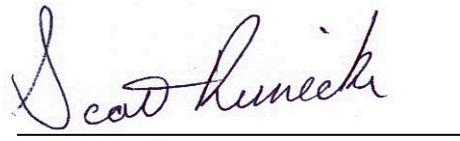
Zach Lockyer  
Regional Wildlife Manager

Curtis Hendricks  
Regional Wildlife Manager

Greg Painter  
Regional Wildlife Manager

Approved by: IDAHO DEPARTMENT OF FISH AND GAME

  
Toby Boudreau, Asst. Chief  
Bureau of Wildlife

  
Scott Reinecker, Chief  
Bureau of Wildlife