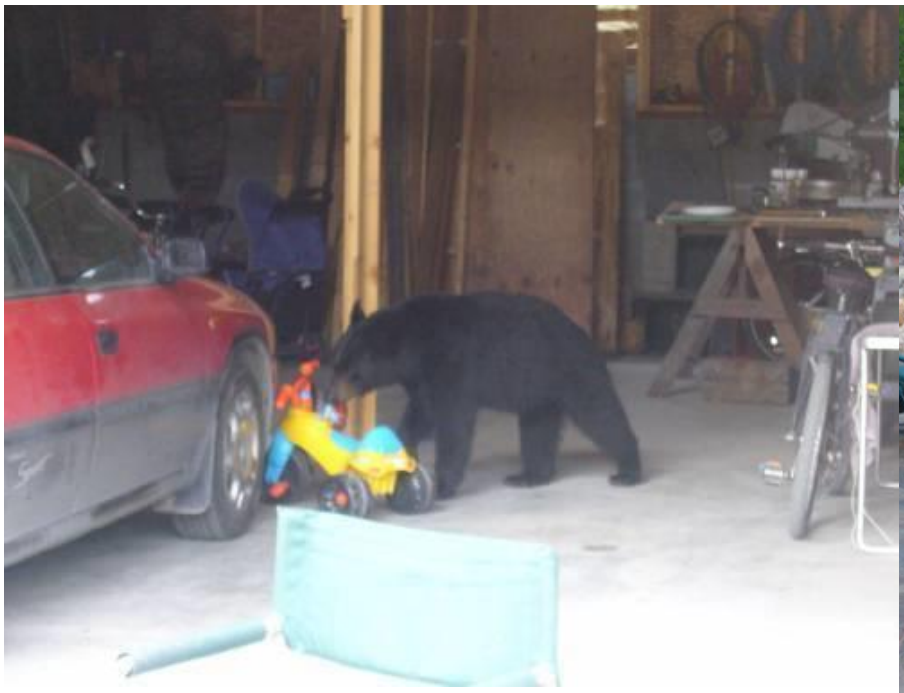

Northwest Montana – FWP Region 1

Black Bear & Cougar Conflict Management

2016

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Project 5152

This report summarizes the level of bear management and cougar management actions taken during the 2016 field season

Black Bear and Cougar Management in Region 1

All of Northwest Montana is prime bear and cougar habitat with the highest densities in the state; black bear densities in the Swan Valley are 22.7 bears/100km2 compared to 12.8 bears/100km2 state wide (Mace and Chilton-Radant 2011) and cougar densities of about 1 adult female per 20 square miles with an estimated population of n=1500 in Region 1. Not only is there a strong population of large predators in Northwest Montana, there is also a growing population of people. During the period 2011-2015, Flathead County grew from an estimated 83,172 people to 96,165 people according to the US Census Bureau. Currently, some of the areas with the highest bear and cougar densities are those areas with the highest and expanding human population. Therefore addressing human conflict situations with bears and cougars have become an increasingly important aspect of Fish Wildlife and Parks management programs.

This cost effective wildlife management program has proven successful in northwest Montana. By actively responding to black bear and cougar conflicts we are able to maintain tolerance for these highly prized game animals throughout the region. Current information and educational efforts such as presentations, brochures or videos target the root cause of most conflicts; improperly stored foods or trash and other attractants. Reducing the level of available attractants subsequently reduces the number of conflicts and thus reduces the need for management actions and removals, regardless of predator involved.

However, there will always be individuals that through accident or intent will receive food rewards associated with people, and in these cases an approach other than simply capturing and moving or destroying the offending animal(s) must be employed. The public at large no longer tolerates the destruction of our wildlife resources if other options are available.

Wildlife Conflict Mitigation & Education Efforts

Information and Education efforts are of primary concern in this program. Each phone call is an opportunity to convey information about bears and/or lions and living in bear/lion country. We put emphasis on electric fencing and proper bear resistant storage methods including bear resistant trash cans, and other attractant management.

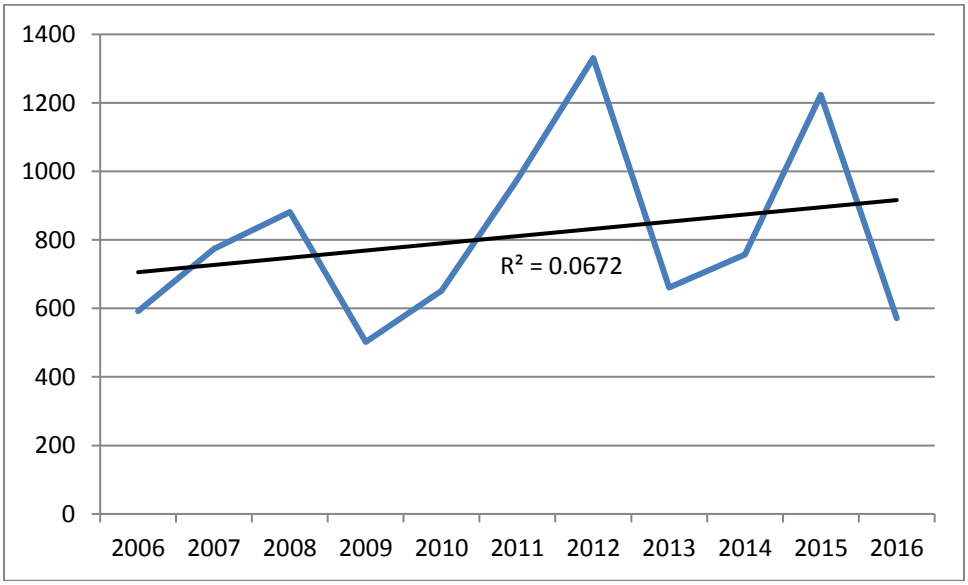
Each year, in addition to the many phone calls we return, we also work toward increasing education efforts within the local school systems. When the opportunity arises we do live presentations for small groups of students, during which students experience bears hands on.

Beyond local school groups or classes, each spring we conduct an education program for the team leaders at Montana Conservation Core (MCC). We discuss camping and traveling in bear country. MCC has in the past had frequent run-ins with bears during outings; therefore we work with this organization in a preventative manner to assist in reducing conflicts for the coming season. Additionally we conduct numerous outreach bear and lion education programs to various organizations throughout the valley, including local Homeowner Associations, Rotary, Science on Tap, and the annual Family Forestry Expo. The estimated audience for all information education outreach programs in 2016, was approximately 800 people, and included all age groups.

Black Bear Conflict Resolution

Calls vary greatly from year to year, but there has been a steady increase in numbers of people needing assistance in regards to bears. Based on the growing population of people in the Flathead Valley, it is reasonable to expect the trend of calls to continue to increase (Figure 1). It is obvious that there is variation between years, and factors such as mast production can be the primary factors in influencing this yearly variation.

Figure 1. Variation in total number of calls about bear conflicts received 2006 - 2016



2016 started with a warm wet spring resulting in wide scale production of succulent green vegetation. As the season progressed so did food production, with abundant summer and fall foods, particularly huckleberries. This resulted in 2016 being a low conflict year, overall (Table1). Comparatively, 2015 started warm and dry resulting in poor food production which continued through the season resulting in earlier and higher than normal level of conflicts.

Natural food production plays a significant role in the number of conflicts each year, but with a growing human population the trend may still continue to grow at high rates.

Table 1. Total calls, site visits, and captures by year (2006 - **2016**).

Year	Number of Calls	# Of Site Visits	# Of Captures	# Of Other
2006	592	207	27	5
2007	774	289	25	18
2008	881	318	47	13
2009	502	180	20	4
2010	652	235	46	5
2011	977	196	43	3
2012	1331	274	58	16
2013	661	99	32	5
2014	757	140	30	6
2015	1223	152	44	8
2016	593	74	19	7
Total	8921	2159	395	90
10 yr Average (2006-2015)	**835**	**209**	**37**	**8**

Looking at the following table (Table 2) it quickly becomes apparent that calls are not evenly distributed throughout the year as calls surge May through November.

In fact 92% (545) of calls occurred over those 214 days yielding an average of 2.5 calls per day. September generated an average of 4.6 calls per day.

Table 2. Total calls, site visits, and captures by month, 2016.

2016	**Jan.**	**Feb.**	**Mar.**	**Apr.**	**May**	**June**	**July**	**Aug.**	**Sept.**	**Oct.**	**Nov.**	**Dec.**
# Calls	5	2	5	35	94	61	38	42	138	123	49	1
# Site Visits				14	19	6	2	4	12	11	5	1
# Bears				8	5	3	2	2	2	3		1

A further breakdown of all calls (conflict and non-conflict) and the related management activities is found on Table 3.

Table 3. Calls (non-conflict and conflict) and related management activities by month for 2016.

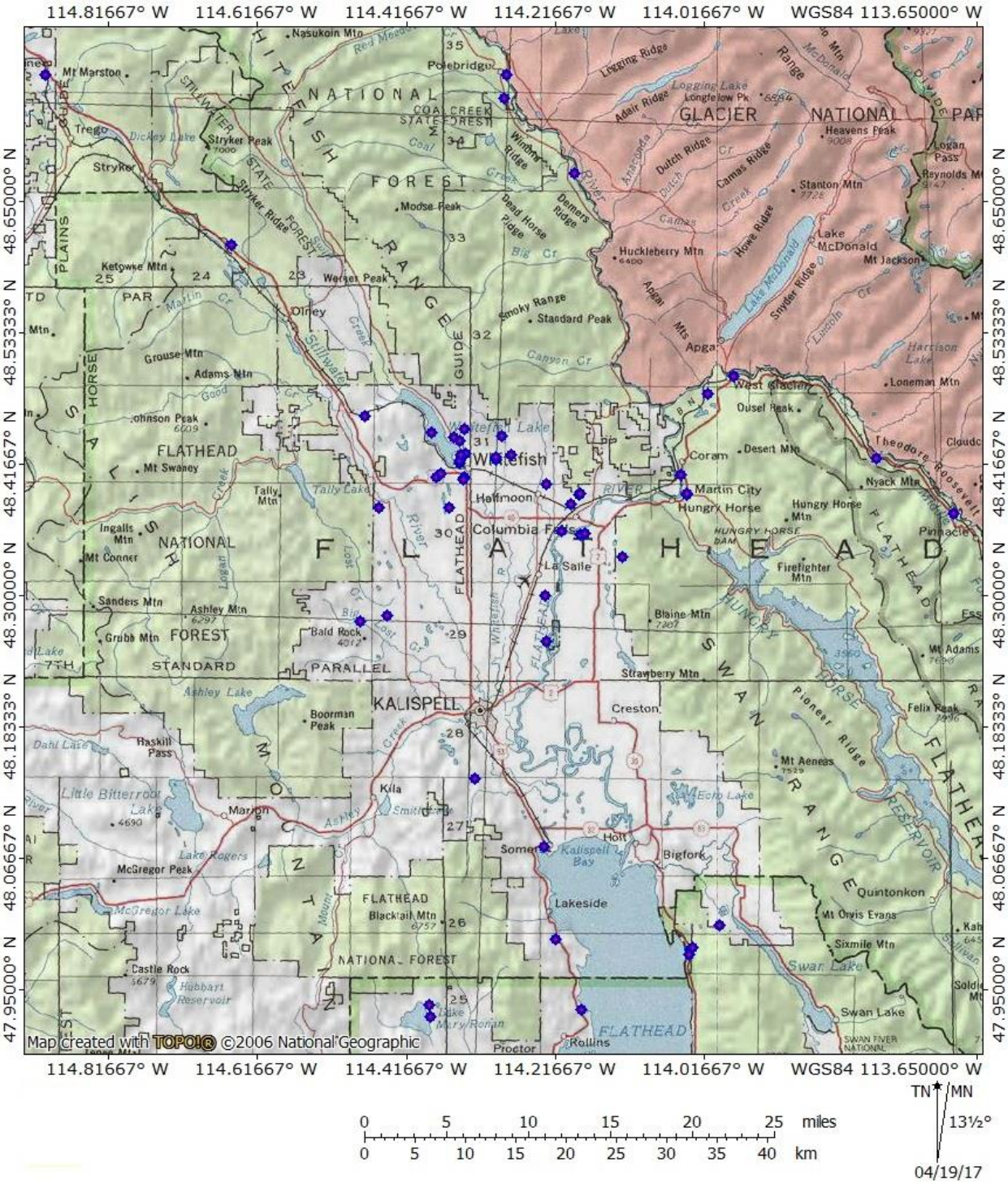
Management Activity	Total	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Calls about bears *	168		6	7	2	16	8	15	21	29	18	16	
Calls about conflicts**	593	4	2	5	35	94	61	38	42	138	123	49	2
Calls about new conflicts	465				27	71	49	26	17	128	94	36	1
Site visits	74				14	19	6	2	4	12	11	5	1
Calls about traps set	128				8	23	12	12	25	10	29	13	1
Number trap nights	139				11	23	12	12	25	12	29	14	1
Number of captures	19				6	4	2	2	1	1	2		1
Carcass recovery	7				2	1	1		1	1	1		
Electric Fence Consultation	4				1			1		2			
Electric Fence Construction	1									1			

*Calls about bears include but are not limited to; request for non-conflict related information, bear hunting suggestions, program requests, and general information i.e. “I was in the woods and I saw a bear”. As non-conflict calls these are excluded from any graphs, tables or narrative portion of this report, and represent additional calls received.

**Calls about conflicts include new conflict calls and calls regarding ongoing conflicts i.e. trap or activity status.

The following map (Figure 2) depicts locations visited for black bear conflicts during the 2016 season.

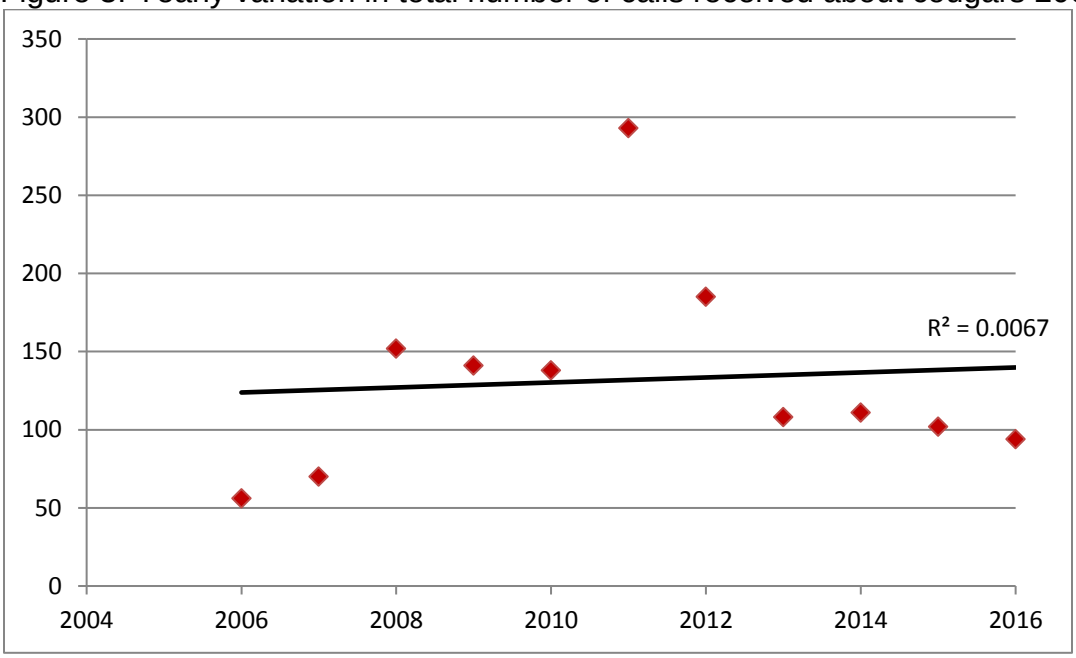
Figure 2. Black bear response locations 2016 (n=74).



Cougar Conflict and Safety Management

Currently, some of the areas with the highest cougar densities are those areas with expanding human population. This is related to the location of deer and elk winter ranges at the edges of the valleys. As the Flathead Valley human population continues to grow (5.8% annual increase from 2008 to 2012), subdividing prime white-tailed deer winter range and agricultural lands, expanding the urban interface, cougar/human conflicts (see Appendix 1) will continue (Figure 3).

Figure 3. Yearly variation in total number of calls received about cougars 2006 - 2016



With the notable exception of 2011 calls regarding cougar conflicts have remained relatively stable and may be on a slight decline since 2013 (Table 3). This may indicate that predator:prey ratios have stabilized. Barring a major decline (likely winter related) in white-tailed deer numbers, cougar numbers are likely to remain high with conflict numbers low.

Table 3. Total cougar calls, site visits, and removals by year (2006-2016).

Year	Number of Calls	# of Site Visits	Depredation Removals	Public Safety Removals	Total # Removed
2006	56	7			
2007	70	13		1	1
2008	152	36	4	9	13
2009	141	20	1	6	7
2010	138	24		5	5
2011	293	34	8	3	11
2012	185	23	3	5	8
2013	108	9	2	3	5
2014	111	7	3	3	6
2015	102	7			
2016	94	5		1 (1*)	2
Total	1450	185	23	35	58
10 yr Average (2006-2015)	136	18	2	4	6

*Lion was removed due to injury from vehicle collision

Although cougar conflicts occur year round there is a period (typically August & September) that has a higher level of reported conflicts. This is due in part to the reproduction cycle typical of cougars in northwest Montana. Juvenile dispersal occurs in 2 pulses, 1 in February / March when the prey base (primarily white-tailed deer) are winter stressed and congregated on winter range, increasing hunting success rates even for young cougars with limited skills. The second pulse occurs in late August / September when prey is robust and widely distributed making hunting more difficult. This results in juvenile cougars seeking out easier prey, often putting them in conflict with humans. This is further exacerbated by juveniles forced to lower elevation in effort to avoid strife with adult male cougars. Nearly 70% of conflicts involve cougars less than 2 years of age.

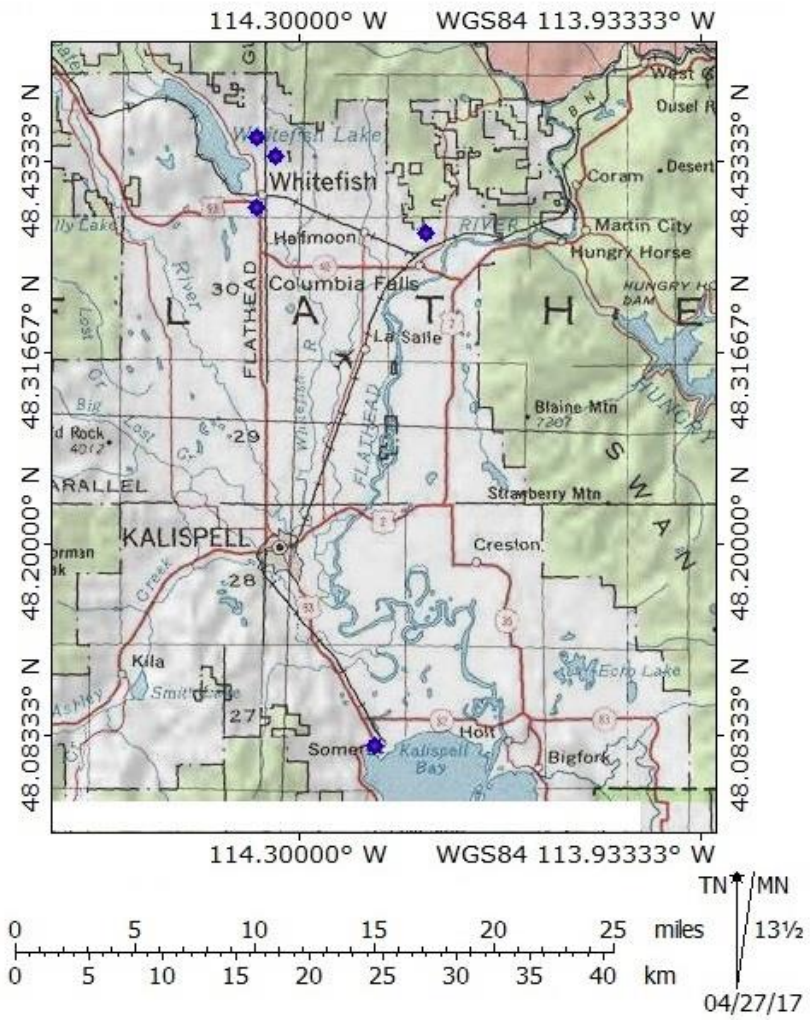
However, during 2016, the higher levels of conflicts began in July (Table 4), perhaps due to earlier than normal dispersal. Also atypical for this dispersing period, there were no public safety related removals. The only lion removed during this period was the euthanization of an adult male crippled from a vehicle impact.

Table 4. Total cougar calls, site visits, and removals by month, 2016.

2016	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
# Calls	2	8	4	8	7	6	17	17	8	7	5	5
# Site Visits		1		1	2			1				
# Removed		1						1				

Figure 4 depicts cougar conflict site visits conducted during the 2015 field season.

Figure 4. Cougar conflict response locations 2016.



Other Species

In addition to bears and cougars we received and responded to 19 calls concerning other wildlife conflicts involving a wide range of species including but not limited to moose, elk, deer, bobcat, lynx and other wayward animals or animals representing a potential threat to public safety.

Each year we will respond to calls regarding animals particularly ungulates with foreign objects attached to them in various fashion. These include deer with rat traps stuck on their faces, ropes wrapped around their necks, or five gallon buckets stuck around their necks and elk with approximately 80 feet of #9 wire wrapped in its antlers.

2017 Field Season; Goals and Objectives

While accurately predicting the conflict level for any given year is impossible, there are indicators that may

The year 2016 was a lower than normal conflict year, partly due to the abundance of natural foods associated with a warm wet spring and the later widespread production of mast crops (i.e. huckleberries). Though early in the 2017 field season, it appears that the Flathead Valley is currently experiencing similar weather patterns, resulting in a warm wet spring. This should result in good green-up conditions providing ample natural forage opportunities. These warm wet conditions, coupled with last fall's wet conditions trigger new stem growth on huckleberry shrubs. This new stem growth is where the majority of huckleberries are produced. So with current conditions, an at least average huckleberry crop is predicted. With good green-up conditions and average huckleberry production, 2017 will hopefully be a lower bear conflict year.

The annual spring white-tailed deer surveys currently being conducted, are resulting in relatively good doe:fawn ratios, which indicates reasonably good over winter survival rates for fawns, the most vulnerable age class. With a robust standing crop of white-tailed deer, it is predicted that lion conflicts will remain low.

However with both bears and lions, these are simple indictors, and not guarantees as to conflict levels.

Goal: Continue information and education outreach programs (I&E).

Objectives: Present I&E for various organizations whenever possible.

Present I&E for the public in whatever forum available, be it phone calls, or presentations at Family Forest Expo.

Provide a hands on I&E opportunity, when reasonably possible, for the public and/or school classes.

Provide media based I&E whenever possible to further the attractant management message.

Goal: Minimize conflicts between people and bears and/or lions.

Objectives: Prevent bear conflicts by working with the public to identify and secure attractants.

Continue to work with other public agencies to promote proper food and attractant storage.

Goal: Reduce and address on the ground conflicts as they occur.

Objective: Respond to calls warranting some form of on the ground action, whether in a preventative fashion (i.e. electric fencing) or a more direct action (i.e. trapping of the offending animal).

Conclusion

Given our expanding human population and residential development in the urban interface, there will continue to be bears, cougars and other wildlife living in close proximity to homes and public activity centers.

Through continued education efforts it will be possible to disseminate the best available information to pre-emptively reduce human / wildlife conflicts. The continued use of a trap and relocate or trap and aversively condition program will address those bears that have already made a positive association with people or their dwellings. The continued response to lion conflicts will reduce (though not eliminate) the potential public safety issues that exist anywhere there are lion populations. Our positive and close relationship with the USDA Wildlife Services trapper will be continued, resulting in effective responses to both urban and rural livestock depredation incidents.

Hopefully we will be able to maintain the public tolerance for these highly prized big game animals in western Montana by maintaining this effective wildlife conflict, safety and education program.

APPENDIX 1

Cougar Conflict Terms and Definitions

(From the new Western Association of Fish and Wildlife Agencies publication - MANAGING COUGARS IN NORTH AMERICA, 2009)

Following are definitions of terms used by most WAFWA western state agencies:

Human-Cougar Interaction Classes:
• Sighting – Reported observation of cougar presence (usually visual)
• Encounter – An unexpected and direct neutral meeting between a human and a cougar without incident.
• Incident – An interaction between a person and a cougar in which a person must take action to cause the cougar to flee, back down, or otherwise allow the person to leave without further conflict. An incident does not result in injury to a person.
• Attack – A human is injured or killed by a cougar; or alternatively, a person is intentionally, aggressively approached and contacted by a cougar, resulting in injury or death of the person.

Cougar Conflict Behavior Classes:
• Nuisance – A cougar involved in an encounter, multiple encounters, and/or involved in multiple sightings in residential areas or other areas of concentrated human activity, and/or a cougar that has killed and cached prey, either domestic or wild, in proximity to humans.
• Depredating – A cougar that injures or kills livestock.
• Aggressive or Dangerous – A cougar exhibiting aggressive behavior towards humans; includes one that follows, stalks, or attacks a person without provocation. Or a cougar that meets any of the following:
-Cougar that attacks a person.
-Cougar that exhibits aggressive behavior such as stalking a person, exhibits unnatural interest in a person, poses a probable threat of injury or death to humans.
-A cougar may be classified as dangerous by trained wildlife professionals based on its behavior and/or location (e.g., schools, bus stops, child care centers, playgrounds, residential areas, etc.).
-A cougar that frequently associates with humans, or human-related food sources, and especially if a pattern of behavior in which it appears to be focusing on humans or pets, or appears to be preying on pets with frequency in a well-defined geographic area (e.g. residential areas, resorts, campgrounds, or other areas of concentrated human activity).

References

U.S. Climate data.
http://www.usclimatedata.com/climate/kalispell/montana/united-states/usmt0188/2015/6

Mace, R. and T. Chilton-Radandt. 2011. Black Bear Harvest Research and Management in Montana 2011 Final Report. Montana Fish Wildlife and Parks publication.

2015 U.S. Census Bureau data.
http://www.census.gov/quickfacts/table/PST045215/30029