GMU 16 FACT SHEET

Black Bear History:

In 1999 and 2001 the BOG 's intent was to allow the Black bear population to decline to reduce predation on the moose population.

The initial goal was a 3 year average of > 270 with > 30% female. 81 females For all of GMU16

Grant Hilderbrand, Ph.D. gave a presentation to the BOG in March 2006 and gave a probability of 99.1 % that a black bear population of 3000 would decline with a 10% harvest rate including 90 adult females.

Earl Becker conducted a black bear estimate in 2007 for GMU16 and estimated 3500 bears

Prior to Black bear Control, the objective was met one year 2006.
'06...418...119F '07...499...165F '08...512...194F '09...436...138F '10...552...224F '11...288...95F

Since Black Bear Control, 2007 – 2011 the reported harvest was 2287 bears; 816 females.

The harvest averaged 163 females per year and a 13% harvest rate of the 2007 population estimate of 3500 bears.

Even 2011 with the reduced participation the harvest of females (95) met the objective and the overall harvest of 288 bears most likely would be over 10% of the 2011 reduced population.

Brown Bear history:

In 1994 the BOG directs the Department to allow the Brown Bear population to decline to reduce predation on the moose population.

The objective was a goal of 3 year average of > 28 females. For all of GMU16

The minimum objective has routinely been met since 1998 and female harvest accelerated beginning in 2005.

'00...86...33F '01...88...28F '02...70...23F '03...91...24F 04...123...27F '05....120...42F

'06...116...36F '07...113...37F '08...135...63F '09...85...38F '10...163...64F '11 ...128...54F

In 2007 Earl Becker conducted a Brown bear estimate that found 800 bears in 16B. Adding the old estimate of around 100 bears for GMU16A gives a total of 900 bears for GMU16.

Since 2007 the reported harvest was 624 bears with 256 females. The harvests averaged 51.2 females per year with a rate of 13.8% of the 2007 estimate.

Wolf History:

There were very few wolves in the unit during the eighties and until approximately 1993. Wolf harvest were very low prior to the mid- 90's.

In 2004 wolf control began. Within 3 yrs wolf populations were substantially reduced near or at pre '93 levels

Since then they have been maintained at low levels.

Calf History:

Composition and Census Data calves per 100 cows.

16B South 1994...24.7 1996...14.2 1997.....12.8 1998...8 1999....8.3 2001...13.3 2004....23 2008....18.3 2010...18

16B Middle 1990...25 1993...25 1999...9 2001...10 2005....14 2008...21 2011...24

16B North 1990...23 1993...16 1996... 23 2000...7.3 2001....14.4 2003...17 2008...12

16A 1994....31.2 1997....34.5 2000....22.2 2005....19 2009....29

The combined efforts of bear and wolf population reduction have resulted in the following approximate increases in calf survival from the lows of the late 90's and early 00's:

16B North 0% 16B middle 150% 16B South 75% 16A 50%

Collared cows are primarily in 16B Middle with 10 or 15 in southern 16B North with a few in southwestern 16A. The calf survival rate of most of these cows has been monitored since 2005.

Calf survival is not the same as calf per 100 cows' ratio. With high pregnancy and twinning rates approximately 122 claves are born per 100 cows. To convert to calf per 100 cows multiply survival rate times 122.

Calf summer survival rates.

2005...8%...9.8C/100cows 2006...16%...19.5C/ 100cows 2007....24%...29.3C/100cows
2008...13%...15.9C/100cows 2009....13-15%...17C/100cows 2010 11-17%...17C/100cows
2011...21%...25.6C/100cows 2012...26%...31.7C/100cows

Yes, there is a strange rise in 2007. This year corresponds with an extremely early green up in 2007. These strange unusual swings occur throughout the calf composition data in the unit for the last forty years. They appear to be spring weather related. The snow lasted almost 20 days later in 2011 and 2012 compared to 2007 despite similar calf survival. Both 2011 and 2012 were late snow and cold compared to the average weather for the last twenty years. The first year's 8% reflects the common survival rate witness with the Composition data for 16B Middle at the time.

The combined efforts of bear and wolf population reduction have resulted in approximately a 200 % increase in calf survival born to these cows with the last three years showing an increasing trend. To be fair the first three years prior to and at the beginning of Black Bear Control calf survival averaged 16% survival. The last three years following multiple years of Black Bear Control calf survival averaged 20.3%. Anyway you slice this there is a documented increase.

Census Data 16B Middle 1990...3880+/-8.4% 1993...3654+/- 53.8% 1999...3314+/- 14.7% 2001...1836+/- 14.5% 2005...1714+/- 12% 2008...2446+/- 13.2% 2011...3458+/-15.6%or 20.2% all 80%CI Note: Apparently beginning in 2009 the Middle count area increased to include the Happy River Drainage. Approximately 250 square miles of moose habitat shifted from the North to the Middle.

Census Data 16B South 1984....1491+/- 8% 90%CI 1991...884+/- 30% 80%CI 1996....1081+/- 13% 80%CI 2008... estimated at 960 from trend data **2010...2372+/- 33% or 44% 80%CI**

This number is odd.

2010 Calf mortality study 16B South.

Calf survival is 20%. This number represents nothing. However in order to have some comparison we can compare it to the calf cow ratio obtained during the same year in and around the surrounding area of 18 calves per 100 cows. Using the pregnancy and twinning rates of the collared cows 30 miles to the north would multiply .2 times 122 and get 24.4 calves per 100 cows in the study area. **In the Black Bear heavy harvest area calf survival appears to be 33% greater than the surrounding area.**

2012 Calf mortality study 16B South.

Calf survival 19 % .**The Brown Bear harvest was not sufficient to improve calf survival from 2010.**

Conclusions:

16B North Since Wolf control began the only information obtained is a 2008 Census. It showed no growth and 12 calves per 100 cows, however 16 yearling bulls per 100cows ,indicating that 2007 was a good recruitment year. The collared cows are located on the southern edge of the area with the exception of one cow. Current moose population appears to be higher in the north based on my observations from trapping through the lowlands and witnessing the migration from the north down to the lowlands where most of the collared cows are located. In my opinion the few collared cows and calves in 16B North give unreliable data as to what calf survival for the entire area may be. My personal observation is there are more moose than in 2003, primarily bulls.

16B Middle From census data, and collared cows and personal observation the population is up, calf survival is good and this area is well on the way to recovery as a result of wolf control and bear control activities and increased harvest of brown bears under general hunting.

16B South From census data and composition data while calf numbers are up from the lows of the late 90's and early 00's, they appear to be inadequate for growth. The population estimate is totally impossible unless all the data we have collected in the past was woefully inaccurate. To me the population status is **unclear.**

16A From Census data this population appears to have adequate calf survival and growth.

Recommendation: Stay with the Herman Griese Game Plan:

1. Maintain wolf population at low levels
2. Maintain long term commitment to bear population reductions.

Support ideas that would continue Black bear female harvest above 90 and Brown bear female harvest above 28.

Reject ideas that would lower bear harvests below these levels.

While GMU16B Middle appears to be recovering 16B North and South should benefit from dispersal from the Middle if increasing population can be accelerated.

Expand moose hunting opportunity in the Fall to reduce bulls that compete with cows for browse and potentially increase bear harvest.

Don't stop bear reduction efforts until we see multiple years of adequate calf survival.

Data Source: ADF&G Documents. Note: Last four years collared cows' calf survival data and brown bear control area calf survival data source; verbal information provided by ADF&G personnel.