

RC 75

Guide Concession Program  
Alaska Department of Natural Resources

**APPENDIX C:**

**Occupational Licensing Guide and Contracted Hunt Data**

The following spreadsheet details two types of information in three different years: 2000, 2009 and 2010. The first type of information is the number of hunting guides and the second is the number of contracted hunts per Guide Use Area. Each type is organized according to Guide Use Area and year.

Some Guide Use Areas are not on the spreadsheet. This occurs when there is either no or very little state land within the Guide Use Area.

*Mark Richards*

Occupational Licensing Data  
11-01-2011

Guide Use Area	2000	2009	2010
1-01	3 Guides/13 Hunts	3 Guides/2 Hunts	3 Guides/1 Hunt
1-02	7 Guides/55 Hunts	5 Guides/31 Hunts	5 Guides/36 Hunts
6-01	5 Guides/111 Hunts	6 Guides/120 Hunts	5 Guides/155 Hunts
6-02	6 Guides/34 Hunts	8 Guides/39 Hunts	8 Guides/44 Hunts
6-03	7 Guides/29 Hunts	5 Guides/47 Hunts	4 Guides/35 Hunts
6-04	4 Guides/16 Hunts	7 Guides/50 Hunts	7 Guides/36 Hunts
6-05	5 Guides/9 Hunts	3 Guides/13 Hunts	3 Guides/9 Hunts
7-01	5 Guides/4 Hunts	4 Guides/6 Hunts	6 Guides/7 Hunts
8-01	3 Guides/5 Hunts	4 Guides/4 Hunts	2 Guides/1 Hunt
8-02	3 Guides/3 Hunts	6 Guides/20 Hunts	8 Guides/31 Hunts
8-03	4 Guides/5 Hunts	14 Guides/29 Hunts	9 Guides/9 Hunts
8-04	2 Guides/8 Hunts	6 Guides/8 Hunts	7 Guides/5 Hunts
8-26	5 Guides/5 Hunts	5 Guides/4 Hunts	4 Guides/9 Hunts
8-27	3 Guides/6 Hunts	6 Guides/2 Hunts	5 Guides/4 Hunts
8-28	5 Guides/10 Hunts	7 Guides/19 Hunts	9 Guides/14 Hunts
8-29	12 Guides/42 Hunts	17 Guides/51 Hunts	17 Guides/34 Hunts
8-30	10 Guides/17 Hunts	17 Guides/52 Hunts	14 Guides/24 Hunts
8-31	No Data	No Data	1 Guide/9 Hunts
9-01	9 Guides/8 Hunts	7 Guides/12 Hunts	3 Guides/1 Hunt
9-02	14 Guides/24 Hunts	8 Guides/8 Hunts	4 Guides/3 Hunts
9-03	6 Guides/6 Hunts	3 Guides/1 Hunt	1 Guide/2 Hunts
9-04	27 Guides/106 Hunts	23 Guides/85 Hunts	18 Guides/40 Hunts
9-05	8 Guides/18 Hunts	2 Guides/6 Hunts	2 Guides/3 Hunts
9-06	2 Guides/10 Hunts	3 Guides/6 Hunts	3 Guides/No Data
9-07	2 Guides/15 Hunts	1 Guide/5 Hunts	2 Guides/2 Hunts
9-08	No Data	1 Guide/1 Hunt	1 Guide/ No Data
9-12	6 Guides/13 Hunts	4 Guides/29 Hunts	3 Guides/15 Hunts
9-19	4 Guides/ 2 Hunts	4 Guides/22 Hunts	2 Guides/1 Hunt
9-25	9 Guides/48 Hunts	11 Guides/54 Hunts	10 Guides/29 Hunts
9-26	6 Guides/33 Hunts	6 Guides/39 Hunts	6 Guides/22 Hunts
9-29	4 Guides/27 Hunts	9 Guides/62 Hunts	9 Guides/68 Hunts
9-30	6 Guides/38 Hunts	7 Guides/24 Hunts	6 Guides/32 Hunts
9-99	4 Guides/22 Hunts	6 Guides/42 Hunts	5 Guides/31 Hunts
12-01	6 Guides/35 Hunts	8 Guides/39 Hunts	8 Guides/24 Hunts
12-03	1 Guide/No Data	2 Guides/No Data	2 Guides/2 Hunts
13-01	26 Guides/133 Hunts	25 Guides/96 Hunts	25 Guides/99 Hunts
13-02	24 Guides/108 Hunts	20 Guides/28 Hunts	21 Guides/39 Hunts
13-03	8 Guides/14 Hunts	9 Guides/10 Hunts	13 Guides/11 Hunts
13-04	5 Guides/8 Hunts	9 Guides/7 Hunts	9 Guides/2 Hunts
13-05	19 Guides/123 Hunts	10 Guides/29 Hunts	13 Guides/26 Hunts
13-06	8 Guides/36 Hunts	6 Guides/6 Hunts	10 Guides/6 Hunts
13-07	3 Guides/4 Hunts	5 Guides/17 Hunts	9 Guides/24 Hunts
14-01	10 Guides/26 Hunts	9 Guides/25 Hunts	11 Guides/24 Hunts
14-02	8 Guides/12 Hunts	3 Guides/8 Hunts	5 Guides/3 Hunts
14-03	6 Guides/6 Hunts	5 Guides/8 Hunts	4 Guides/15 Hunts
14-04	13 Guides/23 Hunts	11 Guides/34 Hunts	13 Guides/31 Hunts

## Occupational Licensing Data

11-01-2011

15-03	4 Guides/11 Hunts	2 Guides/45 Hunts	3 Guides/32 Hunts
16-01	5 Guides/8 Hunts	28 Guides/102 Hunts	28 Guides/59 Hunts
16-02	19 Guides/186 Hunts	33 Guides/88 Hunts	34 Guides/40 Hunts
16-03	16 Guides/37 Hunts	32 Guides/43 Hunts	32 Guides/28 Hunts
16-04	9 Guides/62 Hunts	17 Guides/39 Hunts	16 Guides/ 41 Hunts
16-05	2 Guides/12 Hunts	9 Guides/13 Hunts	13 Guides/23 Hunts
17-01	10 Guides/44 Hunts	8 Guides/3 Hunts	8 Guides/19 Hunts
17-02	35 Guides/203 Hunts	16 Guides/75 Hunts	17 Guides/52 Hunts
17-03	42 Guides/247 Hunts	23 Guides/116 Hunts	24 Guides/68 Hunts
17-04	19 Guides/153 Hunts	8 Guides/50 Hunts	7 Guides/26 Hunts
17-05	17 Guides/124 Hunts	13 Guides/60 Hunts	18 Guides/81 Hunts
17-06	8 Guides/37 Hunts	4 Guides/39 Hunts	4 Guides/20 Hunts
18-02	2 Guides/No Data	2 Guides/No Data	1 Guide/No Data
18-03	1 Guide/4 Hunts	3 Guides/28 Hunts	4 Guides/18 Hunts
19-01	4 Guides/8 Hunts	6 Guides/20 Hunts	5 Guides/11 Hunts
19-02	1 Guide/No Data	4 Guides/No Data	3 Guides/4 Hunts
19-03	26 Guides/472 Hunts	15 Guides/141 Hunts	15 Guides/118 Hunts
19-04	24 Guides/441 Hunts	18 Guides/52 Hunts	18 Guides/45 Hunts
19-05	7 Guides/18 Hunts	5 Guides/41 Hunts	6 Guides/40 Hunts
19-06	5 Guides/52 Hunts	7 Guides/6 Hunts	6 Guides/19 Hunts
19-07	9 Guides/115 Hunts	9 Guides/30 Hunts	9 Guides/19 Hunts
19-08	11 Guides/83 Hunts	9 Guides/26 Hunts	9 Guides/25 Hunts
19-09	6 Guides/49 Hunts	6 Guides/6 Hunts	7 Guides/15 Hunts
19-10	15 Guides/106 Hunts	15 Guides/62 Hunts	17 Guides/61 Hunts
19-11	No Data	2 Guides/2 Hunts	2 Guides/No Data
19-12	9 Guides/65 Hunts	12 Guides/83 Hunts	14 Guides/100 Hunts
19-13	No Data	2 Guides/No Data	1 Guides/1 Hunt
19-14	No Data/No Data	No Data/No Data	No Data/No Data
20-01	5 Guides/64 Hunts	5 Guides/13 Hunts	5 Guides/12 Hunts
20-02	5 Guides/21 Hunts	9 Guides/34 Hunts	8 Guides/10 Hunts
20-03	6 Guides/14 Hunts	8 Guides/48 Hunts	9 Guides/35 Hunts
20-04	20 Guides/148 Hunts	21 Guides/227 Hunts	22 Guides/194 Hunts
20-05	4 Guides/4 Hunts	6 Guides/14 Hunts	8 Guides/15 Hunts
20-06	3 Guides/1 Hunts	2 Guides/2 Hunts	3 Guides/5 Hunts
20-07	6 Guides/11 Hunts	9 Guides/18 Hunts	8 Guides/20 Hunts
20-08	3 Guides/4 Hunts	6 Guides/19 Hunts	7 Guides/10 Hunts
20-09	1 Guide/5 Hunts	1 Guide/2 Hunts	2 Guides/No Data
20-10	No Data	5 Guides/12 Hunts	4 Guides/5 Hunts
20-11	4 Guides/18 Hunts	6 Guides/7 Hunts	5 Guides/15 Hunts
20-12	No Data/2 Hunts	3 Guides/No Data	3 Guides/No Data
21-01	10 Guides/106 Hunts	6 Guide/7 Hunts	7 Guides/20 Hunts
21-02	2 Guides/6 Hunts	4 Guides/2 Hunts	4 Guides/No Data
21-03	4 Guides/20 Hunts	4 Guides/2 Hunts	4 Guides/11 Hunts
21-04	4 Guides/16 Hunts	2 Guides/35 Hunts	3 Guides/16 Hunts
21-05	6 Guides/35 Hunts	2 Guides/38 Hunts	2 Guides/33 Hunts
22-01	1 Guide/3 Hunts	2 Guides/20 Hunts	2 Guides/21 Hunts
22-02	1 Guide/10 Hunts	1 Guide/27 Hunts	1 Guide/22 Hunts

## Occupational Licensing Data

11-01-2011

22-03	1 Guide/No Data	2 Guides/1 Hunts	2 Guides/No Data
22-04	1 Guide/5 Hunts	No Data	No Data
22-05	2 Guides/10 Hunts	2 Guides/4 Hunts	2 Guides/12 Hunts
22-06	4 Guides/35 Hunts	5 Guides/7 Hunts	3 Guides/3 Hunts
22-07	7 Guides/58 Hunts	5 Guides/46 Hunts	6 Guides/37 Hunts
23-01	3 Guides/39 Hunts	6 Guides/12 Hunts	5 Guides/15 Hunts
23-02	5 Guides/21 Hunts	3 Guides/32 Hunts	3 Guides/14 Hunts
23-03	No Data	No Data/4 Hunts	No Data
23-04	3 Guides/8 Hunts	5 Guides/7 Hunts	4 Guides/1 Hunt
23-05	2 Guides/2 Hunts	2 Guides/15 Hunts	2 Guides/13 Hunts
23-06	7 Guides/67 Hunts	9 Guides/41 Hunts	8 Guides/67 Hunts
23-07	2 Guides/10 Hunts	1 Guide/1 Hunt	1 Guide/No Data
24-01	5 Guide/42 Hunts	6 Guides/23 Hunts	5 Guides/35 Hunts
24-02	No Data	1 Guide/2 Hunts	1 Guide/1 Hunt
24-03	1 Guide/4 Hunts	2 Guides/12 Hunts	8 Guides/23 Hunts
24-04	2 Guides/21 Hunts	5 Guides/14 Hunts	2 Guides/1 Hunt
24-05	4 Guides/23 Hunts	4 Guides/24 Hunts	4 Guides/14 Hunts
25-01	1 Guide/11 Hunts	1 Guide/7 Hunts	1 Guide/21 Hunts
25-02	7 Guides/38 Hunts	5 Guides/73 Hunts	8 Guides/61 Hunts
25-03	5 Guides/19 Hunts	5 Guides/80 Hunts	2 Guides/32 Hunts
25-03A	No Data	No Data	4 Guides/20 Hunts
25-03B	No Data	No Data	2 Guides/7 Hunts
25-09	No Data/3 Hunts	1 Guide/1 Hunt	1 Guide/1 Hunt
25-10	No Data/1 Hunt	No Data	No Data/10 Hunts
25-11	2 Guides/No Data	1 Guide/No Data	1 Guide/ 1 Hunt
26-06	3 Guides/17 Hunts	5 Guides/82 Hunts	7 Guides/152 Hunts
26-07	2 Guides/6 Hunts	6 Guides/12 Hunts	6 Guides/5 Hunts
26-08	3 Guides/14 Hunts	3 Guides/23 Hunts	4 Guides/9 Hunts
26-09	1 Guide/22 Hunts	1 Guide/46 Hunts	2 Guides/37 Hunts
26-10	No Data	No Data	No Data
26-11	1 Guide/No Data	3 Guides/1 Hunt	2 Guides/7 Hunts
26-12	No Data	No Data	2 Guides/8 Hunts
26-13	3 Guides/3 Hunts	3 Guides/No Data	3 Guides/No Data

## **GCP Proposed Timeline February 15, 2012**

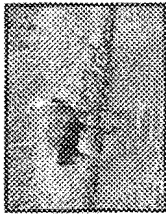
- GCP Proposed Decision issued, 60 day public & agency notice; comment period begins: February 15, 2012
- Public Meetings: March 2012 Specific dates if we have them. Meetings will be held in Juneau, Anchorage and Fairbanks. Additionally we will be hosting a number of Web based meetings. Times and dates to be determined. Please check the GCP website for further details and updates. <http://dnr.alaska.gov/mlw/gcp/>
- Comment period closes: 5:00 pm April 23, 2012

**All dates following the close of the comment period may change based on a number of factors involving the process for DNR's Guide Concession Program.**

- Develop issue response summary; Draft Final GCP Decision: April 24, 2012 – July, 2012
- GCP Final Decision issued: July, 2012
- Regulations development: Summer of 2012
- Legislature approves FY14 budget: March 2013
- Hire staff: Fall, 2013
- Applications available (Implementation of Program): January 1, 2014
- Deadline for applications to be submitted to DNR: April 1, 2014
- Scoring of applications: April through July, 2014
- Notification of areas, permit sent for review and signature, payment: August - September, 2014
- Guide Concession areas effective: January 1, 2015

# Moose Management Plans

## CENTRAL KUSHOKVIM MOOSE MANAGEMENT PLAN



Prepared by  
 Alaska Department of Fish and Game  
 Division of Wildlife Conservation  
 1100 West Northern Boulevard, Anchorage, Alaska 99503



June 2004

## Yukon-Charley Rivers National Preserve Moose Management Plan for Game Management Units 2, 4, and 114



Approved by  
 Board of Game Management  
 1100 West Northern Boulevard, Anchorage, Alaska 99503

December 2003

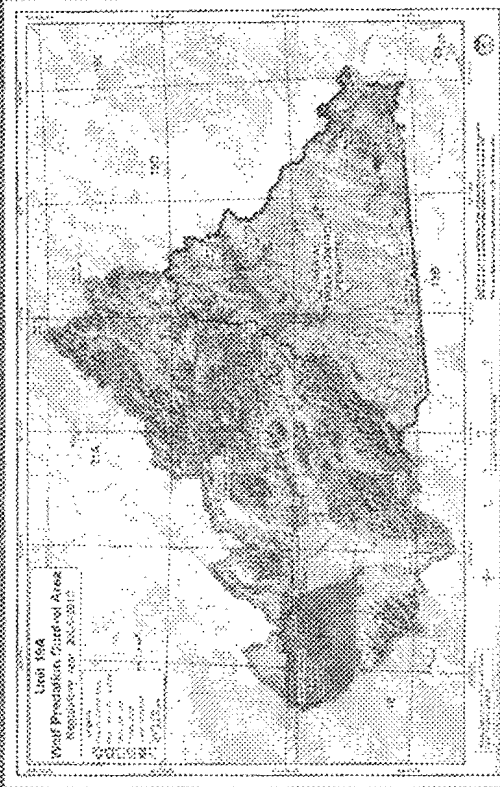
## Preliminary Unit 19D East Adaptive Wildlife Management Implementation Program

Approved by  
 Alaska Department of Fish and Game  
 Division of Wildlife Conservation  
 1100 West Northern Boulevard, Anchorage, Alaska 99503



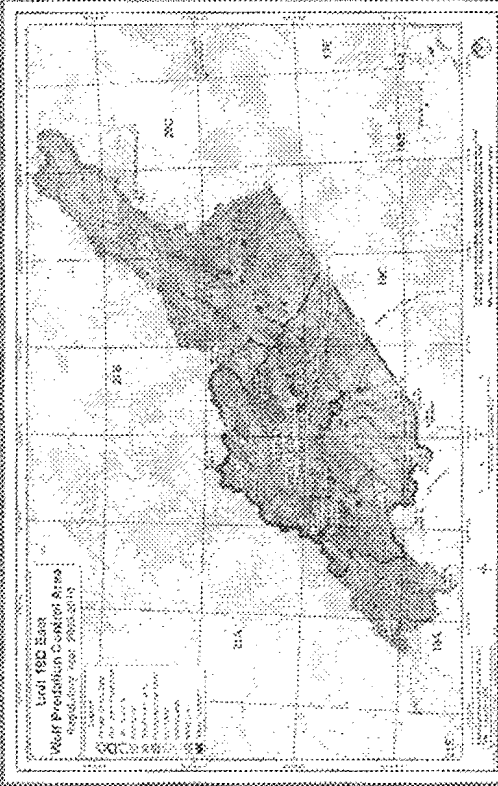
August 2004, Rev. 6, 2004

# Predation Control Areas Unit 19A:



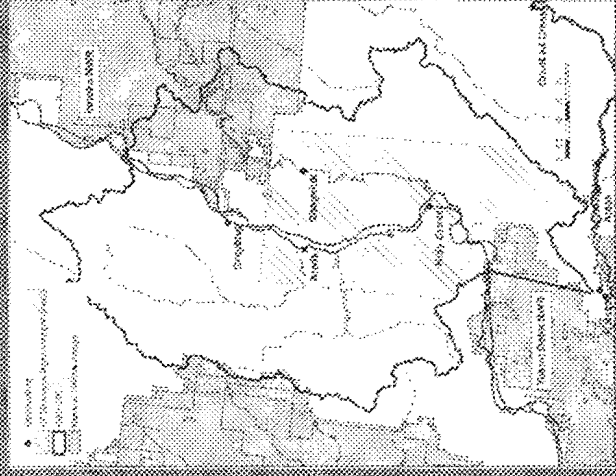
# Predation Control Areas

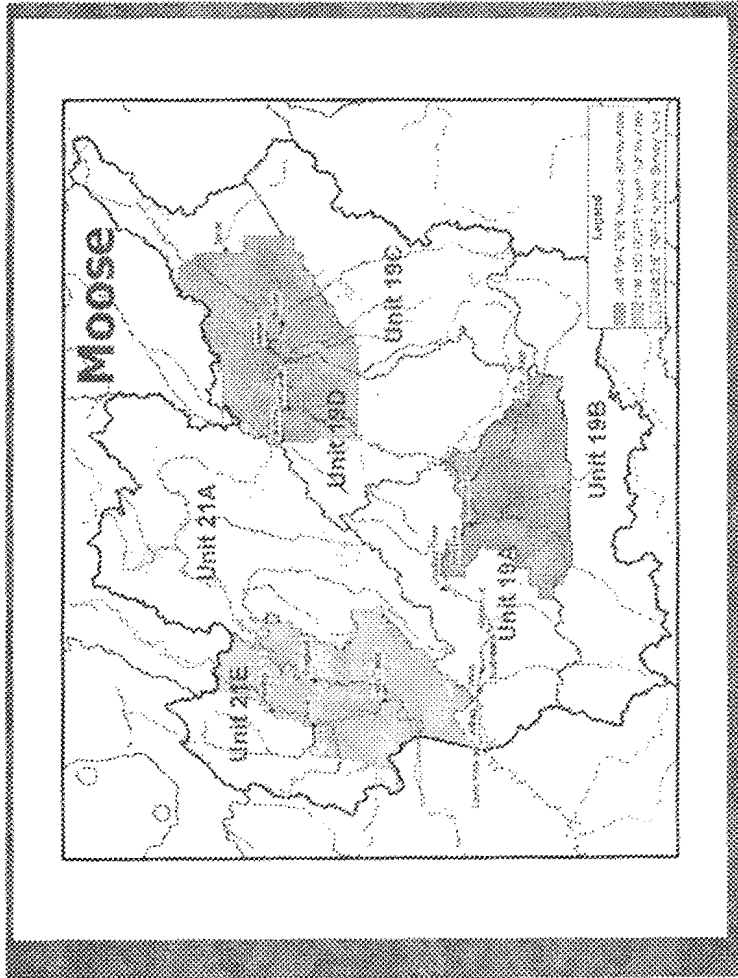
Unit 19D East:



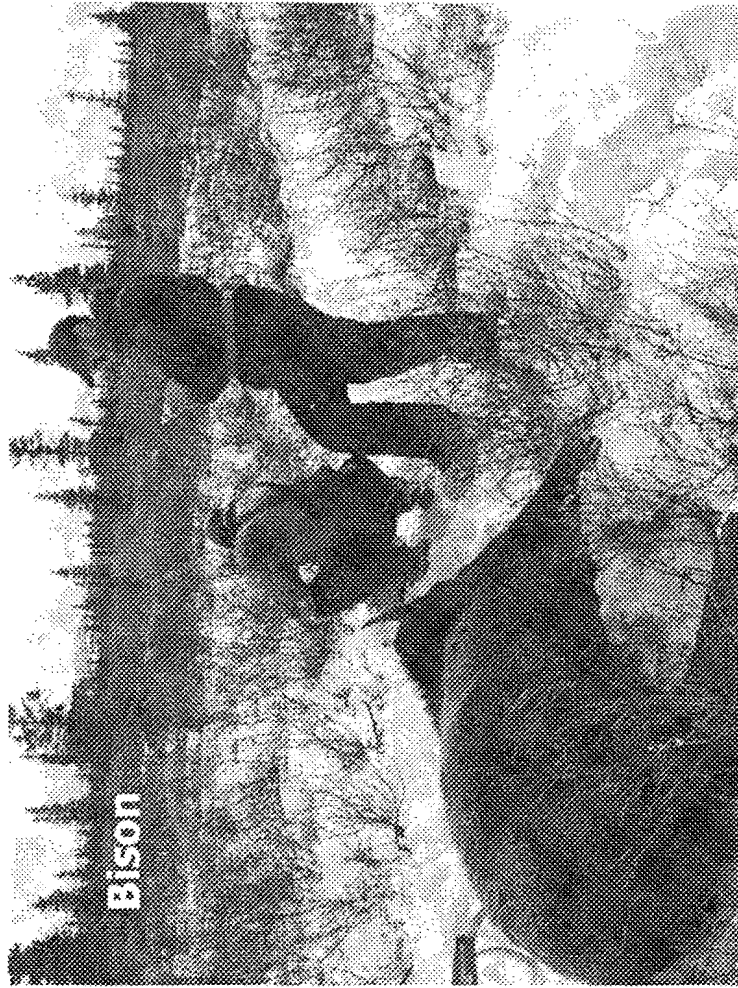
# Predation Control Areas

Unit 21E:





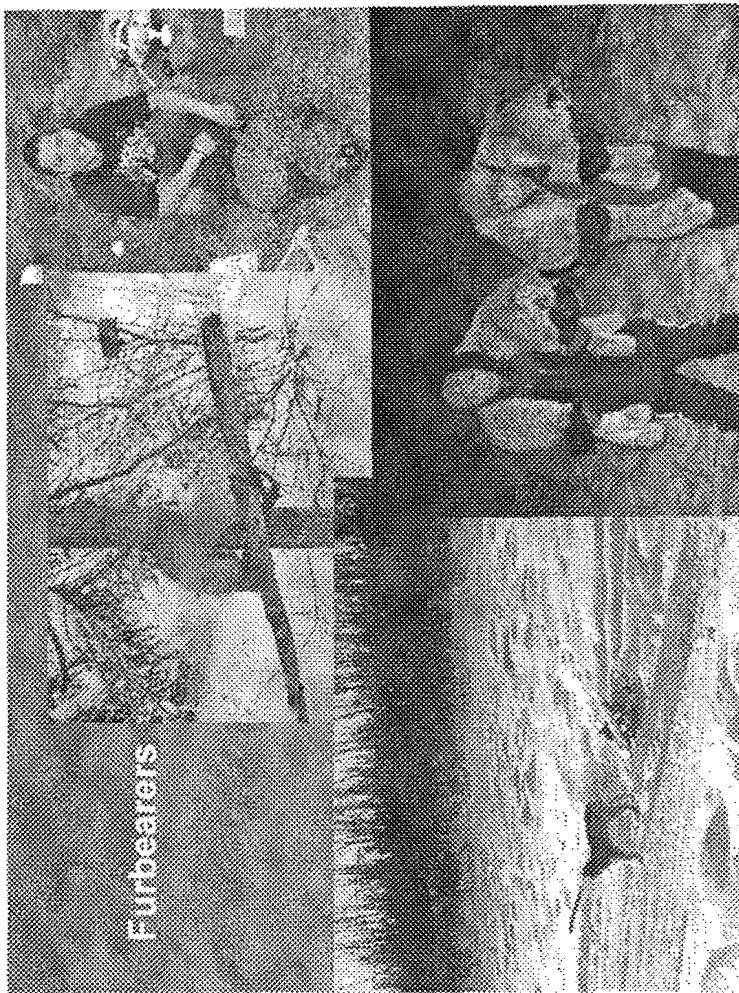




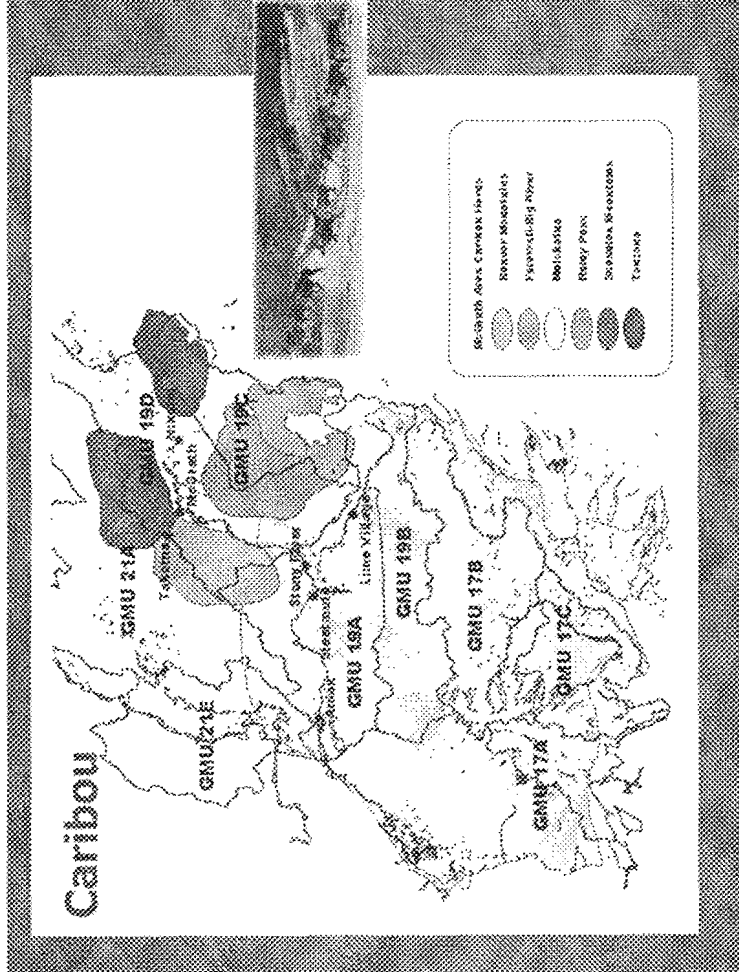
Bison

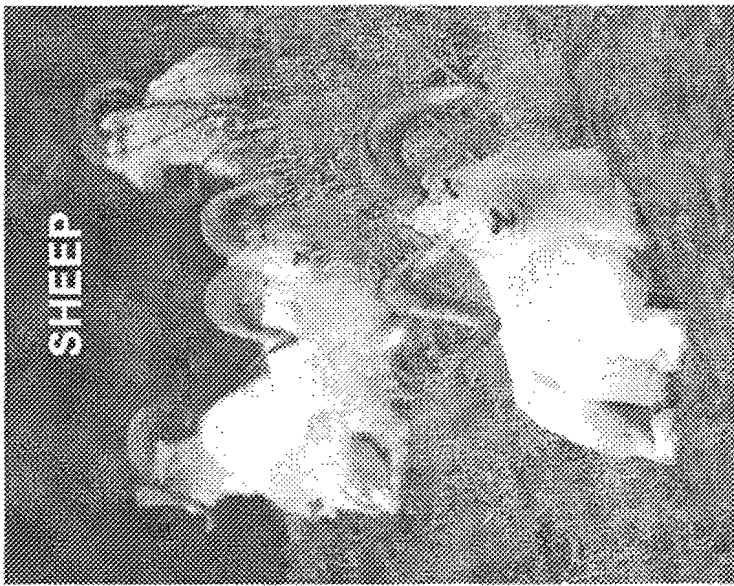
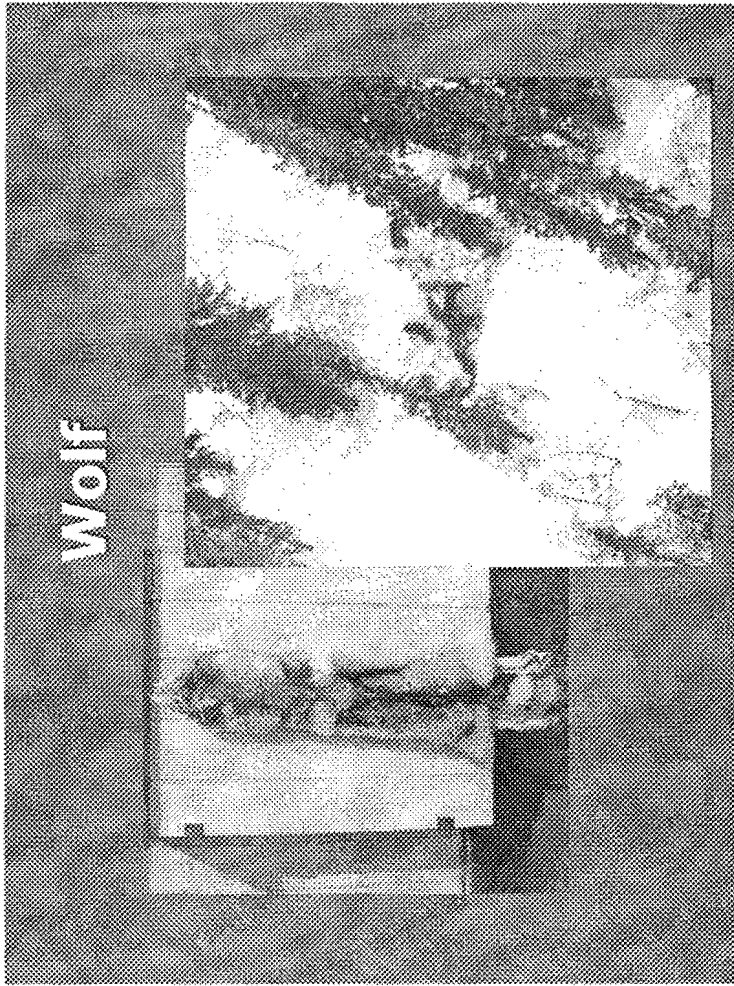


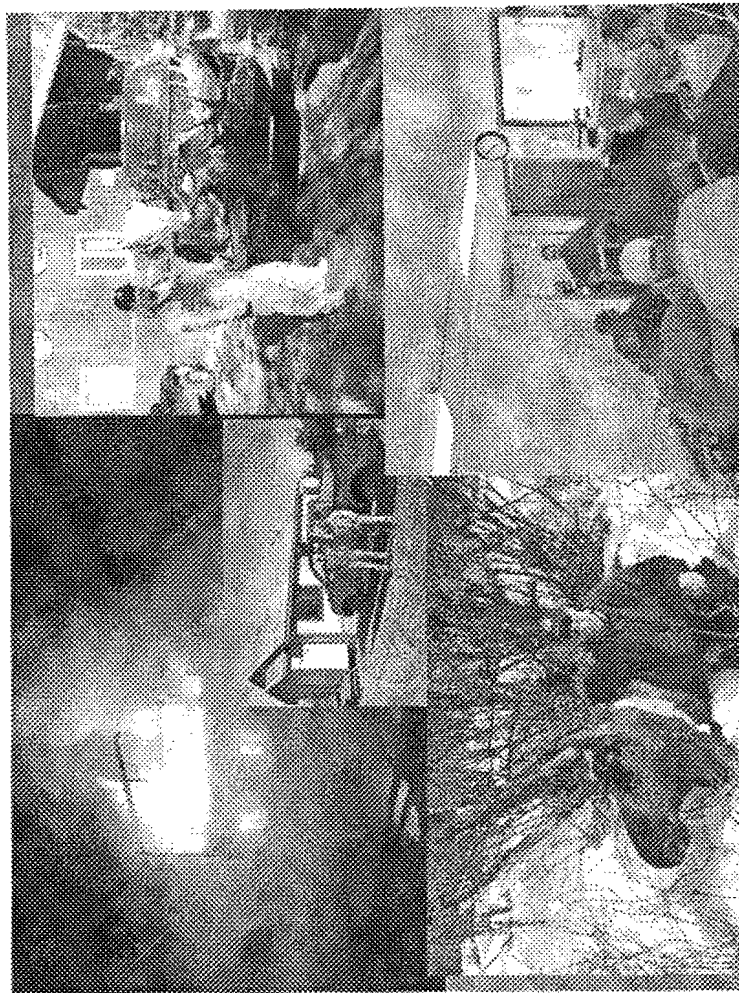
Grizzly Bears



Furbearers





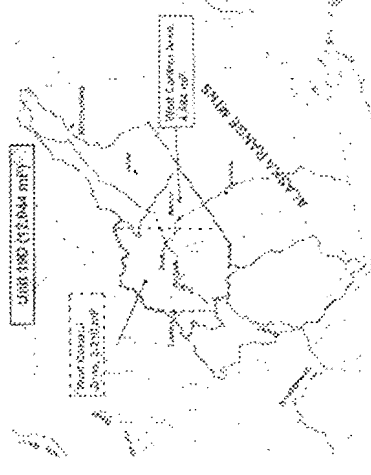
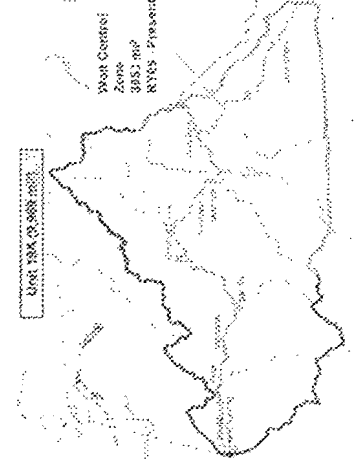


Regulatory Year	Post season weevil estimate in DNA WCA	% reduction from precontrol estimate of 75-160 in the DNA WCA
2004-05	31 - 56	44 - 39%
2005-06	5 - 7	91 - 95%
2006-07	9 - 10 <sup>1</sup>	87 - 91%
2007-08	12	84 - 88%
2008-09	7 - 13 <sup>2</sup>	83 - 93%
2009-10	13 - 18 <sup>3</sup>	79 - 87%
2010-11	19	75 - 81%

<sup>1</sup> based on average of post season estimate R105 - R107  
<sup>2</sup> post season estimate based on nine regions  
<sup>3</sup> based on average of R108 and R110 post season estimate

Regulatory Year	Post season weevil estimate with 1,110 m <sup>2</sup> area	% reduction from precontrol estimate of 40 with 1,110 m <sup>2</sup> area
2004-05	11	73%
2005-06	11	73%
2006-07	(no estimate)	
2007-08	(no estimate)	
2008-09	15 - 17	61% - 69%

<sup>1</sup> reduction from precontrol estimate of 48 with 4,044 m<sup>2</sup> area



## Proposal 131

### Effect of the proposal:

Add bears to the Unit  
19A Predation Control  
Implementation Plan



## Department Recommendation:

Amend and Adopt

Advisory Committee  
recommendations:

CKAC – Adopt

SHAC – Adopt

McGrath – Adopt

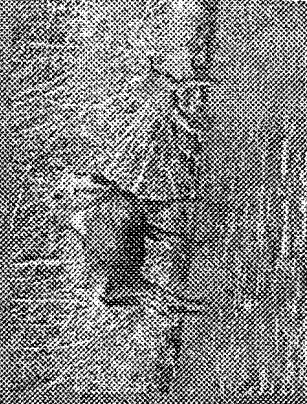


## CKMMP

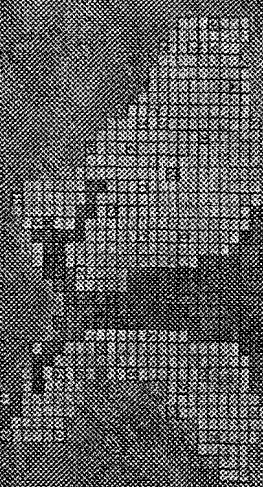
- Board endorsed this plan in spring 2004
- "Research from Unit 19(D)-East suggests that black and brown bear predation is likely a factor that contributes to limiting the moose population" in 19A as well.

## Unit 19A Predation control implementation plan dates

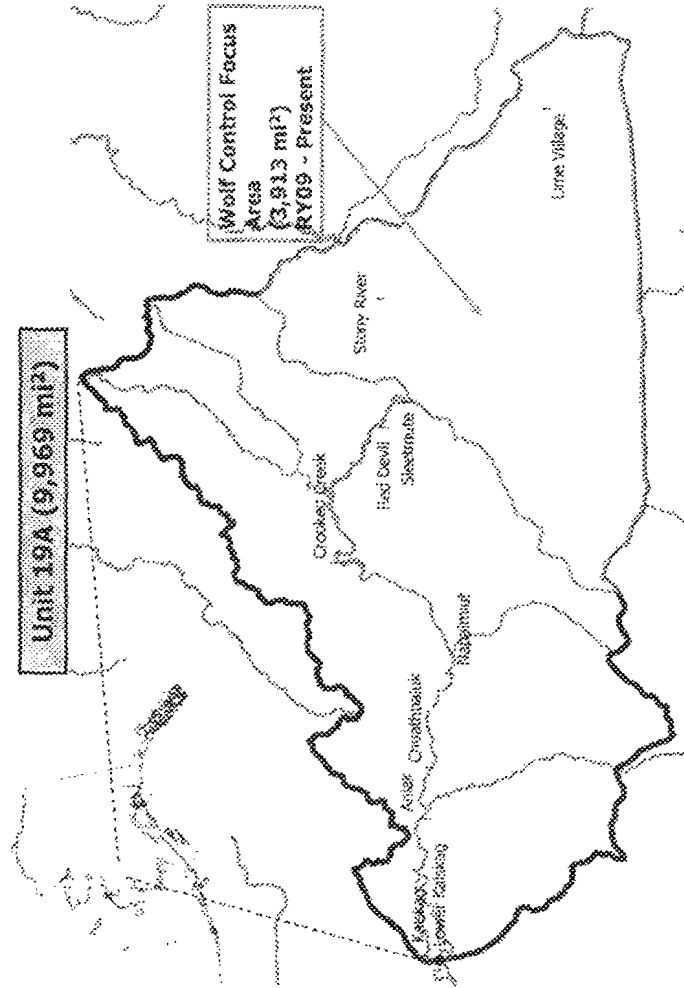
- Adopted in 2004, reauthorized in 2009 through June 2014
- In 2009, aerial wolf control area restricted to approx. 3,913 mi<sup>2</sup> area to focus effort



# Moose density (3874 mi<sup>2</sup>)



Year	Moose/mi <sup>2</sup>	90% CI	Range
2005	0.28	± 17%	897-1270
2006	0.44	± 28%	1225-2191
2011	0.25	± 18%	789-1135
2011 w/scd	0.43	± 36%	1066-2266



## Spring Twinning Surveys

Small sample sizes

Year	twins	Cows with calves
2007	7	11
2009	3	4
2010	12	19
total	22	34



Combined twinning rate: 65%

2006 browse removal was 10%

## Fall moose composition data:

Holitna

Year	Bulls: 100 COWS	Calves: 100 COWS
2005	8	24
2007	35	45
2008	34	27
2009	51	36
2010	48	19
2011	38	31





**Fall moose composition data:  
Holitna vs. McGrath**

AVG = 30

AVG = 55

Year	Calves: 100 COWS
2005	24
2007	45
2008	27
2009	36
2010	19
2011	31

Year	Calves: 100 COWS
2003	56
2004	63
2005	51
2006	58
2007	56
2008	43

**UNIT 19A COMPARISON OF POPULATION  
ESTIMATES AND IM OBJECTIVES**



Population Objective  
7,600 - 9,300

Population Estimate  
for 19A

Total moose 2,791 - 5,782

## UNIT 19A COMPARISON OF POPULATION ESTIMATES AND IM OBJECTIVES

Harvest Objectives  
420 - 530

Reported  
Harvest for 19A

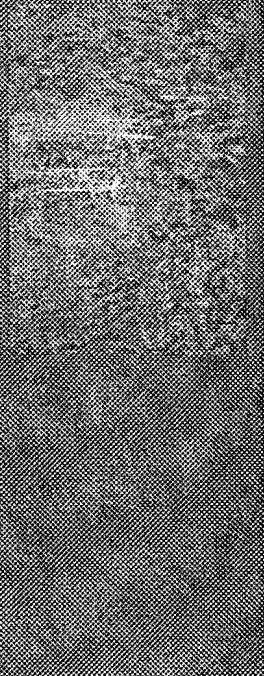
YEAR  
2010-11

92



## Wolf population

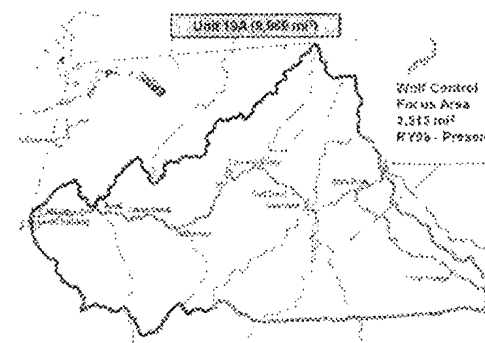
- 2004 estimate was 125 – 150
  - (75 – 100 in wolf control focus area)
- Control objective 30 – 36 unit wide
- Reduce wolf numbers by 60% or more in the focus area



Wolf harvest and wolf control take in Unit 19A, RY01-RY10.

Regulatory Year	Hunting and Trapping Harvest	Wolf Control Take	Total Kill
2001-2002	49	-	49
2002-2003	25	-	25
2003-2004	30	-	30
2004-2005	29	43	72
2005-2006	33	47*	80*
2006-2007	3	7	10
2007-2008	10	15	25
2008-2009	11	20	31
2009-2010	10	2	12
2010-2011	4	10	14

\* Includes one SDA wolf killed & not recovered.



Regulatory Year	Post season wolf estimate in 19A WCA	% reduction from precontrol estimate of 75-100 in the 19A WCA
2004-05	31 - 56	44 - 59%
2005-06	5 - 7	91 - 95%
2006-07	9 - 10 <sup>a</sup>	87 - 91%
2007-08	12	84 - 88%
2008-09	7 - 13 <sup>b</sup>	83 - 93%
2009-10	13 - 16 <sup>c</sup>	79 - 87%
2010-11	19	75 - 81%

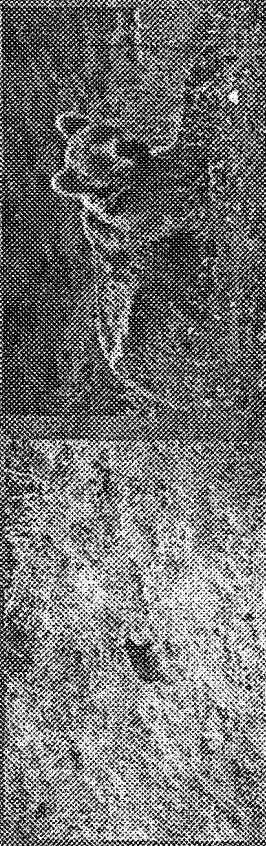
<sup>a</sup> based on average of post season estimate RY05 - RY07

<sup>b</sup> post season estimate based on pilot reports

<sup>c</sup> based on average of RY08 and RY10 post season estimates

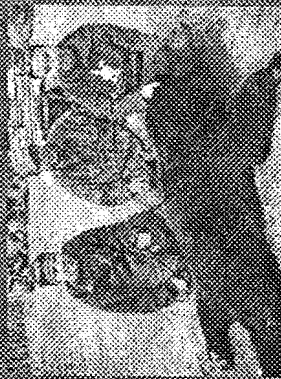
## Unit 19A Bear Population Sizes

	Population estimate	Population Density (bears/1000mi <sup>2</sup> )
Black bear	2,475 – 2,970	250 – 300
Grizzly bear	200	20



## Unit 19A Black bear harvest

Year	Harvest
2002-03	2
2003-04	2
2004-05	14
2005-06	2
2006-07	8
2007-08	6
2008-09	8
2009-10	15
2010-11	10



5 bear bag limit  
Little effect on harvest

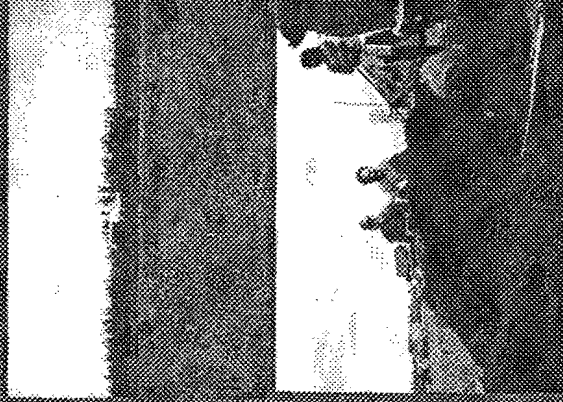
## Moose population response UKVMMMA

Year	Abundance	90% CI
2001	868	(±147)
2002	--	--
2003	--	--
2004	1192	(±228)
2005	--	--
2006	1308	(±174)
2007	1720	(±306)
2008	1718	(±352)
2009	1820	(±323)
2010	1796	(±312)
2011	1648*	

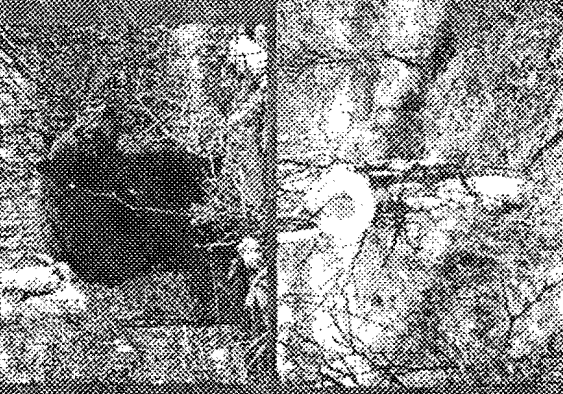
\* preliminary data

## Techniques to reduce bear numbers

### Helicopters



### Foot snares



## Effectiveness and intensity

- In McGrath, 96% of black bears and 50% of grizzlies were removed
- 85% Aerial capture:
  - 94 black bears; 5 grizzlies
- 15% Foot snares:
  - 5 black bears; 2 grizzlies
- Public bear snaring:
  - Summer 2010: 11 black bears (H: 1 C: 10)
  - Summer 2011: 21 black bears (H: 7 C: 14)
- Reduction of bear numbers on this scale requires aerial methods

## What would a Unit 19A bear control program look like?

- Establish Bear Control Focus Area
  - Small enough to remove at least 90% of the black bears and at least 50% of grizzlies
  - Small enough to conduct removal during the short window after hibernation and before leaf emergence
  - Small enough that removal does not threaten the long-term bear population in Unit 19A
    - Proposed BCFA is 5% of Unit 19A
  - Large enough to protect enough moose that we get a response

## **What would a Unit 19A bear control program look like?**

### **Establish Bear Control Focus Area**

- Department would reduce bear numbers to lowest levels possible w/in BCFA
- Using fixed-wing spotters, and helicopter based gunners
- Remove black and grizzly bears from BCFA, including sows and sows with cubs

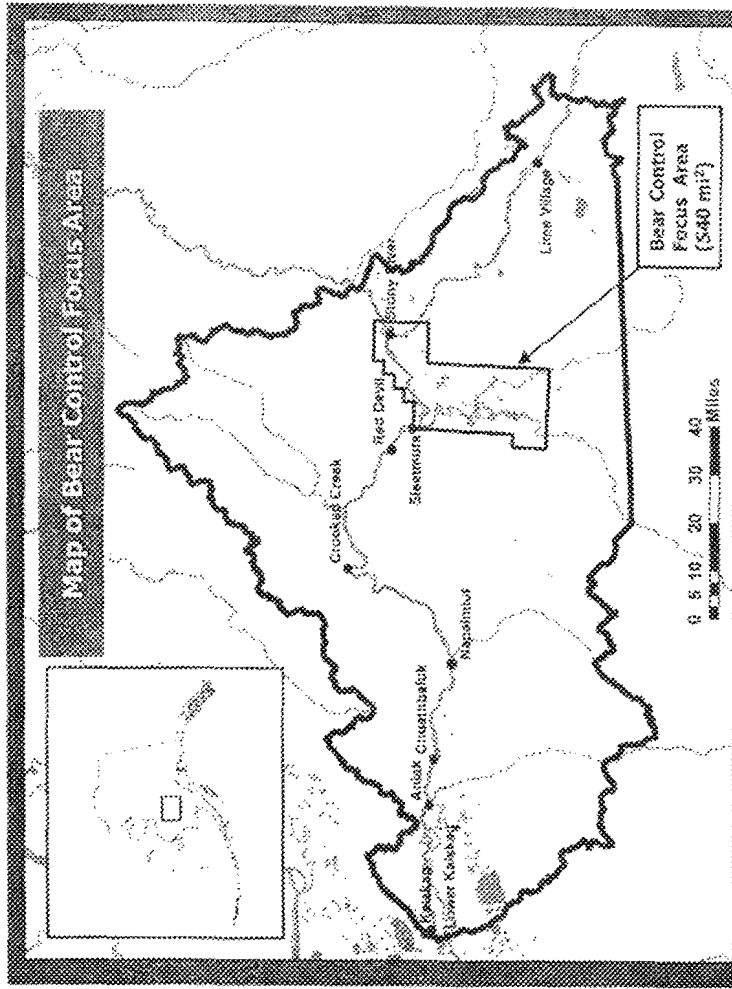
## **What would a Unit 19A bear control program look like?**

### **Establish Bear Control Focus Area**

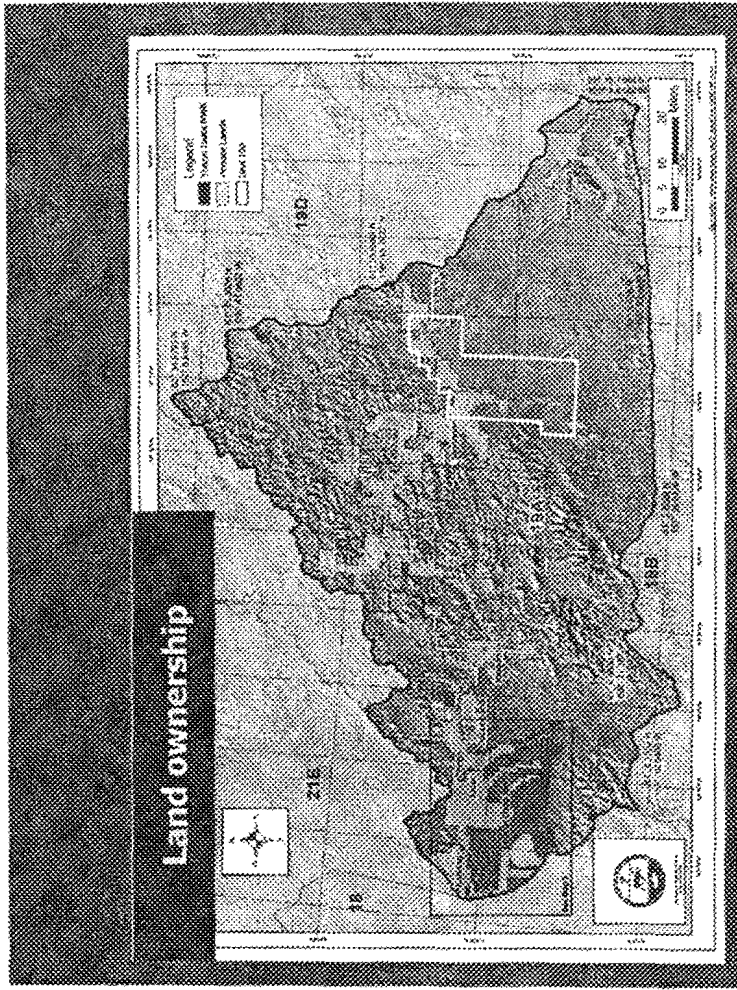
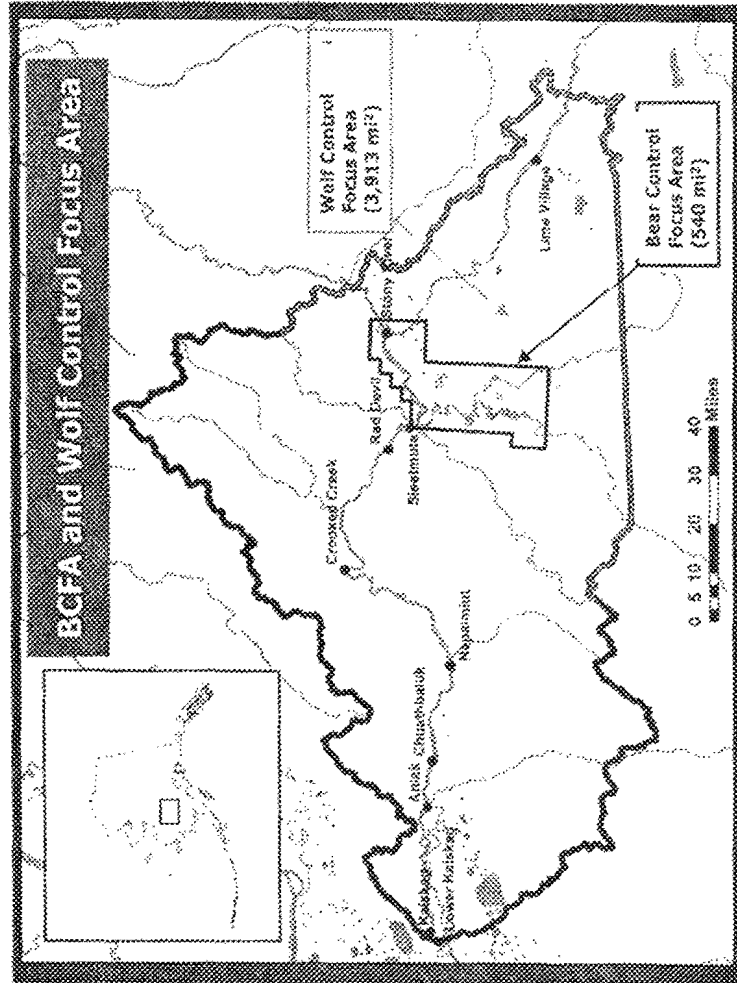
- Department would reduce bear numbers to lowest levels possible w/in BCFA
- Would not include translocations
  - Cost – additional 25.0 to 30.0
  - Lack of release sites
  - Local support lacking

## What would a Unit 19A bear control program look like?

- Establish Bear Control Focus Area
- Department would reduce bear numbers to lowest levels possible w/in BCFA
- Would not include translocations
- Public participation using foot snares
  - Outside the control program, and not part of this proposal but within 19A
  - Proposal 141 would establish a black bear trapping season in Unit 19A

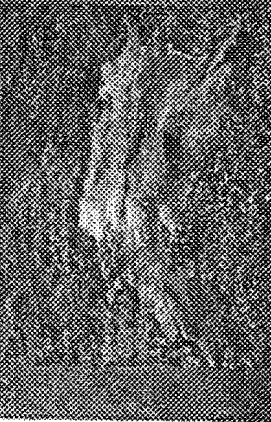






## Salvage

- Hides and skulls
- Meat to satisfy local demand
- Sample collection



## Timeline

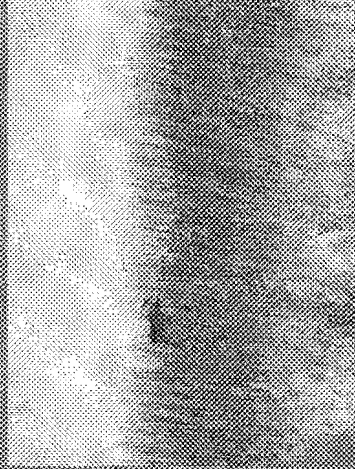
- Two bear removal events, in consecutive years
- The first effort in spring 2013
- Second effort in spring 2014
- The entire predation control implementation plan is due for review during spring 2014

## Proposal 153

Effect of the proposal:  
Require that the RM650 registration permit be distributed throughout the season

Department recommendation:  
No Recommendation

Advisory Committee recommendations:  
McGrath – Do Not Adopt  
CKAC – Do Not Adopt  
SHAC – Do Not Adopt



Proposal #153  
Distribute registration permits during season

Hunts in Units 18 & 23  
– Failed, November 2011

Unit 19D  
– RM650 moose considered now

## Proposal #153

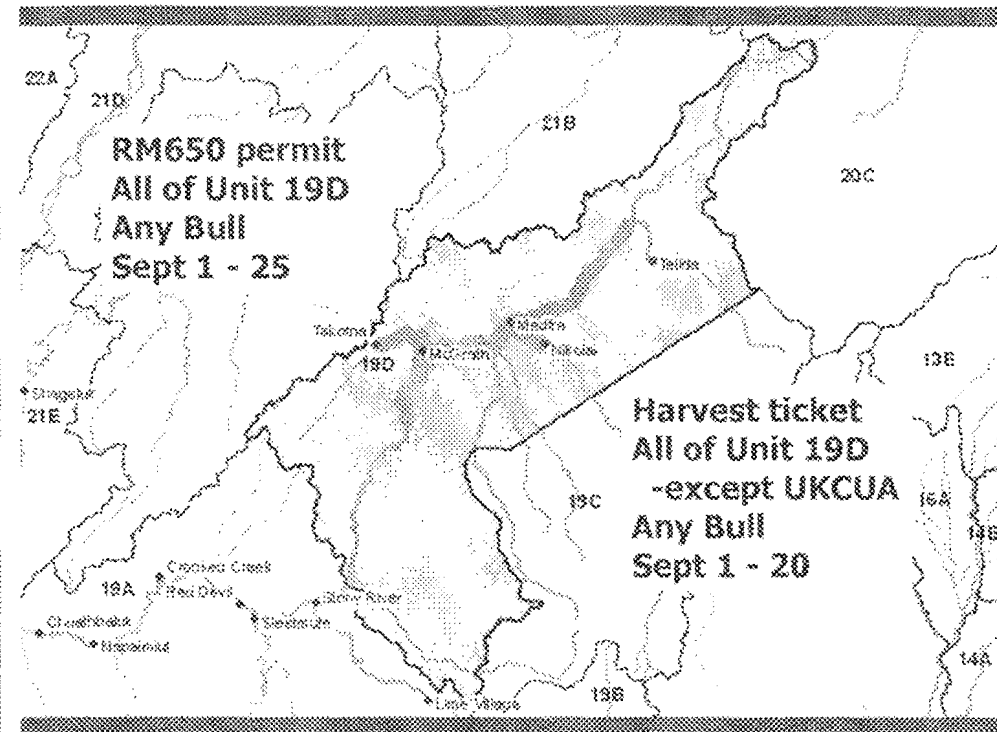
### RM650 Permits:

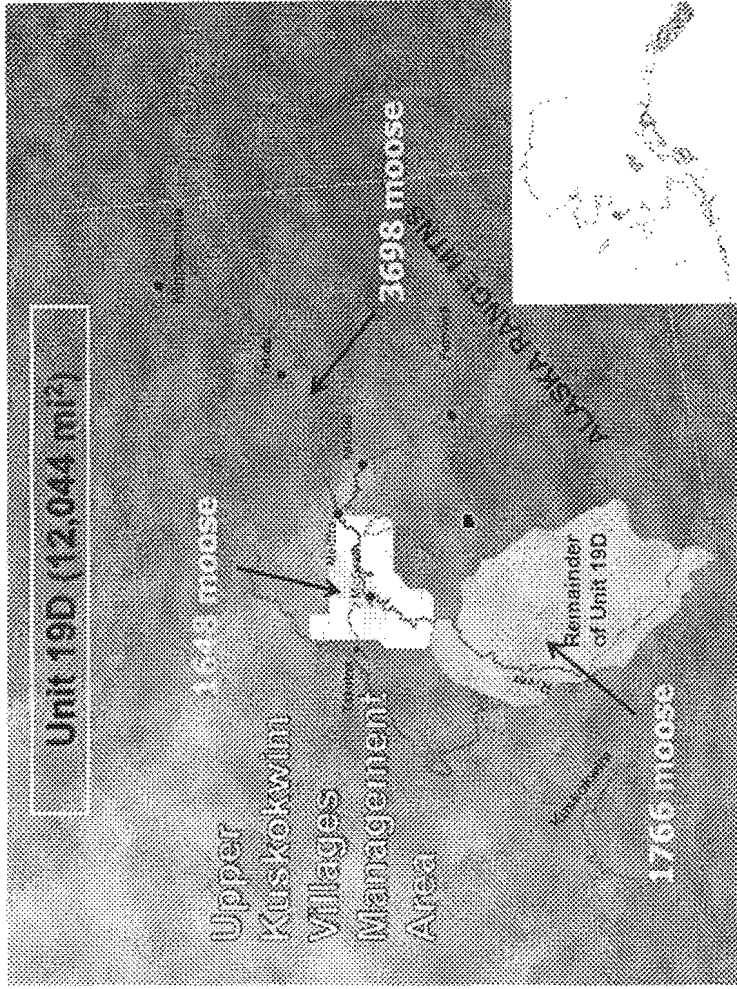
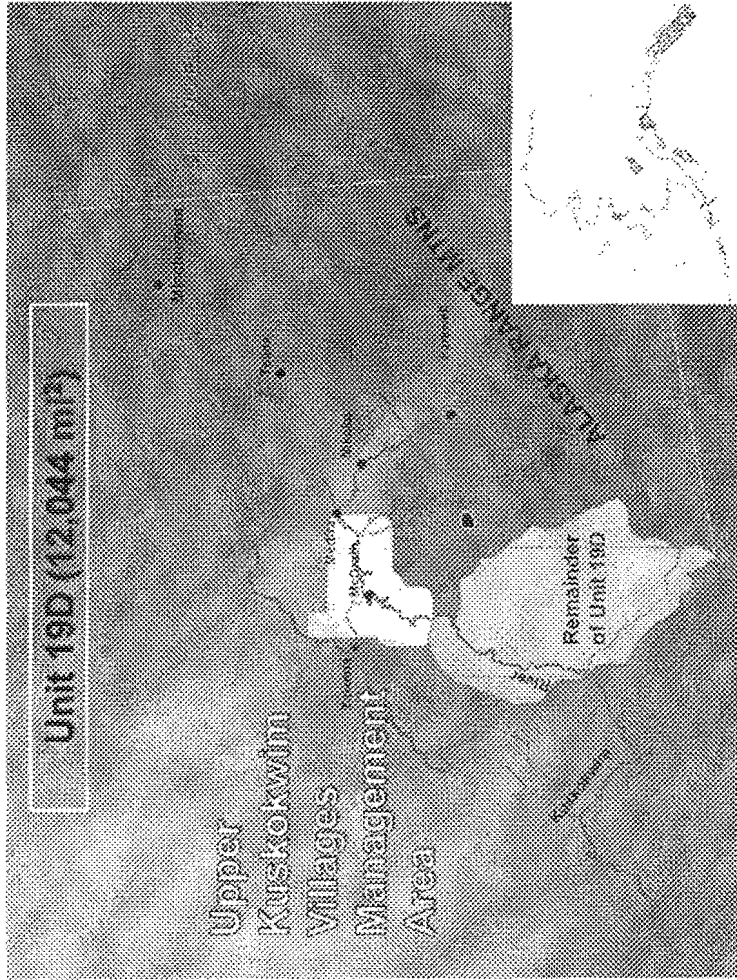
Distributed in Unit 19D villages

- ~July 14–August 20
- About 300 permittees

### Hunt

- Sept. 1–25
- up to 128 bulls harvested





## 19D Moose harvestable surplus

	MMA	19D East outside MMA	19D below Selatna
Population	1,648	3,698	1,766
Harvestable surplus (4%)		~150	~70
Harvestable surplus (6%)	~100		
2011 harvest	~95 - 100	~34 - 39	15 <sup>a</sup>
Unmet surplus	~0 - 5	~111 - 116	~55

<sup>a</sup> Preliminary data

Year	RM650 Harvest	Unit 19D Residents
2001	73	78
2002	98	91
2003	75	82
2004	60	58
2005	71	68
2006	62	58
2007	86	84
2008	103	91
2009	92	77
2010	107	92
2011	128	103

Unit 19D East

Harvest:

Program objective:  
130 - 150 locally



20% of permittees from outside 19D

Year	Upper Kuskokwim Villages MMA
2001	868 (0.8)
2002	
2003	
2004	1192 (1.1)
2005	
2006	1308 (1.2)
2007	1720 (1.5)
2008	1718 (1.5)
2009	1820 (1.6)
2010 <sup>a</sup>	1796 (1.6)
2011 <sup>a</sup>	1648 (1.5)

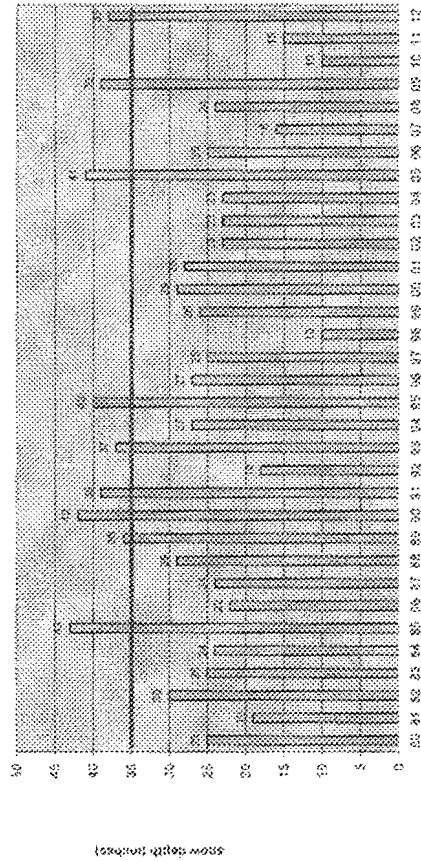
<sup>a</sup> Preliminary data

Year	Upper Kuskokwim Villages MMA
2001	868 (0.8)
2002	
2003	
2004	1192 (1.1)
2005	
2006	1308 (1.2)
2007	1720 (1.5)
2008	1718 (1.5)
2009	1820 (1.6)
2010	1796 (1.6)
2011 <sup>a</sup>	1648 (1.5)

<sup>a</sup> Preliminary data

## April snow depth 1980 thru 2012 (2012 data is for Jan 1, 2012)

April 1 snow depth



page

## Proposal 153

Effect of the proposal:  
**Require that the RM650 registration permit be distributed throughout the season**

Department recommendation:  
**No Recommendation**





# Proposal 154

Effect of the proposal:  
**Reauthorize a TBA winter  
 any moose season in Unit  
 19D**

Department  
 recommendation:  
**Adopt**

Advisory Committee  
 recommendations:  
**McGrath – Adopt**



# Current and Proposed Unit 19 moose seasons:

Area	Res or NR	Permit type	Bag limit	Season
Unit 19D w/in Upper Kuskokwim CUA	Res Res NR	RM650 RM651	1 antlered bull Any moose	Sept 1 – Sept 25 TBA between Feb 1 – 28 No open season
Unit 19D Cheenectnuik and Gagaryah River's except 2 mi from Swift	Res Res Res NR	RM650 RM651 Harvest Harvest	1 antlered bull Any moose 1 antlered bull 1 bull SF50-4	Sept 1 – Sept 25 TBA between Feb 1 – 28 Sept 1 – Sept 20 Sept 1 – Sept 20
Unit 19D Remainder	Res Res Res NR	RM650 RM651 Harvest	1 antlered bull Any moose 1 antlered bull	Sept 1 – Sept 25 TBA between Feb 1 – 28 Sept 1 – Sept 20 No open season

## Current and Proposed Unit 19D moose seasons:

Area	Res or NR	Permit type	Bag limit	Season
Unit 19D w/in Upper Kuskokwim CUA	Res	RM650	1 antlered bull	Sept 1 – Sept 25
	Res	RM651	Any moose	TBA between Feb 1 – 28
	NR			No open season
Unit 19D Cheenesteek and Gagarayah Rivers except 2 mi from Swift	Res	RM650	1 antlered bull	Sept 1 – Sept 25
	Res	RM651	Any moose	TBA between Feb 1 – 28
	Res	Harvest	1 antlered bull	Sept 1 – Sept 20
	NR	Harvest	1 bull SF30-4	Sept 1 – Sept 20
Unit 19D Remainder	Res	RM650	1 antlered bull	Sept 1 – Sept 25
	Res	RM651	Any moose	TBA between Feb 1 – 28
	Res NR	Harvest	1 antlered bull	Sept 1 – Sept 20 No open season

## Unit 19D Any moose hunt details

### Unit 19D

#### Registration permit hunt

- Available in McGrath

#### Residents only

TBA Season: Feb 1 – 28

#### Any moose bag limit

Quota set, early

reporting requirement

Hunt area established  
to target moose in  
areas with high  
densities

- discretionary permit  
authority to limit hunt  
area

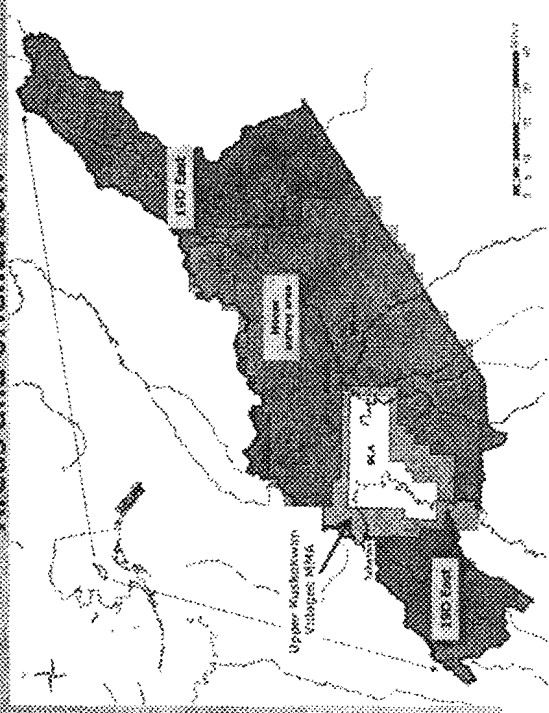
Hunt is held only if

two year average  
twinning rates decline

## Considerations

- 1) Moose numbers have increased
- 2) Harvestable surplus discussion
- 3) Approaching population and harvest objectives
- 4) Habitat measures suggest an any moose hunt option is prudent
- 5) Guidelines for managing growth (2-year avg twinning rates)

## 1) Moose numbers have increased -Areas and orientation



### Moose estimates

Year	UKVMMA (density)	MSA
2001	868 (0.8)	2564 (0.5)
2002		
2003		
2004	1192 (1.1)	2744 (0.5)
2005		
2006	1308 (1.2)	
2007	1720 (1.5)	
2008	1718 (1.5)	3889 (0.7)
2009	1820 (1.6)	
2010	1796 (1.6)	
2011 <sup>a</sup>	1648 (1.5)	

<sup>a</sup> Preliminary data

### Moose estimates

Year	UKVMMA (density)	MSA
2001	868 (0.8)	2564 (0.5)
2002		
2003		
2004	1192 (1.1)	2744 (0.5)
2005		
2006	1308 (1.2)	
2007	1720 (1.5)	
2008	1718 (1.5)	3889 (0.7)
2009	1820 (1.6)	
2010	1796 (1.6)	
2011 <sup>a</sup>	1648 (1.5)	

<sup>a</sup> Preliminary data

## 2) Harvestable surplus

	MMA	19D East outside MMA	19D below Selatna
Population	1648	3698	1766
Harvestable surplus (4%)		~150	~70
Harvestable surplus (6%)	~100		
2011 harvest	~95 - 100	~34 - 39	15 <sup>a</sup>
Unmet surplus	~0 - 5	~111 - 116	~55

<sup>a</sup> Preliminary data

## Composition in UKVMMA

Year	Bulls:	Calves:
2011	100 COWS 33	100 COWS 41



## Harvestable surplus and ANS

- Harvestable surplus in Unit 19D
  - 320
- Share of ANS for 19D
  - 131 – 289 in 19D

3) We are approaching population objectives

19D East POPULATION ESTIMATE AND IM OBJECTIVE

Population Objective	6000-8000
Population Estimate for 19D East (8513 mi <sup>2</sup> )	5346
YEAR	2011



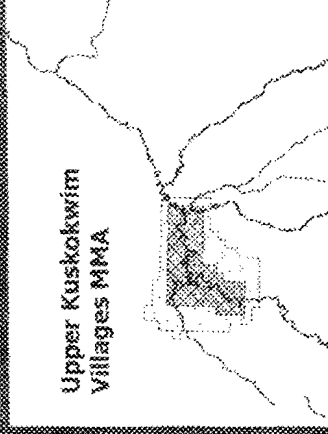
## UNIT 19D East HARVEST AND IM OBJECTIVES

YEAR	IM Harvest Objective	Reported Harvest for 19D East
2011	400 - 600	149



## Population and harvest objectives for Upper Kuskokwim Villages MMA:

- Moose population objective: a minimum of 2500 (2.2 moose/mi<sup>2</sup>)  
2011 estimate: 1648
- Harvest objective: a minimum of 100  
Current: ~95 - 100



#### 4) Habitat measures used to ID carrying capacity

- Browse surveys
- Twinning rates



#### Browse surveys

- 40.5% browse utilization was measured in winter 2008-09

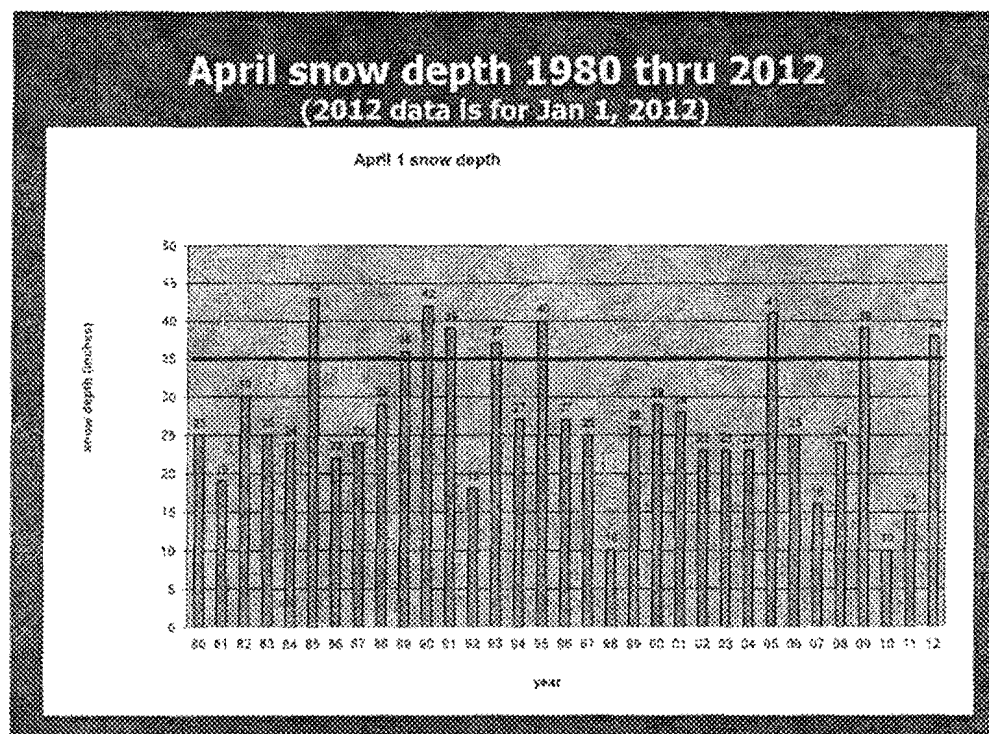




## 5) Guidelines for managing growth (2-year ave twinning rates)

2-year average twinning rates and moose management strategies associated with this measure

2-year ave. Twinning rates	Management strategy
> 25%	Promote rapid growth
20 – 25 %	Slow growth
15 – 20%	Stabilize population density
< 15%	Reduce population density



## Observed twinning rates

Year	Twinning rate
2002	39%
2003	36%
2004	39%
2005	50%
2006	35%
2007	50%
2008	--
2009	26%
2010	29%
2011	37%

2 Year Avg twinning rate is 33%

## Proposal 154 Summary

Effect of the proposal:  
Reauthorize the any moose TBA registration permit moose hunt in Unit 19D

Department recommendation:  
Adopt



END

# Proposal 155

Effect of the proposal:  
**Close resident and nonresident caribou seasons throughout Units 19, 21A, and 21E**

Department recommendation:  
**Do Not Adopt**

Advisory Committee recommendations:  
**SHAC – Do Not Adopt**  
**CKAC – Do Not Adopt**  
**McGrath – Do Not Adopt**  
**GASH – Do Not Adopt**



# Current Unit 19, 21A, and 21E caribou seasons:

Resident or Non Resident	Area	Bag limit	Season
Resident	Units 19A and 19B	2 caribou – no more than 1 bull and only 1 caribou Aug 1 – Jan 31	Aug 1 – Mar 15
Non resident	Units 19A and 19B		No open season
Res and NR	Unit 19C	1 bull	Aug 10 – Sept 20
Res and NR	Unit 19D Nixon Fork drainage	1 bull	Aug 10 – Sept 20
Resident	Unit 19D remainder	1 bull	Aug 10 – Sept 20
Non resident	Unit 19D remainder	1 caribou	Nov 1 – Jan 31
Res and NR	Units 21A and 21E	1 bull	Aug 10 – Sept 20

### Proposed Unit 19, 21A, and 21E caribou seasons:

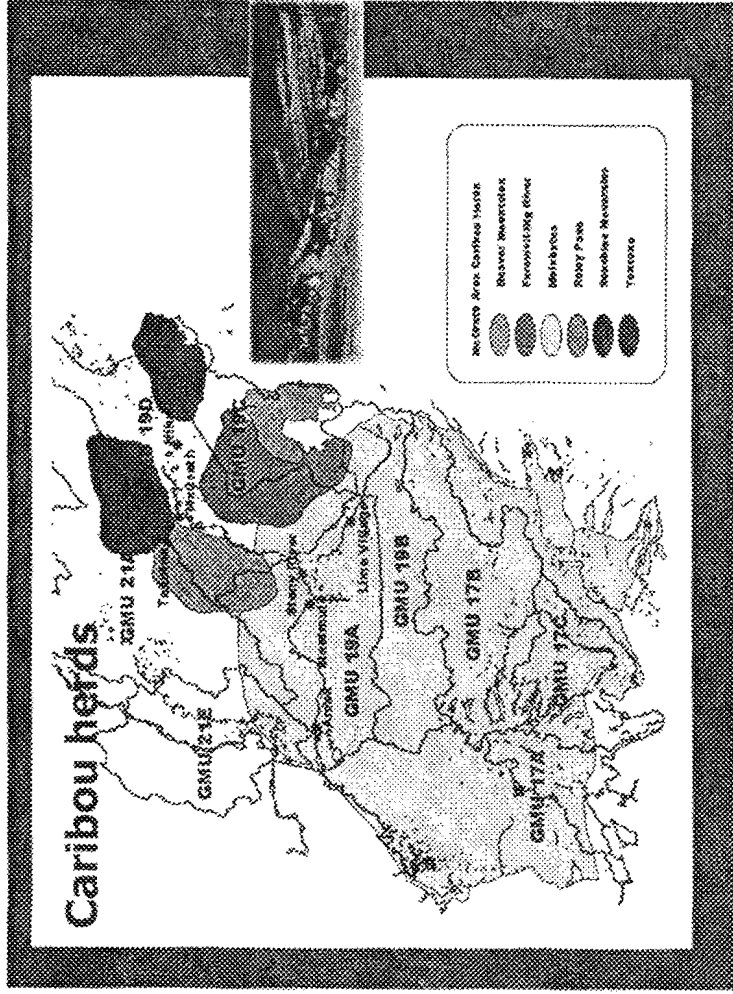
Resident or Non Resident	Area	Bag limit	Season
Resident	Units 19A and 19B		No open season
Non resident	Units 19A and 19B		No open season
Res and NR	Unit 19C		No open season
Res and NR	Unit 19D Nixon Fork drainage		No open season
Resident	Unit 19D remainder		No open season
Non resident	Unit 19D remainder		No open season
Res and NR	Units 21A and 21E		No open season

### Herds mentioned in the proposal:

Resident or Non Resident	Area	Herds affected	Mentioned in proposal?
Resident	Units 19A and 19B	Mulchatna	No
Non resident	Units 19A and 19B	Mulchatna	No
Res and NR	Unit 19C	Mulchatna Tonazona Rainy Pass Big River - Farewell	No No No Yes
Res and NR	Unit 19D Nixon Fork drainage	Beaver-Sunshine	Yes
Resident	Unit 19D remainder	Mulchatna Tonazona Big River - Farewell	No No Yes
Non resident	Unit 19D remainder	Mulchatna Tonazona Big River - Farewell	No No Yes
Res and NR	Units 21A and 21E	Beaver-Sunshine	Yes

### Herds mentioned in the proposal:

Resident or Non Resident	Area	Herds affected	Mentioned in proposal?
Resident	Units 19A and 19B	Mulchatna	No
Non resident	Units 19A and 19B	Mulchatna	No
Res and NR	Unit 19C	Mulchatna	No
		Tonzana	No
		Rainy Pass Big River - Farewell	No Yes
Res and NR	Unit 19D Nixon Fork drainage	Beaver-Sunshine	Yes
Resident	Unit 19D remainder	Mulchatna	No
		Tonzana	No
		Big River - Farewell	Yes
Non resident	Unit 19D remainder	Mulchatna	No
		Tonzana	No
		Big River - Farewell	Yes
Res and NR	Units 21A and 21E	Beaver-Sunshine	Yes



## Beaver-Sunshine Herd Surveys

Year	Total caribou
2007	96
2009	158
2011	434

Total number of Beaver-Sunshine caribou estimated at 500 – 750

## Big River – Farewell estimate

- 500 – 750 caribou in Big River – Farewell herd based on:
  - Opportunistic sightings similar in size to Beaver-Sunshine herd observations
  - Reports from hunters, guides, and pilots
- Fewer caribou than a decade ago
  - Coincides with decline in MCH
  - Conservative hunt strategies

## Caribou harvest

Harvestable surplus: 15 – 30

Regulatory year	Big River – Farewell	Beaver – Sunshine
2006-07	13	0
2007-08	9	0
2008-09	5	1
2009-10	9	0
2010-11	10	1

## Intensive Management considerations

- Negative IM findings under 5 AAC 92.108.
- For small herds including Beaver, Farewell/Big River, Rainy Pass, Sunshine Mountain



## **ANS considerations**

**ANS for Beaver-Sunshine is 5 caribou**

- Reduced from 30 at 2008 BOG meeting
- Harvestable surplus of 15 – 30 exceeds ANS
- No Tier II implications

## **ANS considerations**

- Rainy Pass herd (500 – 700)
- Big River – Farewell herd (500 – 750)
- Harvestable surplus for these two herds combined is 30 – 60
- ANS for Big River – Rainy Pass caribou is 50 – 70

### Big River-Farewell and Rainy Pass harvests

Average harvest: 20

Average resident harvest: 11

Harvestable surplus: 30 – 60

ANS: 50 – 70

Reg year	Big River – Farewell		Rainy Pass		Total hunters	
	Res	NR	Res	NR	Res	NR
2006-07	10	3	5	3	53	26
2007-08	7	2	8	4	54	21
2008-09	2	3	7	4	42	28
2009-10	3	6	6	6	39	26
2010-11	4	6	5	7	32	23

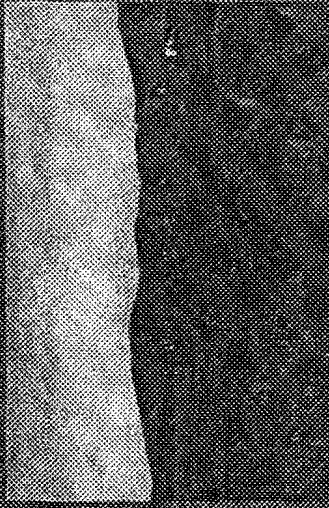
## Proposal 155 Summary

Effect of the proposal:

Close all caribou seasons in Units 19, 21A and 21E

Department recommendation:

**Do Not Adopt**



# Proposal 156

**Effect of the proposal:**  
Close nonresident caribou seasons in Units 19C and 19D

**Department recommendation:**

**No recommendation**

**Advisory Committee recommendations:**

**SHAC – Do Not Adopt**

**CKAC – Do Not Adopt**

**McGrath – Do Not Adopt**



## Current Unit 19C and 19D caribou seasons:

Resident or Non Resident	Area	Bag limit	Season
Res and NR	Unit 19C	1 bull	Aug 10 – Sept 20
Res and NR	Unit 19D, Nixen Fork drainage	1 bull	Aug 10 – Sept 20
Resident	Unit 19D remainder	1 bull 1 caribou	Aug 10 – Sept 20 Nov 1 – Jan 31
Non resident	Unit 19D remainder	1 bull	Aug 10 – Sept 20

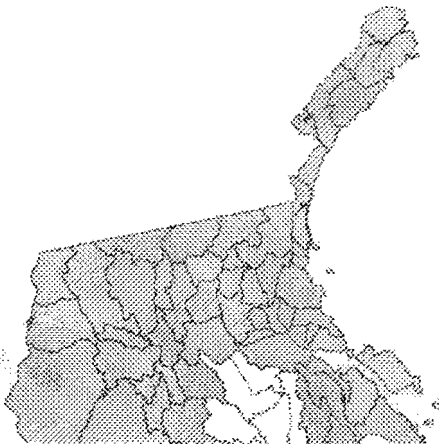
### Proposed Unit 19C and 19D caribou seasons:

Resident or Non Resident	Area	Bag limit	Season
Res	Unit 19C	1 bull	Aug 10 – Sept 20
Non resident	Unit 19C		No open season
Res	Unit 19D Nixon Fork drainage	1 bull	Aug 10 – Sept 20
Non resident	Unit 19D Nixon Fork drainage		No open season
Resident	Unit 19D remainder	1 bull 1 caribou	Aug 10 – Sept 20 Nov 1 – Jan 31
Non resident	Unit 19D remainder		No open season

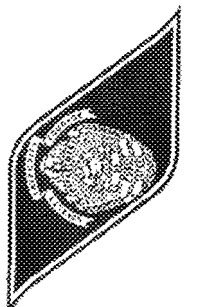
### Herd mentioned in the proposal:

Resident or Non Resident	Area	Herds affected	Mentioned in proposal?
Res and NR	Unit 19C	Mulchatna Tonzona Rainy Pass Big River - Farewell	No Yes No No
Res and NR	Unit 19D Nixon Fork drainage	Beaver-Sunshine	No
Resident	Unit 19D remainder	Mulchatna Tonzona Big River - Farewell	No Yes No
Non resident	Unit 19D remainder	Mulchatna Tonzona Big River - Farewell	No Yes No

# h Area




Biologist: Roger Seavoy  
 Biologist: Joshua Palmer  
 Biologist: Carl Eggleston



## AK Wildlife Troopers:

- John Groover, (recently retired) McGrath
- Art Cummings, Aniak
- vacant, St. Marys
- Mike Cresswell, Bethel



- McGrath Area
- Central Inland
- Eastern
- Fairbanks
- Ketchikan
- Kotzebue Sound
- Pitmegea
- Yukon

RC 76

Proposals  
 131  
 153 - 156  
 160

## Tonzona estimate

- 500 – 750 caribou in Tonzona herd based on:
  - Opportunistic sightings similar in size or larger than Beaver-Sunshine herd observations
  - Reports from hunters, guides, trappers, and pilots
- Fewer caribou than a decade ago
  - Conservative hunt strategies

## Tonzona harvest

Harvestable surplus: 15 – 30

Regulatory year	Residents	Nonresidents
2006-07	0	1
2007-08	1	0
2008-09	0	1
2009-10	0	2
2010-11	1	1

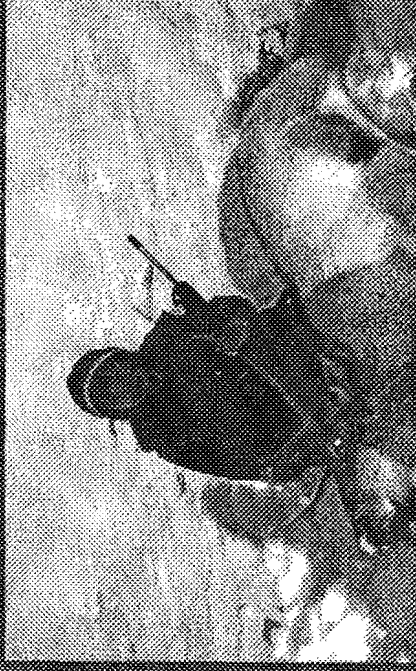
## Intensive Management considerations

- Negative IM findings under 5 AAC 92.108 for the Tonzona herd.



## ANS considerations

- ANS for Tonzona herd is 20 – 30
- Harvestable surplus is 15 – 30



### Tonzona harvests

Average harvest: 1

Average resident harvest: <1

Harvestable surplus: 15 – 30  
ANS: 20 – 30

Regulatory year	Harvest		Hunters	
	Res	NR	Res	NR
2006-07	0	1	0	5
2007-08	1	0	2	2
2008-09	0	1	1	1
2009-10	0	2	1	2
2010-11	1	1	2	5

## Proposal 156 Summary

Effect of the proposal:

Close Nonresident  
caribou seasons in Units  
19C and 19D

Department  
recommendation:

No recommendation



## Proposal 160

Effect of the proposal:

Extend the Unit 19 lynx trapping season through March 31

Department recommendation:

Adopt

Advisory Committee recommendations:

SHAC – Adopt

CKAC – Adopt

McGrath – Adopt



## Unit 19

### Current vs. Proposed seasons:

- Current lynx trapping season: Nov 1 – Feb 28 (or 29)
- Proposed lynx trapping season: Nov 1 – Mar 31
- Aligned with adjacent Units 17, 18, and potentially 21

## Unit 19 Lynx Harvest data



## Recent harvest

- RY06 – RY10
  - between 33 – 118 lynx taken
  - 0.2 – 3.2 lynx taken per 1000 mi<sup>2</sup>
- Low harvest density – many untrapped areas

## Other considerations

- Trapper effort decreases after Feb when marten season closes
- Similar trap techniques used during other open seasons in March
- Lynx caught incidentally in March could be retained by the trapper
- Few additional lynx are likely to be taken

## Proposal 160 Summary

- Effect of the proposal:  
extend the Unit 19 lynx trapping season through March
- Department recommendation:  
Adopt



RC # 77

**Proposal 157**

- **Effect:** Amend Mulchatna Caribou Herd Predation Management Plan to include GMUs 19A & B
- **Issue:** Expand wolf control into area of GMU 19A & B used by Mulchatna caribou for calving

Department position: Adopt

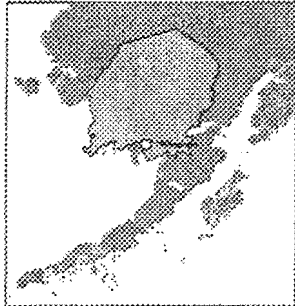

Prop. 157

**BOG - March, 2011**

- Passed amended Proposal 119 and adopted MCH predation management plan to reduce wolf predation on Mulchatna caribou.
- 119 amended to include only GMU 17B&C, and 9B (other parts of MCH range not in call for proposals)
- Proposal submitted to include 19A&B for Region 3 BOG meeting

Prop. 157

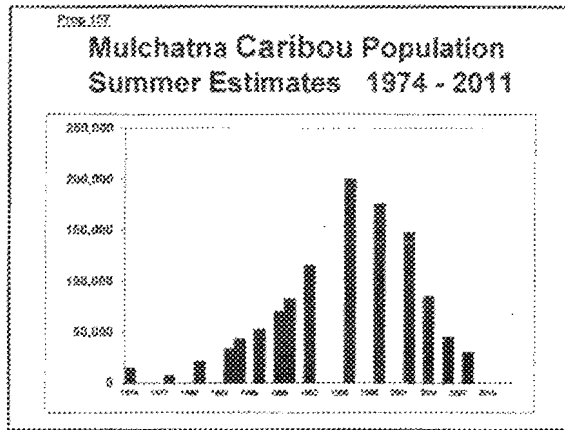
**Mulchatna Caribou Herd (MCH)**

Population: 38,308 – 40,808 (2008)

Status: Stable?7

Reported Harvest: 488



Prop. 157

**Intensive Management Steps**

Statutory Considerations: Has the Board established population and harvest objectives?

Population	Harvest
30,000 – 80,000	2,400 – 8,000

Prop. 157

**Intensive Management Steps**

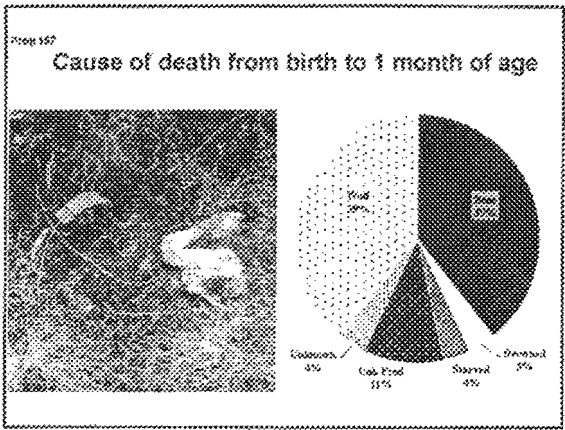
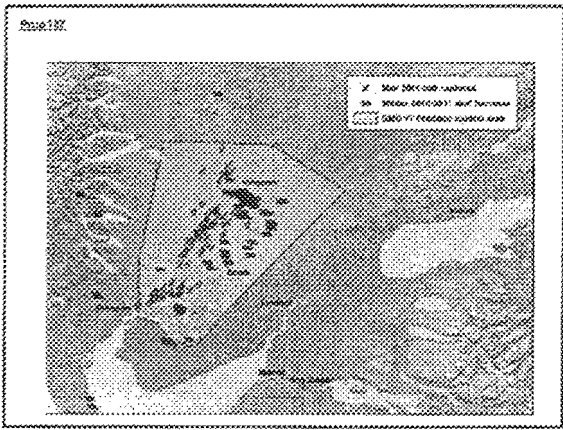
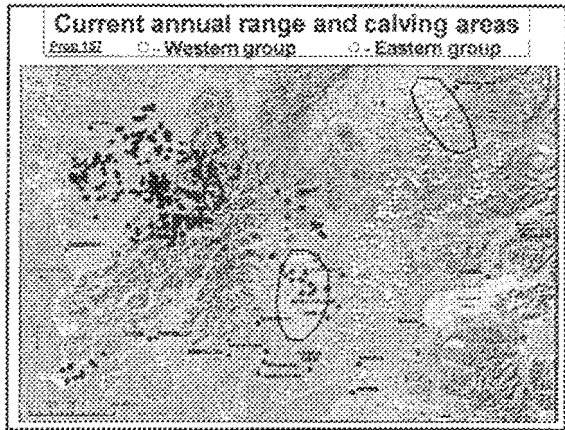
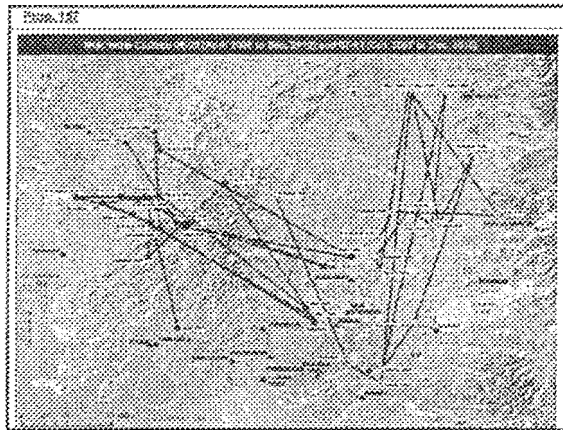
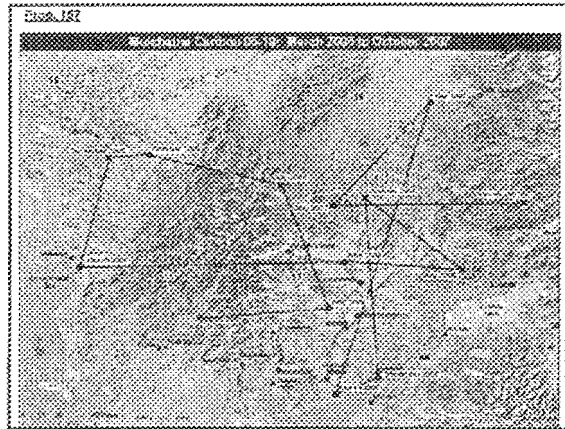
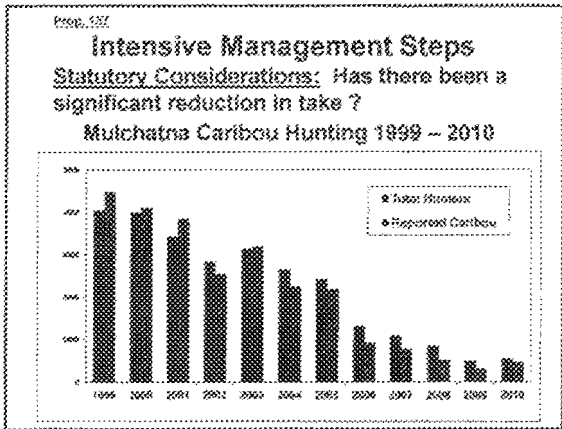
Statutory Considerations: Have the harvest objectives been met?

Harvest Obj	2006 – 2010 ave*
2,400 – 8,000	595

No

\*Note: Reported Harvests from general harvest cards. Likely considerable unreported harvest, especially on western side of herd's range.

Range-wide reported hunter numbers declined from 1,312 to 493 during this period. Reported harvest declined from 921 caribou to 369.



Prop 157

### 2011 MCH calf mortality study summary

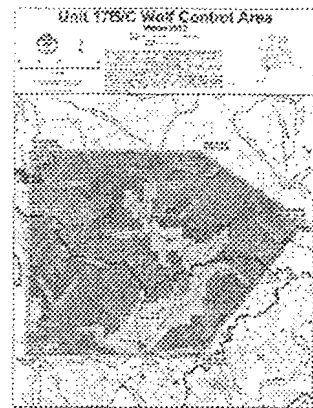
Calving ground:	Southern	Northern
Calves collared:	81	7*
Survival		
2 weeks	60%	17%*
6 months	44%	0%*

\* Sample size too small to make meaningful inferences

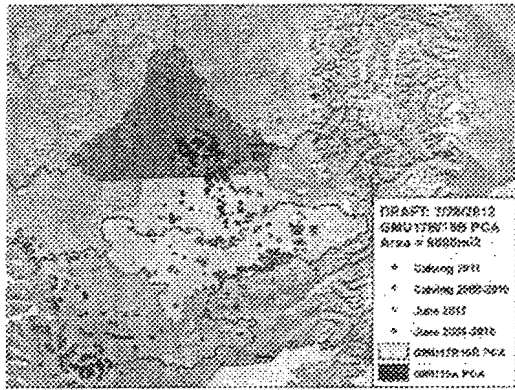
Prop 157

Aerial wolf control -  
Mar. 1 - April 30, 2012

34 Pilot permits  
approved



Prop 157



Prop. 157

Nushagak F & G Advisory Committee,

Mar. 2, 2012

"Support Proposal 157: B - 0"

### Proposal 158

- Effect: Implement a predator control plan for the range of the Mulchatna Caribou Herd
- Issue: Insufficient number of caribou
- Department position: Take no action

Prop. 158

Nushagak F & G Advisory Committee,

Mar. 2, 2012

"Take no action based on their vote for  
Proposal 157"

## Proposal 159

- Effect: Change the Intensive Management population objective for the Mulchatna Caribou Herd
- Issue: IM objective too low
- Department position: Do not adopt

Doc. 159

## Spring 2009 Board of Game meeting

### Changed Population Objective:

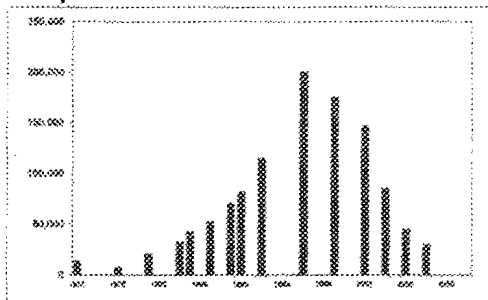
Originally: 100,000 – 150,000 caribou

Present: 30,000 – 80,000 caribou

Proposed: 100,000 – 150,000 caribou  
(also proposed and not adopted during Spring 2011 meeting)

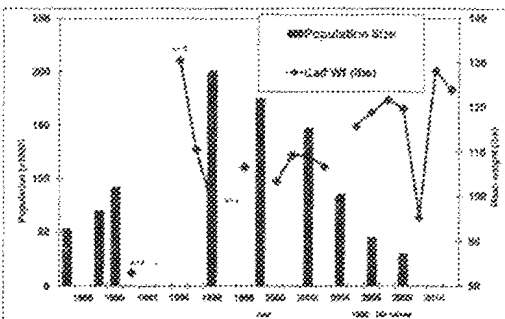
Doc. 126

## Mulchatna Caribou Population Estimates 1974 - 2011



Doc. 126

## MCH Minimum Summer Population and Calf Weights at 10 Months Old



Page 159

Nushagak F & G Advisory Committee,

Mar. 2, 2012

"Take no action based on their vote for Proposal 157"

## Proposal 159

- Effect: Change the Intensive Management population objective for the Mulchatna Caribou Herd
- Issue: IM population objective too low
- Department position: Do not adopt