

# Intensive Management briefing



March 2022

1

1

# Presentation outline

- Review of handout (focus on prey harvest)
- Prey abundance response in IM programs
- Large predator kill before and during IM

IM Update March 2022

2

2

1 page handout summary

AS 16.05.255 (e) (g) and (k) required the Board of Game to:

➤ Set prey population and harvest objectives in areas or for herds important to hunting,

➤ Consider active management of predation and habitat when prey abundance and harvest are below IM objectives and harvest restrictions are proposed, and

➤ Consider feasibility based on science, land ownership, and subsistence uses (e.g., effect of increased number of hunters or more hunting opportunity on local users) before authorizing programs.

Ways to evaluate the efficacy of an active IM program:

➤ Achieving lower IM objectives for prey abundance and harvest

✓ Changes in prey population abundance (intent: positive)

✓ Changes in prey harvest (intent: positive)

✓ Reduced effort for harvest (intent: less time or money)

IM Update March 2022

3

3

Intensive Management programs for caribou or moose in Alaska, Regulatory Years 2003-2021

- Game Management Unit (GMU)
- Black bear control
- Black bear and brown bear control
- Brown bear control
- Wolf control maximum active area
- Area authorized for predator control
- Highways

10% of AK land area had active predator control at some time during spring 2004-spring 2021

0 50 100 200 300 400 Miles

10 February 2022

4

2

1 page handout summary

Monitoring in most IM programs was designed to determine whether prey increased. Often the monitoring design was insufficient to separate the effect of predator control from that of wildland fires, winter severity, or prey movements that can also affect prey abundance.

Observations during regulatory years 2003 2018:

➤Prey harvest tended to increase where prey abundance increased substantially, but only programs on or near the road system achieved the lower IM harvest objectives (Fortymile caribou, Units 13 and 16 moose).

➤Wolf control averaged 24% of wolf kill in 11 IM program areas and was 12% of total wolf kill statewide.

➤Bear control (both species) averaged <4% of total kill in 4 IM program areas and <2% of total bear kill statewide.

IM Update March 2022

5

5

1 page handout summary

IM program data through RY2020	Years of active predator control (RY started)	Prey species	Bear control also	Prey population		Prey harvest (7 year annual averages before and after IM so all programs have same before and after duration)					
				Meet lower IM objective?	Numbers increase?	Meet lower IM objective?	Harvest increase?	Average 7 years before IM	Average 7 years after IM started	Average last 3 years	
GMU 13	13 (2003)	Moose	No	Yes	Yes	Yes	Yes	709	731	815	
GMU 15A	3 (2013)	Moose	No	No	No	No	No	73	45	52	
GMU 16	13 (2004)	Moose	Yes	Yes	Yes	Yes	Yes	455	347	566	
GMU 19A <sup>a</sup>	16 (2004)	Moose	Yes	No	Yes <sup>b</sup>	No	Yes <sup>b</sup>	101	84	112	
GMU 19D <sup>a</sup>	17 (2003)	Moose	Yes	Yes <sup>c</sup>	Yes	No	Yes	96	106	140	
GMU 20E <sup>d</sup>	14 (2004)	Moose	Yes	No	Yes	No	Yes	138	159	214	
GMU 24B	3 (2012)	Moose	No	No	Yes	No	No	33	35	31	
Fortymile <sup>d</sup>	14 (2004)	Caribou	No	Yes	Yes	Yes	Yes	533	925	4191	
Mulchatna <sup>a</sup>	10 (2011)	Caribou	No	No	No	No	No	829	275	131	
N AK Peninsula	4 (2011)	Caribou	No	No	Yes	No	Yes	3	73 <sup>e</sup>	71	
S AK Peninsula	3 (2007)	Caribou	No	No	Yes	No	Yes	67	13 <sup>e</sup>	56	

<sup>a</sup> Active 2021; <sup>b</sup> no increase in 19A East predator control area, likely moose immigration from Unit 18 into 19A West; hunting closed 2006 2018 in 19A East; <sup>c</sup> exceeded upper IM objective; <sup>d</sup>same predator control area; <sup>e</sup> following 6 7 years of closed hunting.

IM Update March 2022

6

6

### Evaluating change in prey abundance in IM areas

- Change in prey abundance after predator control
  - Degree of predator reduction (effectiveness)
  - Concurrent ecological factors (weather, wildland fire, animal movements) and hunting closures

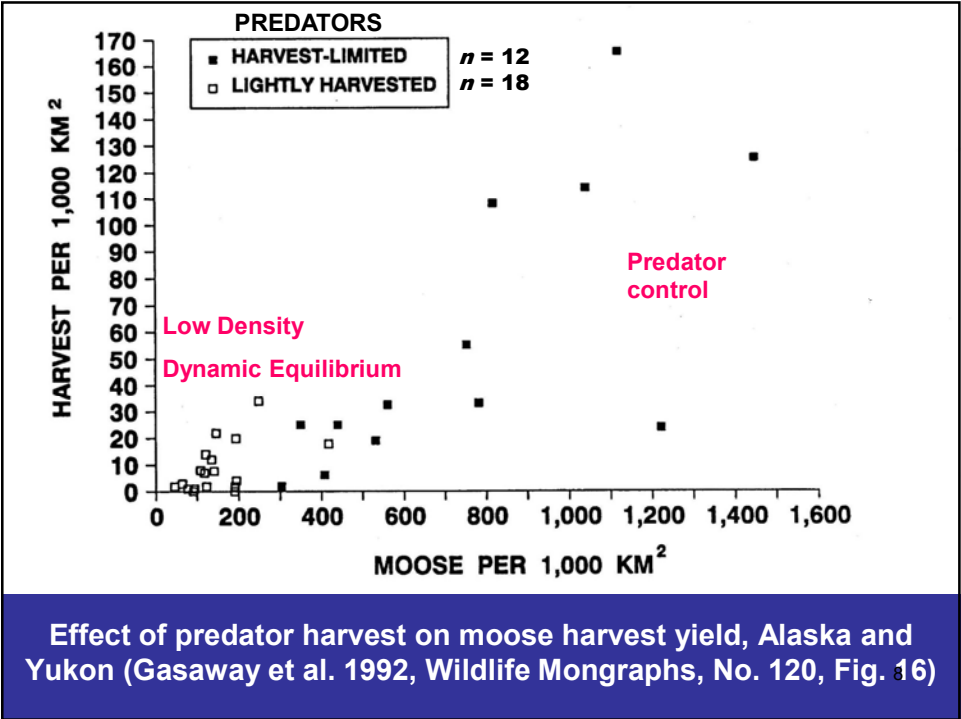
Population objective = harvestable surplus (DWC role)

↓

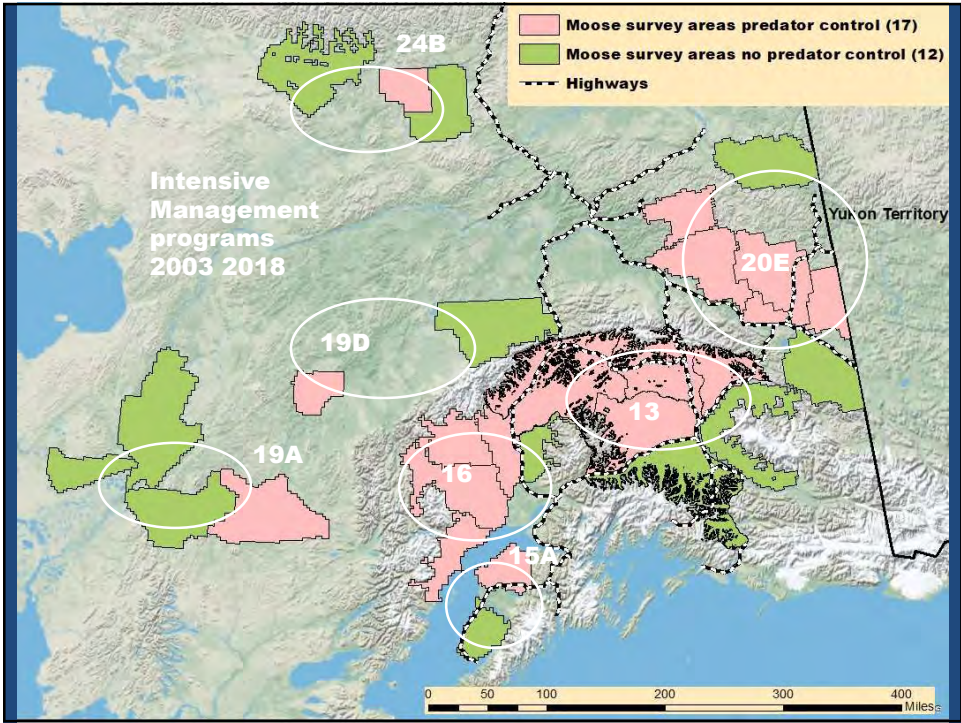
Harvest objective = degree and allocation of use (BOG)

IM Update March 20227

7



8



9

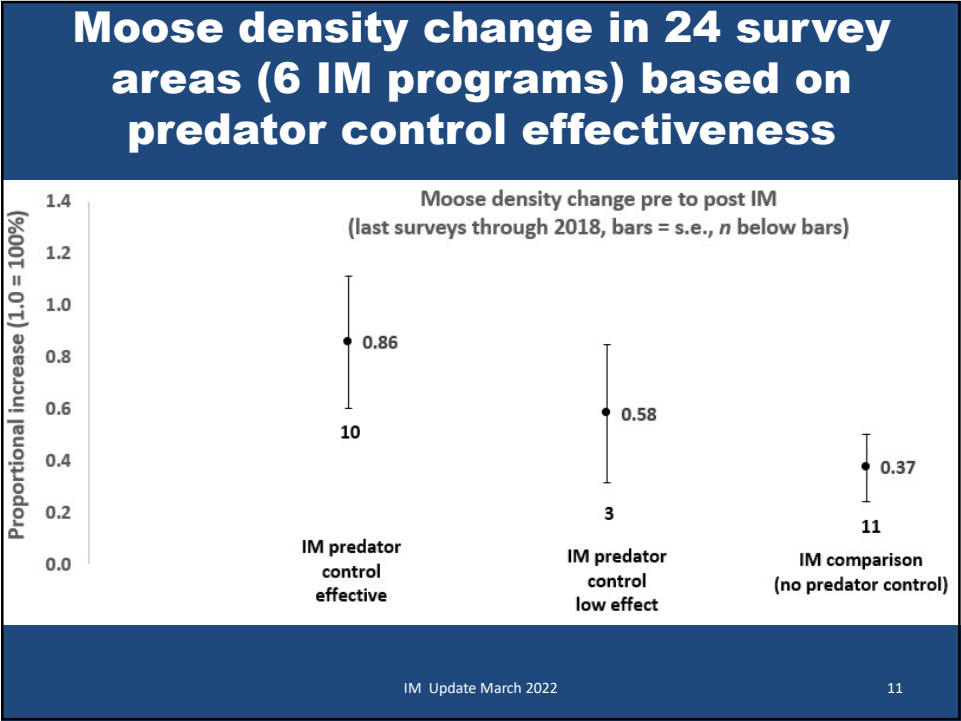
### Prey observations in IM programs

- Factors associated with substantial prey increase
  - Effectively reduce >1 predator: *Unit 19D\* moose (but no response 19A East moose)* *\*Wildland fire*
  - Effectively reduce wolves, maintain “high” bear harvest: *Fortymile caribou, Unit 13, 16, 20E\* moose*
  - Effectively reduce wolves: *SAP caribou\**, *\*Wolf harvest increased during & after control*
- Factors associated with moderate prey increase
  - Effectively reduce wolves: *NAP caribou\**
  - Effectively reduce wolves but not bears: *Unit 24B moose*
- Factors associated with no prey increase
  - Ineffective wolf reduction (area too small or public ineffective): *Mulchatna caribou, Unit 15A moose*
- Comparison areas without predator control (moose)
  - Most starting at <1.1/mi<sup>2</sup> remained <1.1/mi<sup>2</sup> (Low Density Dynamic Equilibrium)
  - 2 sites increased to >1.1 /mi<sup>2</sup> (mild winters, possibly immigration from Unit 18): *19A West, 21E*

IM Update March 2022

10

10



11

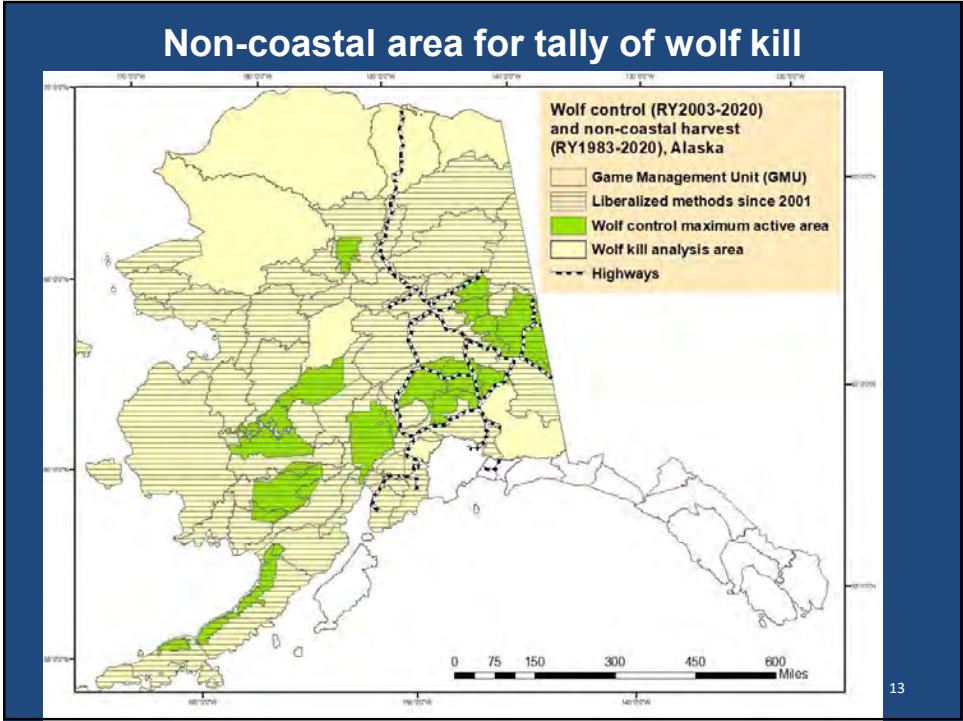
### Large predator kill before and during IM

- **Kill by species and method 1983 2020**
  - Consistent data structure for hide sealing records (subunit resolution)
  - Post ANILCA land ownership (regulations/policy)
  - Reconcile harvest reporting and sealing black bears 2009 2018
  - Estimate unique individuals sealing hides each RY
  - No estimate of predator hunter or trapper population
- **Focus on non-coastal region that contained all predator control programs and where predator harvest also liberalized over time (described in regulations and BOG predator policies)**

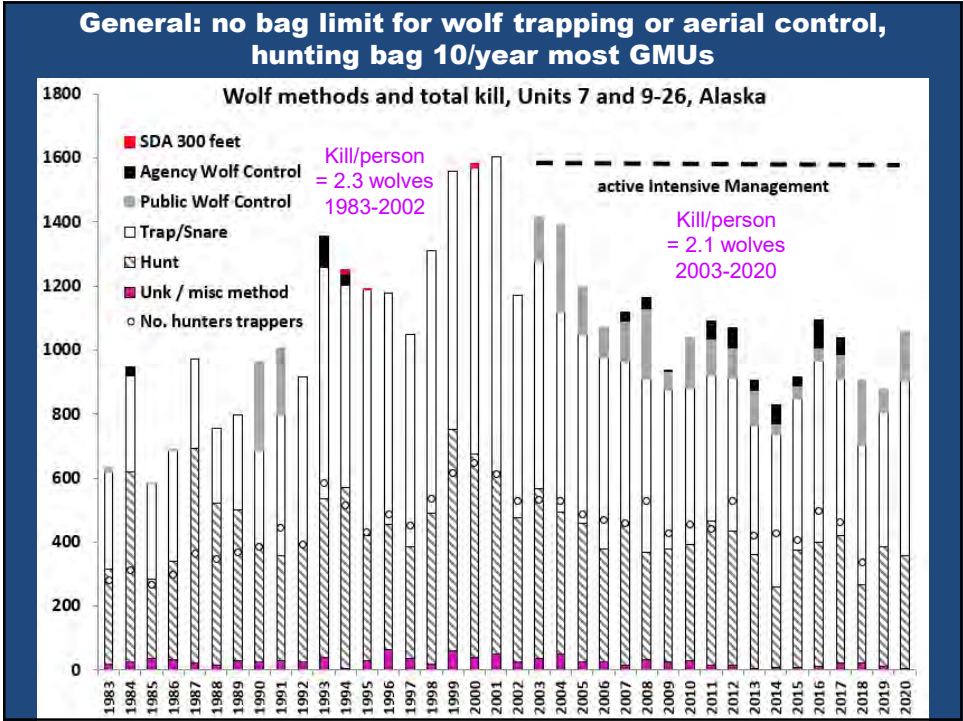
IM Update March 2022 12

12

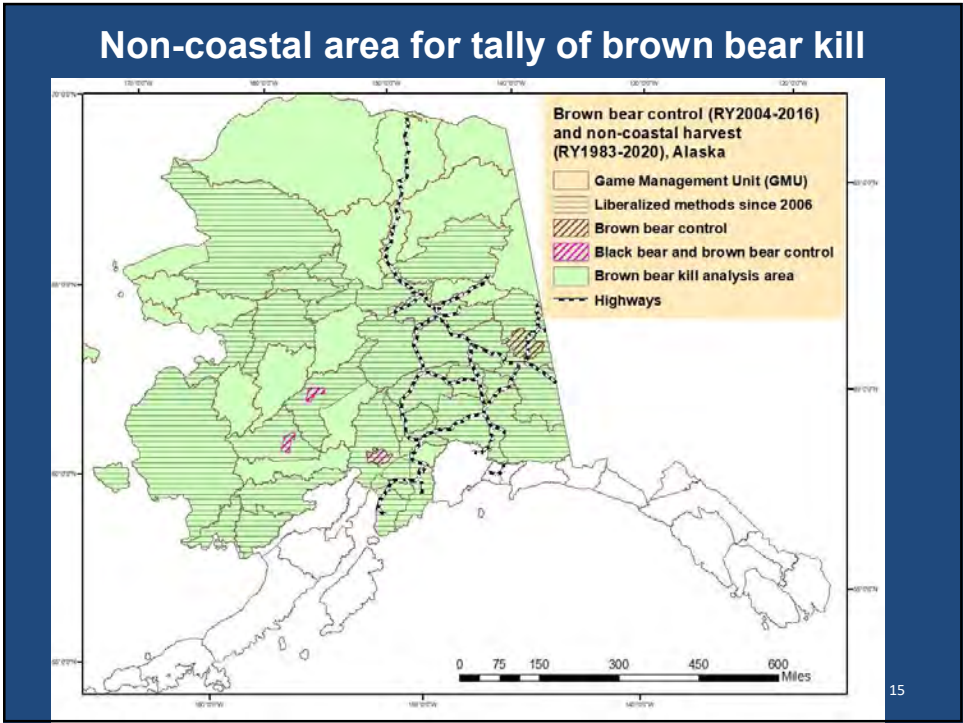




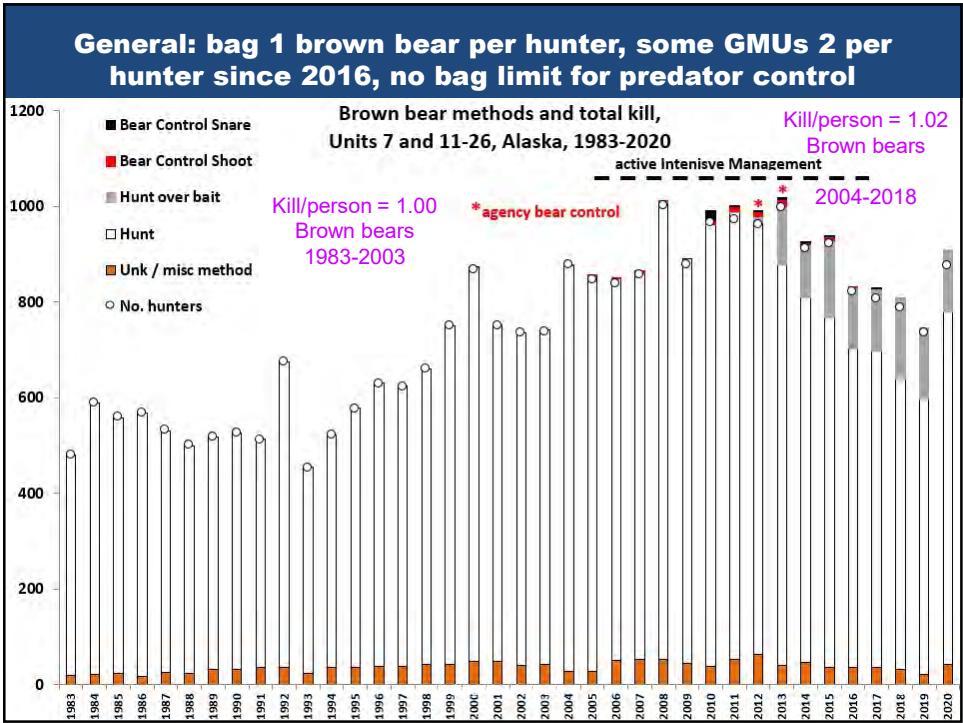
13



14

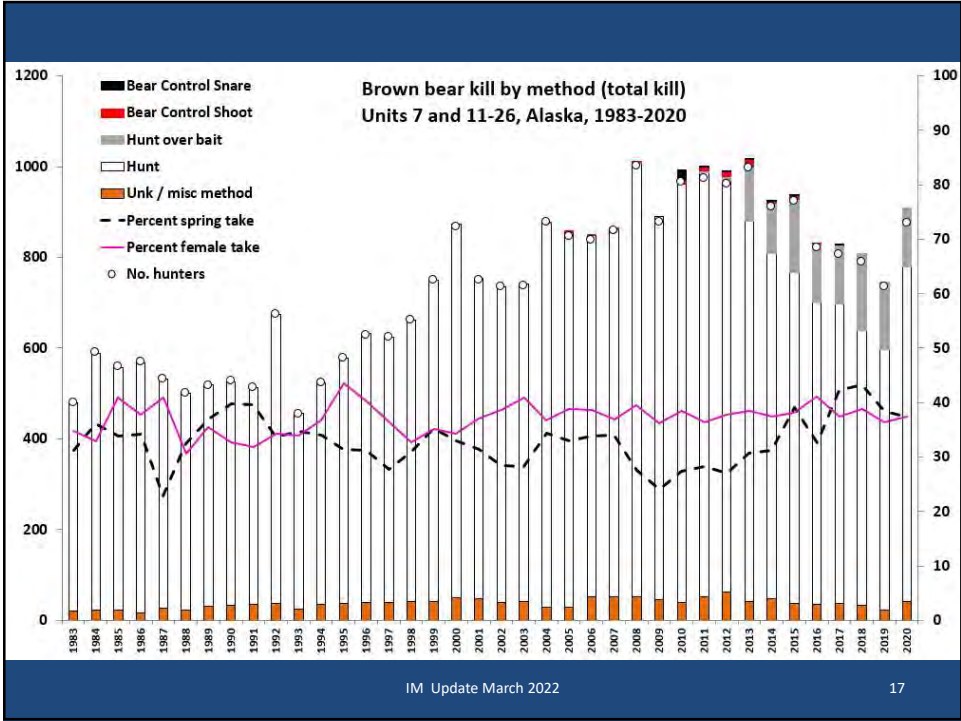


15

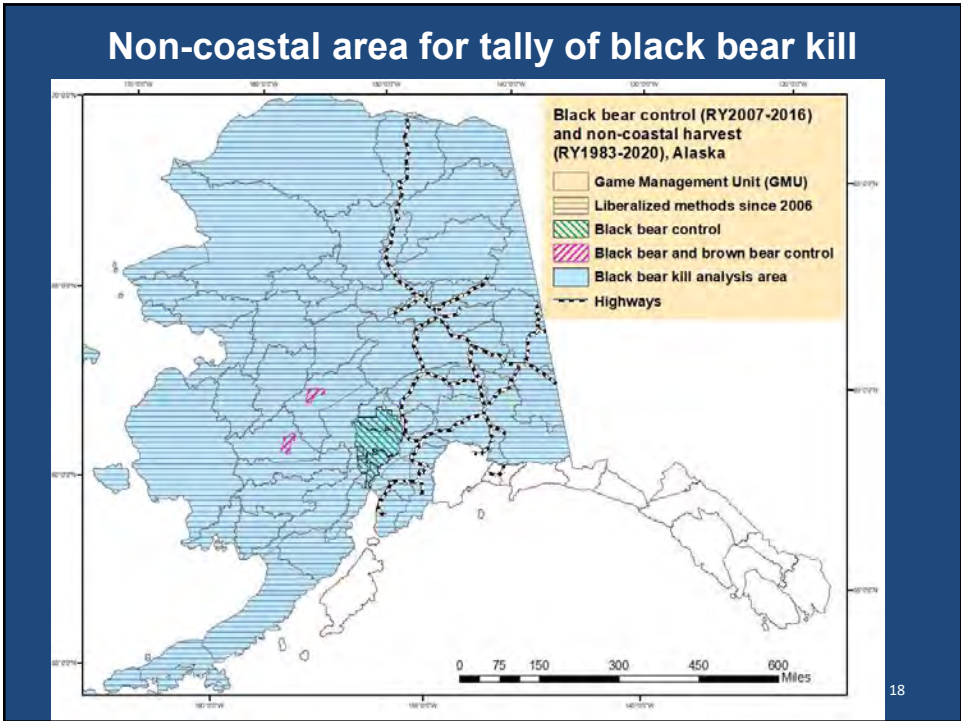


16

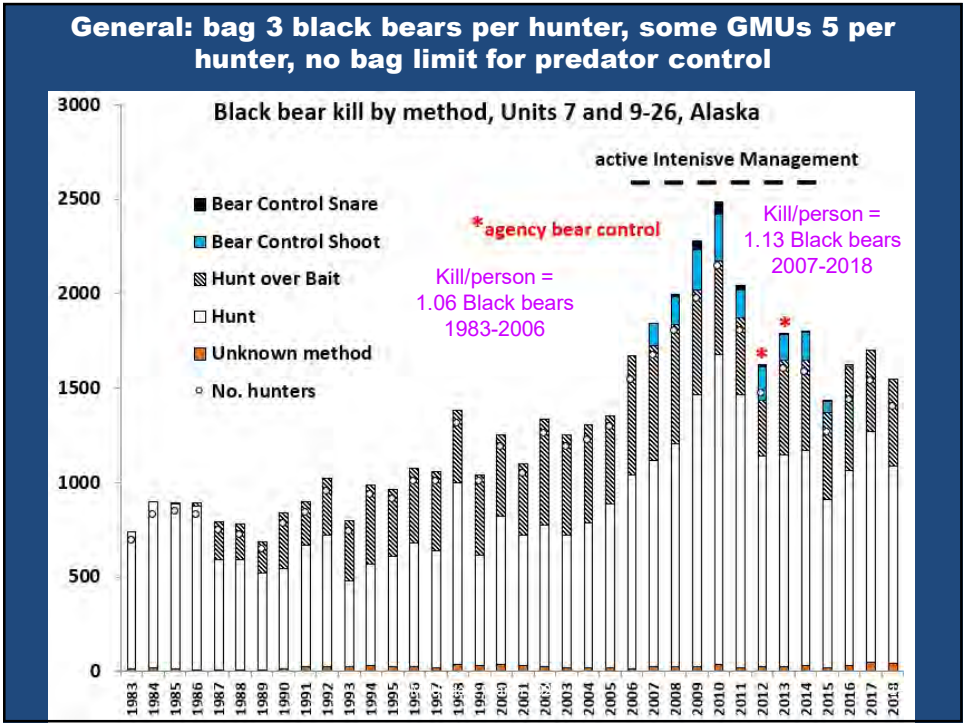




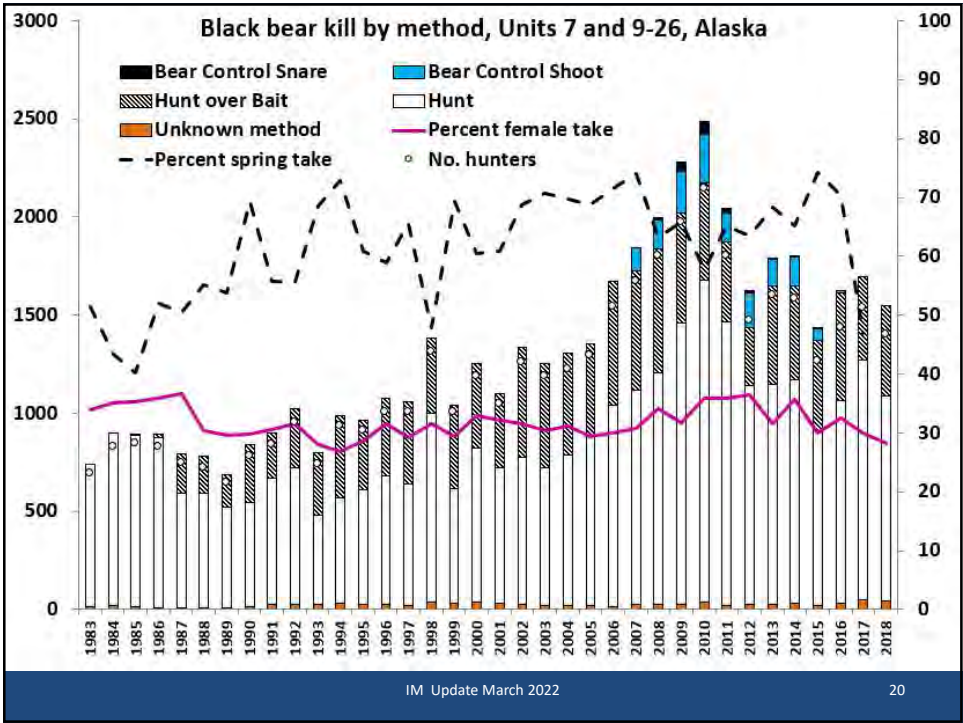
17



18



19



20

### Trends in large predator kill at broad scale

- **Caution interpreting regional data: Sustained Yield is evaluated for predator populations at GMU scale**
- **Little change in kill per person, pre vs. post IM, so total kill corresponds to number of people sealing hides**
  - **Peak take of wolves 2000, prior to lethal IM**
  - **Peak take of brown bears 2010-13, black bears 2010**
- **Possible reasons for recent decline in number sealed despite increased harvest opportunity**
  - **Regional decline in sealing rate unlikely because hide shipping or sale requires locking seal**
  - **Regional decline in predator abundance unlikely based on monitoring evidence at GMU scale**
  - **Regional decline in hunter/trapper motivation (cost, effort)**

IM Update March 2022

21

21

### Predator population dynamics in IM areas

- **Black bears reduced 96% around McGrath (19D) returned to pre treatment abundance 4-6 years after live translocation by agency (Keech et al. 2014)**
  - **Wolves reduced 82% around Allakaket (24B) returned to pre treatment abundance by 3 years after end of lethal wolf control by agency**
  - **Spatial pattern of predator take varies within GMUs by habitat quality, public access, land ownership (source-sink dynamics across large landscapes)**
  - **Area biologists incorporate agency and public observations, DLP, nuisance complaints, other factors in sustained yield judgments**
- (end of biological update)**

IM Update March 2022

22

22

## **Department position on Intensive Management**

**The Department will continue to actively manage for sustained yield using many tools, including IM**

**IM helps provide opportunity to harvest wildlife and provide food for Alaska residents**

**The Department will continue to implement Board approved IM programs through our IM Protocol**

**The Department is committed to IM work and following the IM law**

IM Update March 2022

23