

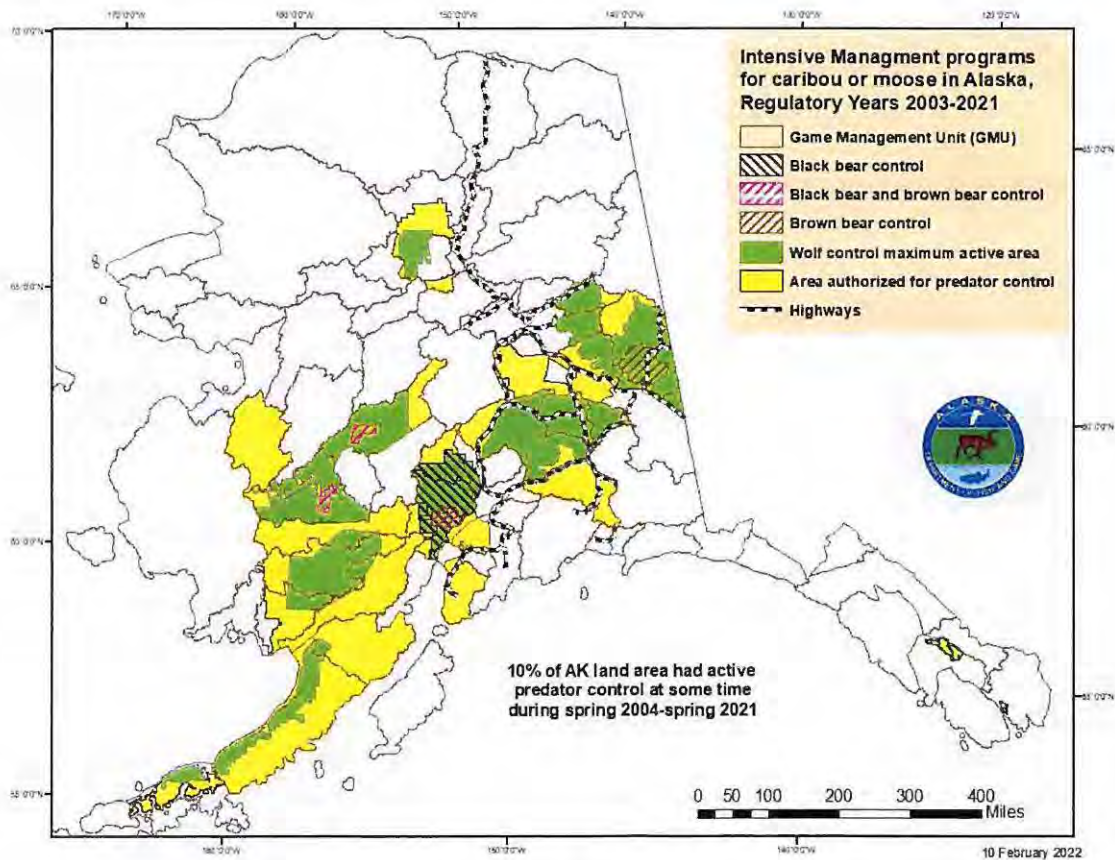
Update on intensive management for moose and caribou

Alaska Department of Fish and Game, Division of Wildlife Conservation (1 March 2022)

In 1994 the Alaska Legislature passed Alaska Statute 16.05.255 (e)-(g) and (k) for caribou, deer, and moose (game or prey species) that required the Alaska 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.

Eleven (7 moose and 4 caribou) intensive management (IM) programs involving lethal predator control have been implemented in portions of some Game Management Units. The map shows active control (green areas for wolves, hashed sub-areas for bears) was done only in a portion of the area authorized for predator control (green and yellow areas combined, none on national parks or national wildlife refuges).



There are multiple ways to evaluate the efficacy of an IM program that has been activated:

- Achievement of 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)

The table below briefly displays key outcomes of 11 IM programs implemented for different periods during spring 2004-spring 2021. All IM programs had wolf control. Regulatory years (RY) begin 1 July. Similar averages in the table often masked declines in harvest prior to IM and increases after IM. Information about IM programs is found at <http://www.adfg.alaska.gov/index.cfm?adfg=intensivemanagement.main>.

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 ^a	16 (2004)	Moose	Yes	No	Yes ^b	No	Yes ^b	101	84	112
GMU 19D ^a	17 (2003)	Moose	Yes	Yes ^c	Yes	No	Yes	96	106	140
GMU 20E ^d	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 ^d	14 (2004)	Caribou	No	Yes	Yes	Yes	Yes	533	925	4191
Mulchatna ^a	10 (2011)	Caribou	No	No	No	No	No	829	275	131
N AK Peninsula	4 (2011)	Caribou	No	No	Yes	No	Yes	3	73 ^e	71
S AK Peninsula	3 (2007)	Caribou	No	No	Yes	No	Yes	67	13 ^e	56

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

WHAT HAVE WE LEARNED SINCE IMPLEMENTING INTENSIVE MANAGEMENT?

Some IM programs had research funding to increase species monitoring, but most programs did not have enough funding for research experimental designs to calculate a precise degree of predator reduction ("effectiveness" of predator control) or to show cause and effect in prey response. Factors other than predator control, such as wildland fires, winter severity, or prey movements may have also influenced prey abundance estimates. These are general observations about IM programs during regulatory years 2003-2018:

- Moose programs with substantially increased prey abundance after wolf control also had bear control (Units 16, 19D, 20E, but no increase in Unit 19A East) or consistently high bear harvest (Unit 13).
- Harvest tended to increase where prey increased substantially, but only programs in proximity to 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, with 19% by permitted members of the public and 5% by agency staff. Wolf control was 12% of total wolf kill statewide.
- Bear control averaged $\leq 3\%$ of total kill in 4 IM program areas and $< 2\%$ of total bear kill statewide.
- Statewide kill of predators (all methods of take) and the number of hunters and trappers sealing predator hides has declined since about 2000 for wolves and since about 2010 for bears, despite greater harvest opportunity in non-coastal areas and periods of active predator control in IM areas.

Predator management continues to be controversial among Alaskans and broader audiences. Scientific information can help assess conservation risks to wildlife and opportunity for increase in sustainable harvest of predators and prey. However, science cannot resolve conflict over values, morals, or public opinions about intent, practices, or cost effectiveness of Intensive Management.