Customary and traditional use worksheet, snowy owls, GMUs 17, 18, 22, 23, and 26

1

Proposal 132

- 5 AAC 85.070(5). Hunting season and bag limits for unclassified game. Modify the hunting season for snowy owls
  - Units 17, 18, 22, 23, and 26:
    - Residents: September 1 – April 1
    - Nonresidents: no open season
- The board has not addressed customary and traditional uses of snowy owls
- Full written worksheet provided
  - Worksheet addresses all units in proposal

2

Criterion 1: Length and consistency of use

- Ethnographic information documents historical and recent uses of snowy owls for food and raw materials.
- Northwest Alaska Inupiat
  - People also ate seagulls, hawks, and owls (Ray 1984 and 1992).
- Kivalina
  - Trapping efforts, migration patterns, harvest, use (Saario and Kessel 1966)
  - Key respondent in 1997: trapping, seasonality of harvest
- Point Hope
  - Owls harvested at various times of year (Alaska Consultants 1984)
- Selawik
  - Effort, harvest, uses (Georgette 2000)

3

Criterion 1: Length and consistency of use continued

- Seward Peninsula, King Island region, Yukon Flats
  - Harvests in late 1960s and early 1970s (USFWS 1980)
- 11 communities of the NANA Region:
  - Harvests in 1970s (Patterson 1974)
- Barrow
  - Snowy owl egg harvest 2014 (Ikuta et al. *in prep*)
- Yup'ik, Dena'ina Athabascan, Aleut, Siberian Yupik, and Inupiaq names for snowy owls
- Harvest data = Table 1 in written C&T worksheet: 1982-2014
- Recent survey data show snowy owls taken in small numbers throughout their coastal range, with most harvest in North Slope and Northwest Alaska communities.

4

Criterion 2: Seasonality

- Year-round
  - Bering Strait Inupiat = April and May
  - Noorvik:
    - Spring
    - Winter
  - Kivalina:
    - October and November (during migration)
    - Fall
  - Cape Krusenstern = October
  - Kotzebue = Fall
  - Inland areas = winter (depending on prey availability)
  - Buckland, Deering, Kobuk = Winter
  - Selawik = any time of year
  - Noatak = year-round
- Culturally, socially important
  - Occur when other resources are scarce

5

Criterion 3: Efficient means and methods of harvest and economy of cost

- Uhl and Uhl (1977)
  - Directed effort = trapping by Kotzebue, Noatak, Kivalina in Cape Krusenstern
  - Incidental effort = taken by firearms during caribou hunts

6

Criterion 4: Geographic areas

- Along coastal areas during migration
- Inland in areas used for caribou hunting, other subsistence activities
- Yup'ik, Dena'ina Athabascan, Aleut, Siberian Yupik, and Inupiaq names for snowy owls

7

Criterion 5: Means of handling, preparing, preserving, and storing

- Soup
- Camp food
- Baked
- Eggs
- Feathers in dance fans

8

Criterion 6: Intergenerational transmission of knowledge of skills, values, and lore

- Directed trapping efforts
  - How to trap, when to trap, daily trap checks
- Cooperative trapping efforts
  - Effort spread out between trappers
  - Elders ask for snowy owls: "they were raised with them"
- Inupiaq name for Barrow = *Utqiaġvik* or *Ukpiaġvik* "Place where we hunt snowy owls"
- Feathers used in dance fans used by men

9

Criterion 7: Distribution and exchange

- Elders request snowy owls
- Eaten as camp food

10

Criterion 8: Diversity of resources in an area; economic, cultural, social, and nutritional elements

- Snowy owls are part of diverse, large subsistence harvests in all GMUs where they occur
  - Important component that provides fresh meat when other resources are scarce, and diversity in diet

11

Conclusion

- No current recommendation on amount reasonably necessary for subsistence due to lack of harvest data
- State season limited to Sep 1 – Apr 1, but federal subsistence season provides opportunity for eligible hunters in spring and summer
- Questions?

12

Customary and traditional use worksheet, cormorants, GMUs 6, 8, 10, 17, 18, 22, and 23

1

Proposal 133

- 5 AAC 85.070(5). Hunting season and bag limits for unclassified game. Modify the hunting season for cormorants
  - Units 6, 8, 10, 17, 18, 22, 23:
    - Residents: September 1 – April 1
    - Nonresidents: no open season
- The board has not addressed customary and traditional uses of cormorants
- Full written worksheet provided
  - Worksheet addresses all units in proposal

2

Criterion 1: Length and consistency of use

- Ethnographic and archaeological data show cormorants to be one of variety of seabirds used for thousands of years (Causey et al. 2005; Moss 2007)
- Were and continue to be eaten
- One of most important birds traditionally in Bering Sea, Aleutians, and lower Alaska Peninsula communities
- 20th century use in all coastal GMUs by Alutiiq, Aleut, Central Yup'ik, Siberian Yupik, Inupiat
- Table 1 in written worksheet

3

Criterion 2: Seasonality

- Recent data (2004-2013): 83% of cormorant harvests occur in fall and winter
  - Important source of fresh meat in mid-winter when other resources scarce
- 12% in summer
- 5% in spring
- Aleut name for February means "young cormorant"

4

Criterion 3: Efficient means and methods of harvest and economy of cost

- Past = hunted by hand at night while on nests
- Bird cliffs approached by boat or by rope; snares, bolas, hand nets, leisters, clubs, or by hand
- Contemporary = shotguns, nets.
- Harvest gear owned by family groups
- Directed effort, but also opportunistically during other subsistence activities (marine mammal hunting, berry picking)

5

Criterion 4: Geographic areas

- Coastal areas, where other subsistence activities occur as well

6

Criterion 5: Means of handling, preparing, preserving, and storing

- Traditionally fried, roasted, in soups or stews
- Feathered skins made into parkas
- Fishing barbs from cormorant bones
- Seal spears constructed with cormorant feather fletching


7

Criterion 6: Intergenerational transmission of knowledge of skills, values, and lore

- Oral traditions of hunting methods, recipes
- Called “Aleut turkeys”
- Dena’ina Athabascan oral history from Lime Village

8

Criterion 7: Distribution and exchange

- Bird and egg harvests frequently shared, especially with elders
- Table 3 in written worksheet

9

Criterion 8: Diversity of resources in an area; economic, cultural, social, and nutritional elements

- Cormorants and their eggs are part of diverse, large subsistence harvests in all GMUs where they occur
  - Important component that provides fresh meat when other resources are scarce, and diversity in diet

10

Conclusion

- No current recommendation on amount reasonably necessary for subsistence due to lack of harvest data
- State season limited to Sep 1 – Apr 1, but federal subsistence season provides opportunity for eligible hunters in spring and summer
- Questions?

11

Proposal 132

Modify the hunting season for snowy owls

Department: Support

Department Proposal

Proposal 132

Background

Current Regulation:

- Residents — No closed season / No bag limit
- Nonresident — No open season

Proposed Regulation: (Required due to federal regulations)

- Residents — Sept 1-April 1 / No bag limit
- Nonresident — No open season

Proposal 132

Modify the hunting season for snowy owls

Department: Support

Department Proposal

Proposal 133

Modify the hunting season for cormorants

Department: Support

Department Proposal

Proposal 133

Background

Current Regulation:

- Residents No closed season / No bag limit
- Nonresident No open season

Proposed Regulation: (Required due to federal regulations)

- Residents Sept 1-April 1 / No bag limit
- New Season in Units 6 and 8
- Pelagic and Double-crested cormorants only
- No season for Red-faced cormorants

Proposal 133

Modify the hunting season for cormorants

Department: Support

Department Proposal

Proposal 142

Renew Unit 13 IM program regulation

Department: Support

Department Proposal

Proposal 142

- Current Regulation Scheduled to expire October 31, 2016

- Proposal extends expiration to July 1, 2027
  - Conforms to the new IM operational planning protocol
  - Reduces the size of the regulation in codified
  - Introduce a new IM Operational Plan for Unit 13

Proposal 142

Moose Objectives and Current Estimates
(Below Objectives vs Meeting Objectives)

Subunit	Population	Havest	Bull-to-Cow
13(A)	3,500-4,200	210-420	25 : 100
2013	4,015	255	24 : 100
13(B)	5,300-6,300	310-620	25 : 100
2013	4,934	201	39 : 100
13(C)	2,000-3,000	155-350	25 : 100
2013	1,764	50	43 : 100
13(D)*	1,200-1,900	75-190	No obj.
2013	1,511	67	89 : 100
13(E)	5,000-6,000	300-600	25 : 100
2013	4,947	140	28 : 100

Proposal 142

Renew Unit 13 IM program regulation

Department: Support

Department Proposal

Proposal 136

Establish additional hunting opportunities for winter moose hunts in Unit 16B

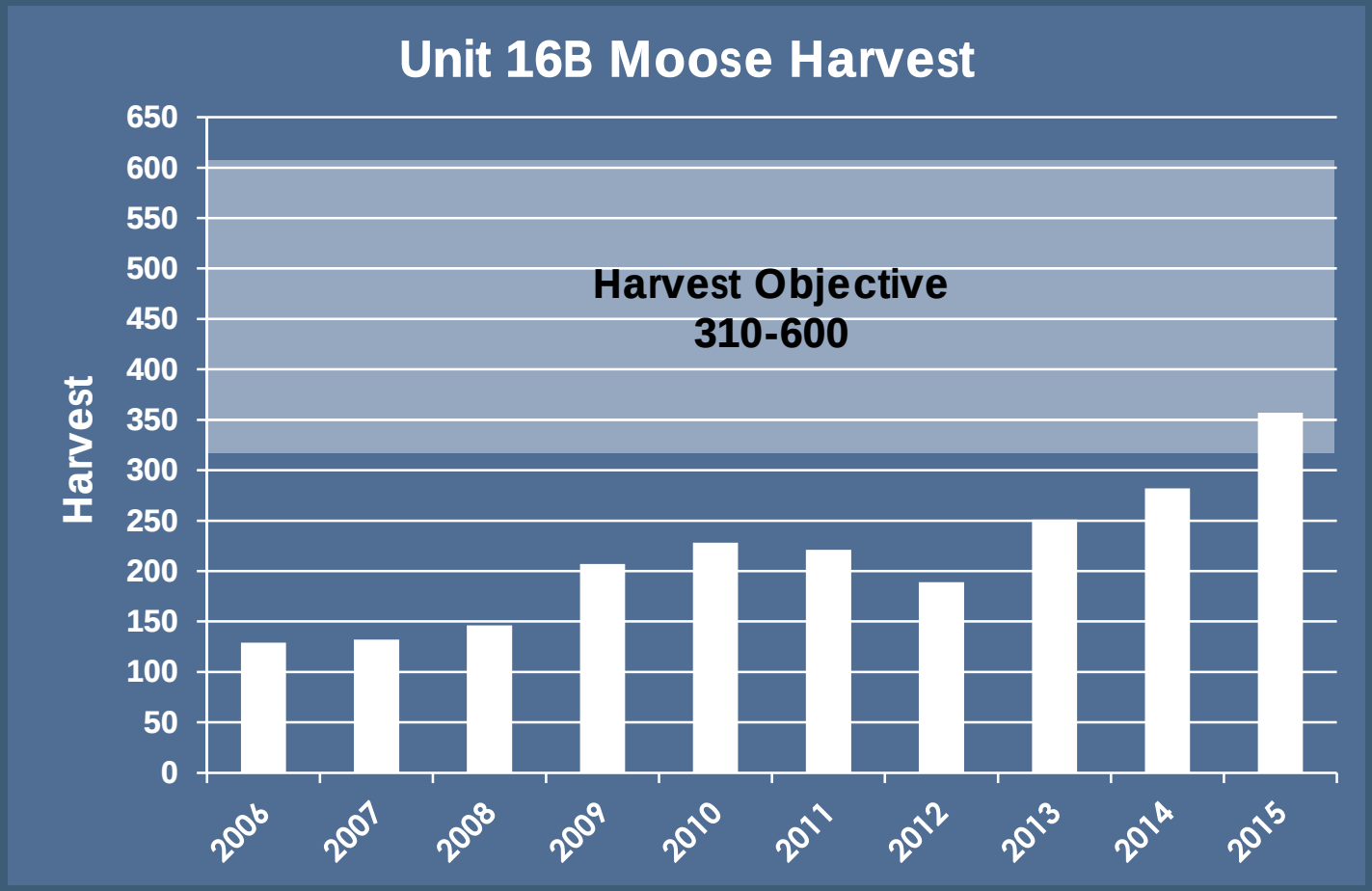
Department: Support

Department Proposal

Proposal 136

Survey Unit	IM Population Objective proportional to area (midpoint)	Moose Population Estimate	Percent Recovery to Objective Midpoint	Bull:100 Cow Ratio
16(B)-North	1,820–2,100 (1,960)	1,587	81%	60
16(B)-Middle	3,120–3,600 (3,360)	3,458	103%	46
16(B)-South	1,560–1,800 (1,680)	2,372	141%	52
Unit 16(B)	6,500–7,500 (7,000)	7,418	106%	

Proposal 136



Proposal 136

Background

Current Regulations

• General Season (SF5)	Aug 20-Sept 25
• Drawing permit (Any bull)	Aug 20-Sept 25
• Youth Drawing permit (Any bull)	Aug 20-Sept 25 Nov 15-Dec 15
• Tier II (Any bull)	Dec 15-Mar 31

Proposal 136

Background

Recommend Consideration of other winter hunt opportunities

- Registration/Draw hunts — Dec 15 to end of Feb
- Additional Tier II permits — (limited to 260 permits)

- Extend Youth hunt?

Proposal 136

Establish additional hunting opportunities for winter moose hunts in Unit 16B

Department: Support

Department Proposal

Proposal 139

Change nonresident goat hunt structure in Unit 14C from registration to drawing permit

Department: Neutral

Department Proposal

Proposal 139

Background

Current Regulation:

• Res and Nonres – Archery	Registration	Aug 16-31
• Res and Nonres	Registration	Sept 1-Oct 15

Proposed Regulation:

• Res and Nonres – Archery	Registration	Aug 16-31
• Resident	Registration	Sept 1-Oct 15
• Nonresidents	Drawing	Sept 1-Oct 15

Proposal 139

Background

Lake George (14C) Goat Harvest Summary

	2012	2013	2014	2015
Resident Quota (65%)	13	13	13	15
Resident Harvest	16	12	14	11
Nonresident Quota (35%)	8	7	7	3
Nonresident Harvest	10	10	12	6
Total Quota	21	20	20	18
Total Harvest	26	22	26	17

Proposal 139

Background

Lake George (14C) Goat Survey Results

YEAR	Adults	Kids	Total
2011	365	75 (17%)	440
2013	307	108 (26%)	415
2015	372	99 (21%)	471

Proposal 139

Change nonresident goat hunt structure in Unit 14C from registration to drawing permit

Department: Neutral

Department Proposal

Proposal 137 A– Moose / Unit 20A

PROPOSED BY:

- Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO?

- Change the Intensive Management population objective from 12,000-15,000 to 10,000-15,000 moose
- Lower the Intensive Management harvest objective from 900-1,100 to 500-900 moose

DEPARTMENT POSITION: AMEND AND ADOPT

Advisory Committee Votes:

- Fairbanks, Middle Nenana River: Support

Proposal 137A - Moose / Unit 20A

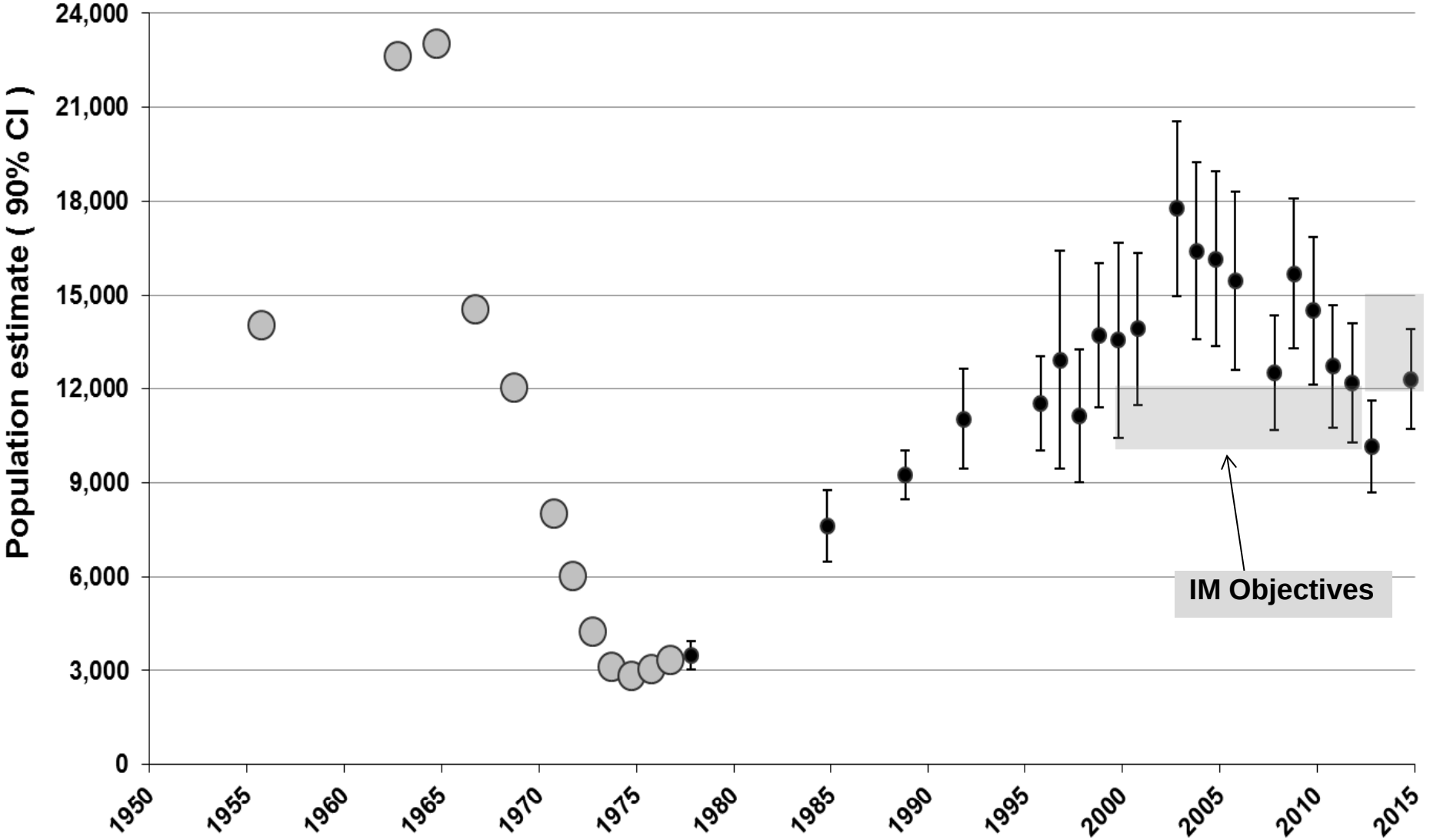
Proposal 137A – Moose / Unit 20A

	IM Population Objective	IM Harvest objective
1998-2001	10,000 – 12,000	300 – 500 (3% – 4.2%)
2002-2003	10,000 – 12,000	500 – 720 (5%-6%)
2004-2011	10,000 – 12,000	1,400 – 1,600 (14%-13.3%)
2012- present	12,000 – 15,000	900 – 1,100 (7.5% - 7.3%)

Proposal 137A – Moose / Unit 20A

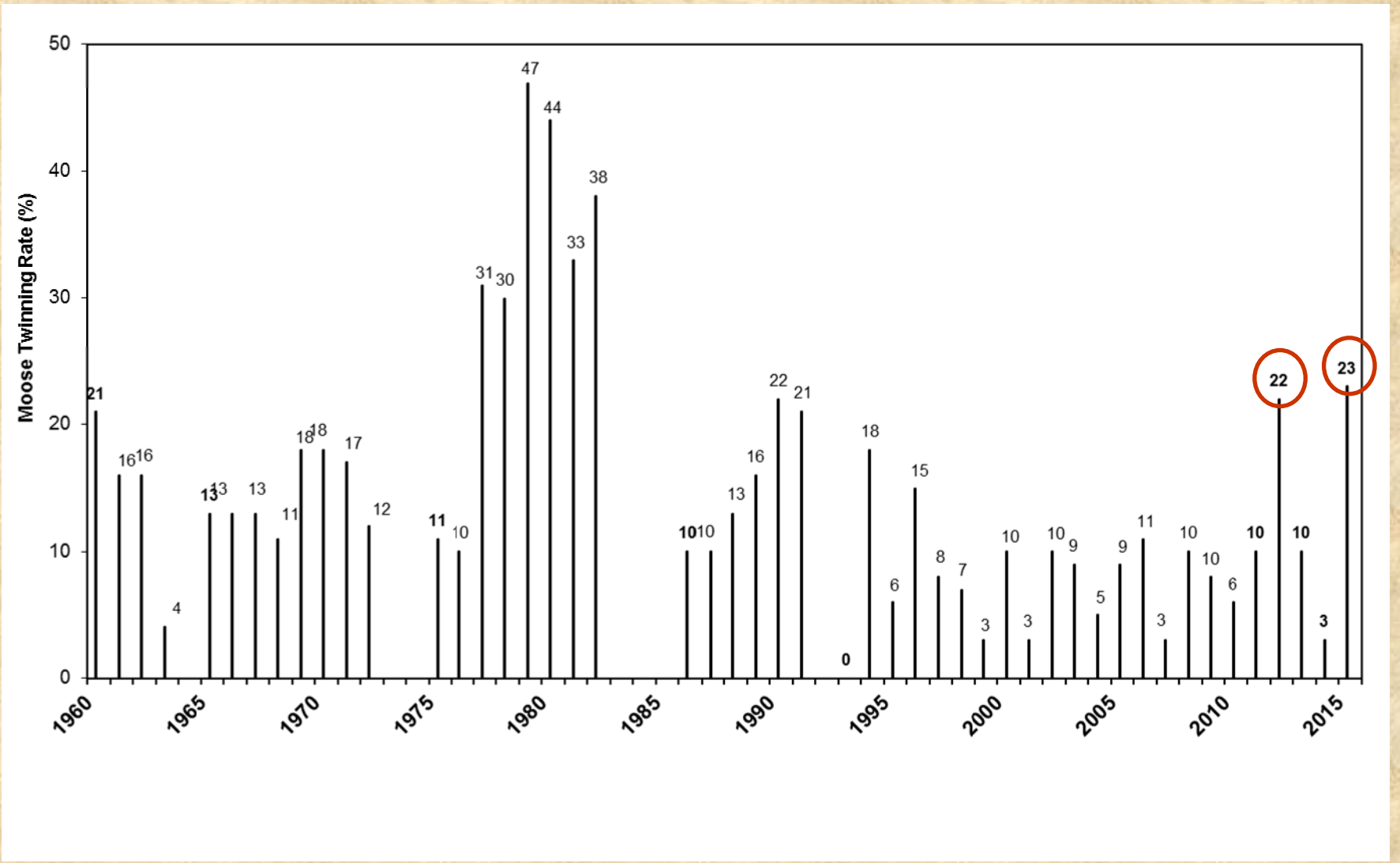
	IM Population Objective	IM Harvest objective
GMU 20A moose	12,000 – 15,000	900 – 1,100 (7.5% - 7.3%)
GMU 23 moose	3,500 – 9,200	210 – 920 (6% - 10%)
GMU 1A deer	15,000	700 (4.66%)
Western Arctic caribou	At least 200,000	12,000 – 20,000 (6% - 10%)

Post-hunt moose population estimates, Unit 20A, 1956-2015

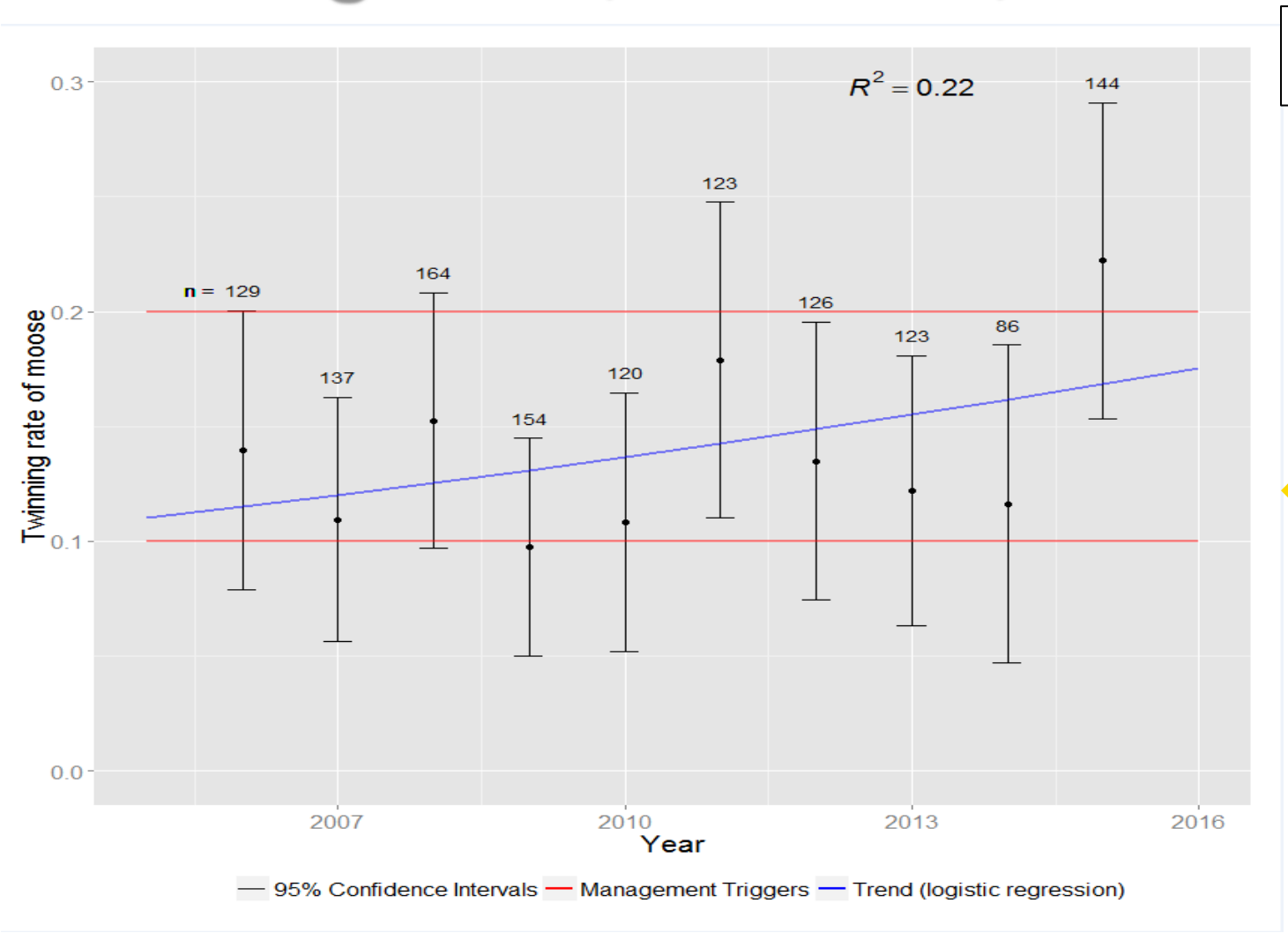


Proposal 137A - Moose / Unit 20A

Moose twinning rates, central Unit 20A, 1960-2015



Twinning rates, Unit 20A, 2006-2015



Recommendation (multiyear twinning rates)

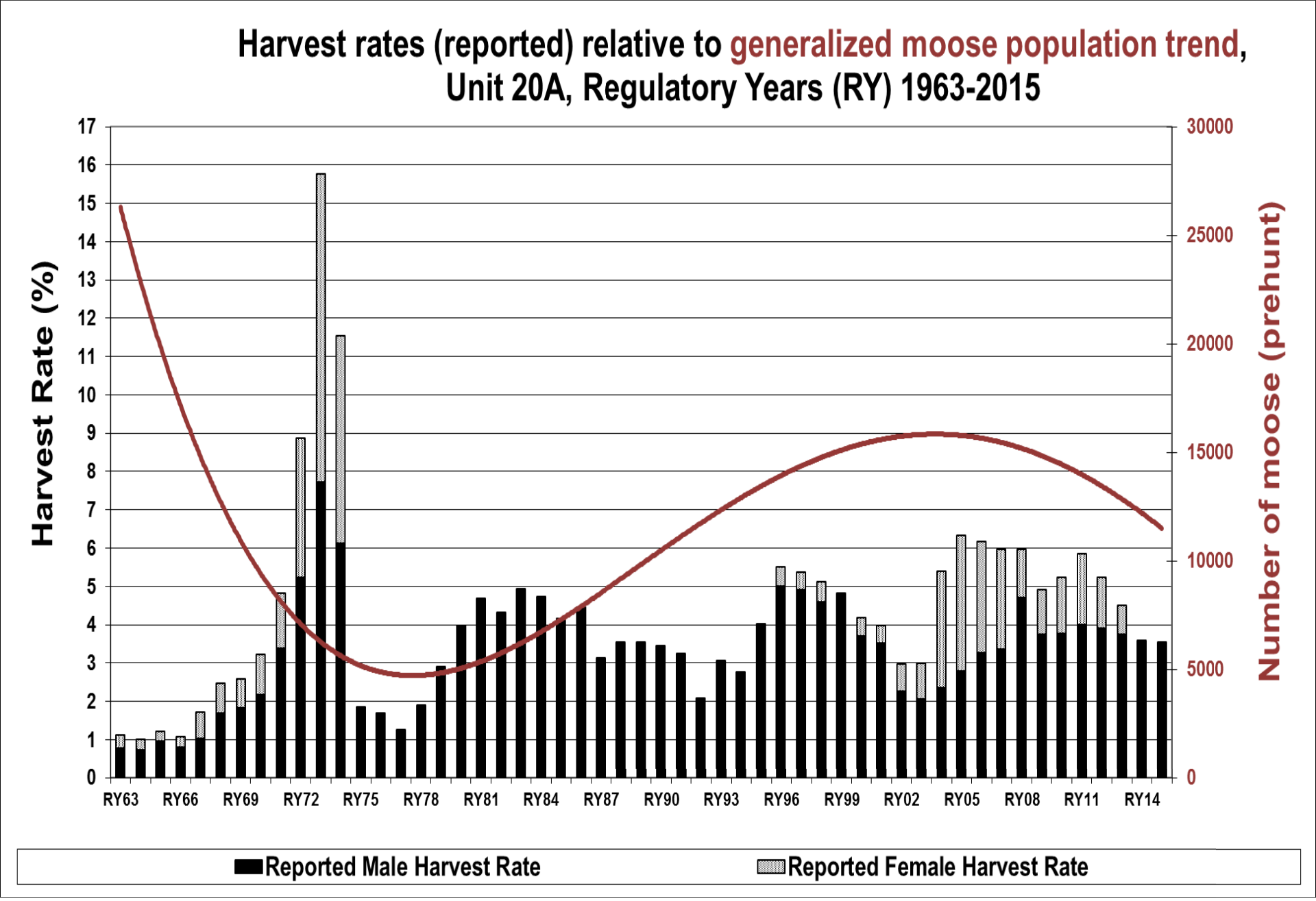
Population

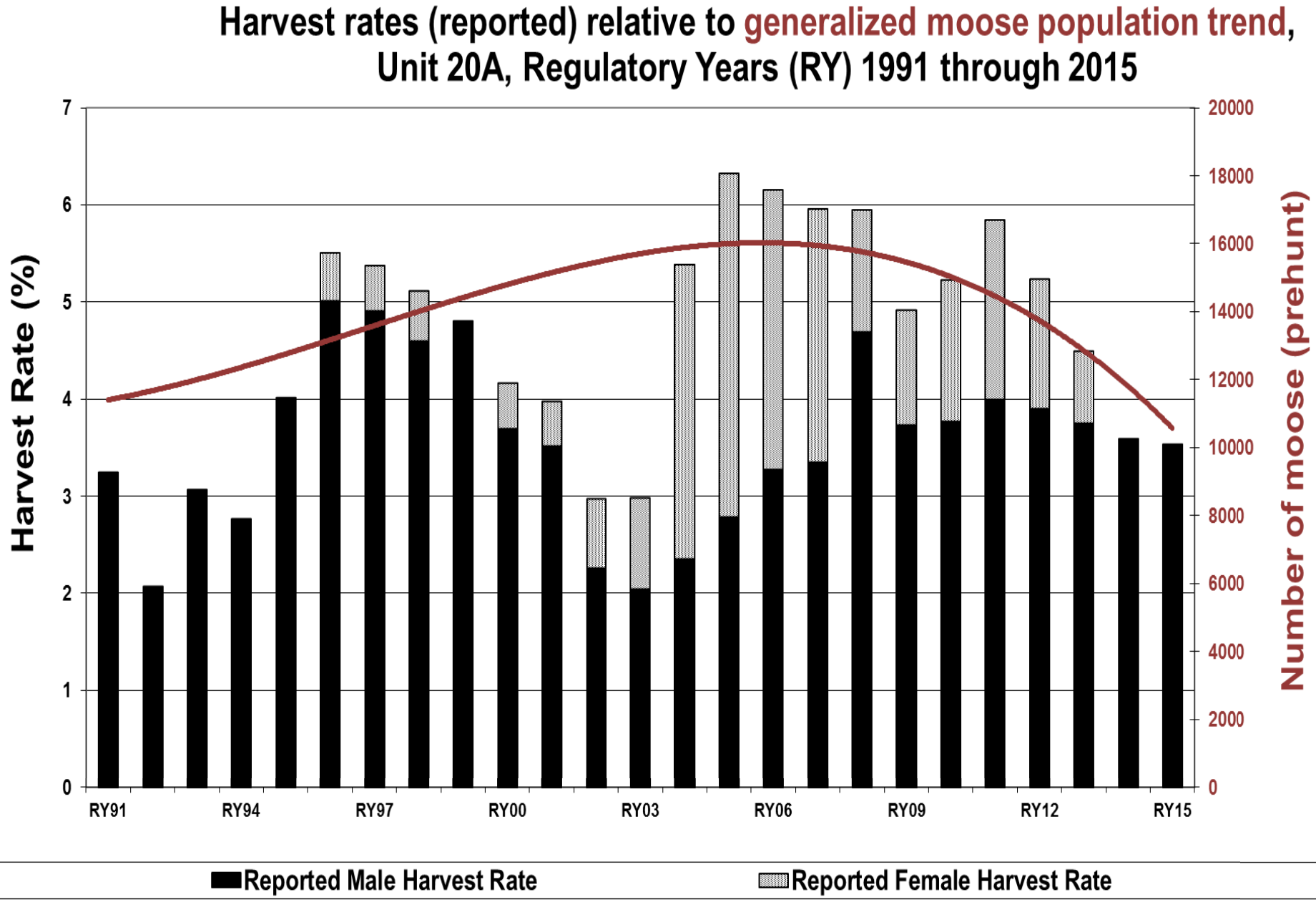
Weight of 10-month old calves:

- Used to substantiate low twinning rates
- More sensitive index to condition
- Threshold = 385 lbs (Boertje et al. 2007)

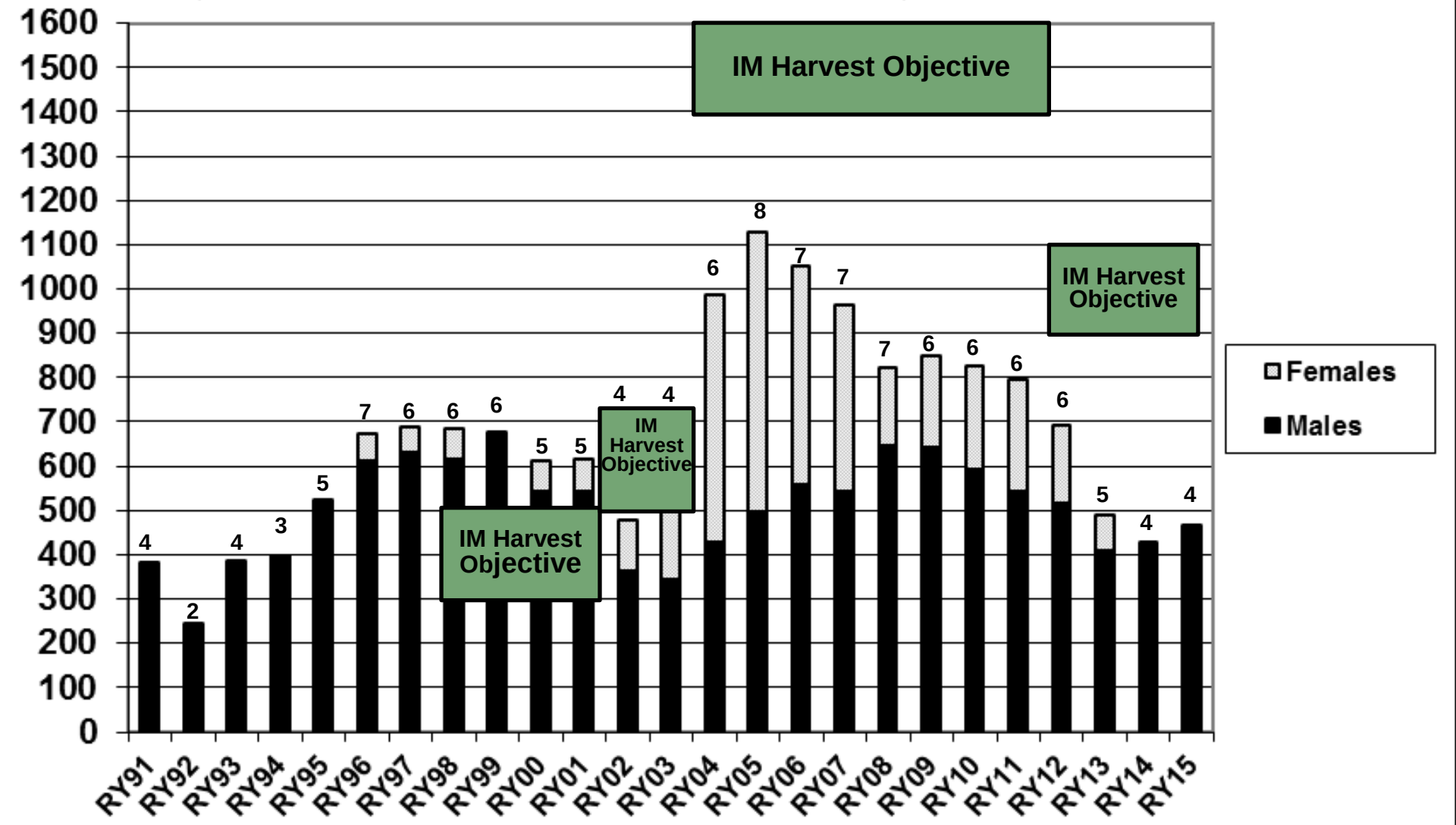
Pounds	Pre-reduction	Post-reduction	Difference
Females	362 (n=191)	372 (n=77)	10 (*p*=0.08)
Males	364 (n=31)	397 (n=40)	**33 (*p*=0.003)**

BOERTJE, R.D., K. A. KELLIE, C. T. SEATON, M. A. KEECH, D. D. YOUNG, B. W. DALE, L. G. ADAMS, and A. R. ADERMAN. 2007. Ranking Alaska moose nutrition: signals to begin liberal antlerless harvests. Journal of Wildlife Management 71: 1494–1506.


Harvest rates (reported) relative to generalized moose population trend,
Unit 20A, Regulatory Years (RY) 1963-2015
Harvest Rate (%)
Number of moose (prehunt)
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
0
5000
10000
15000
20000
25000
30000
RY63
RY66
RY69
RY72
RY75
RY78
RY81
RY84
RY87
RY90
RY93
RY96
RY99
RY02
RY05
RY08
RY11
RY14
Reported Male Harvest Rate
Reported Female Harvest Rate


Harvest rates (reported) relative to generalized moose population trend,
Unit 20A, Regulatory Years (RY) 1991 through 2015
Harvest Rate (%)
Number of moose (prehunt)
0
1
2
3
4
5
6
7
0
2000
4000
6000
8000
10000
12000
14000
16000
18000
20000
RY91
RY94
RY97
RY00
RY03
RY06
RY09
RY12
RY15
Reported Male Harvest Rate
Reported Female Harvest Rate

Reported harvest and harvest rate of moose, Unit 20A, Regulatory Years (RY) 1991 through 2015



Proposal 137 A– Moose / Unit 20A

PROPOSED BY:

- Alaska Department of Fish and Game

WHAT WOULD THE PROPOSAL DO?

- Change the Intensive Management population objective from 12,000-15,000 to 10,000-15,000 moose
- Lower the Intensive Management harvest objective from 900-1,100 to 500-900 moose

DEPARTMENT POSITION: AMEND AND ADOPT

Advisory Committee Votes:

- Fairbanks, Middle Nenana River: Support

FEASIBILITY ASSESSMENT FOR MAINTAINING OR INCREASING SUSTAINABLE HARVEST OF MOOSE IN UNIT 20A

FEASIBILITY ASSESSMENT FOR MAINTAINING OR INCREASING SUSTAINABLE HARVEST OF MOOSE IN UNIT 20A

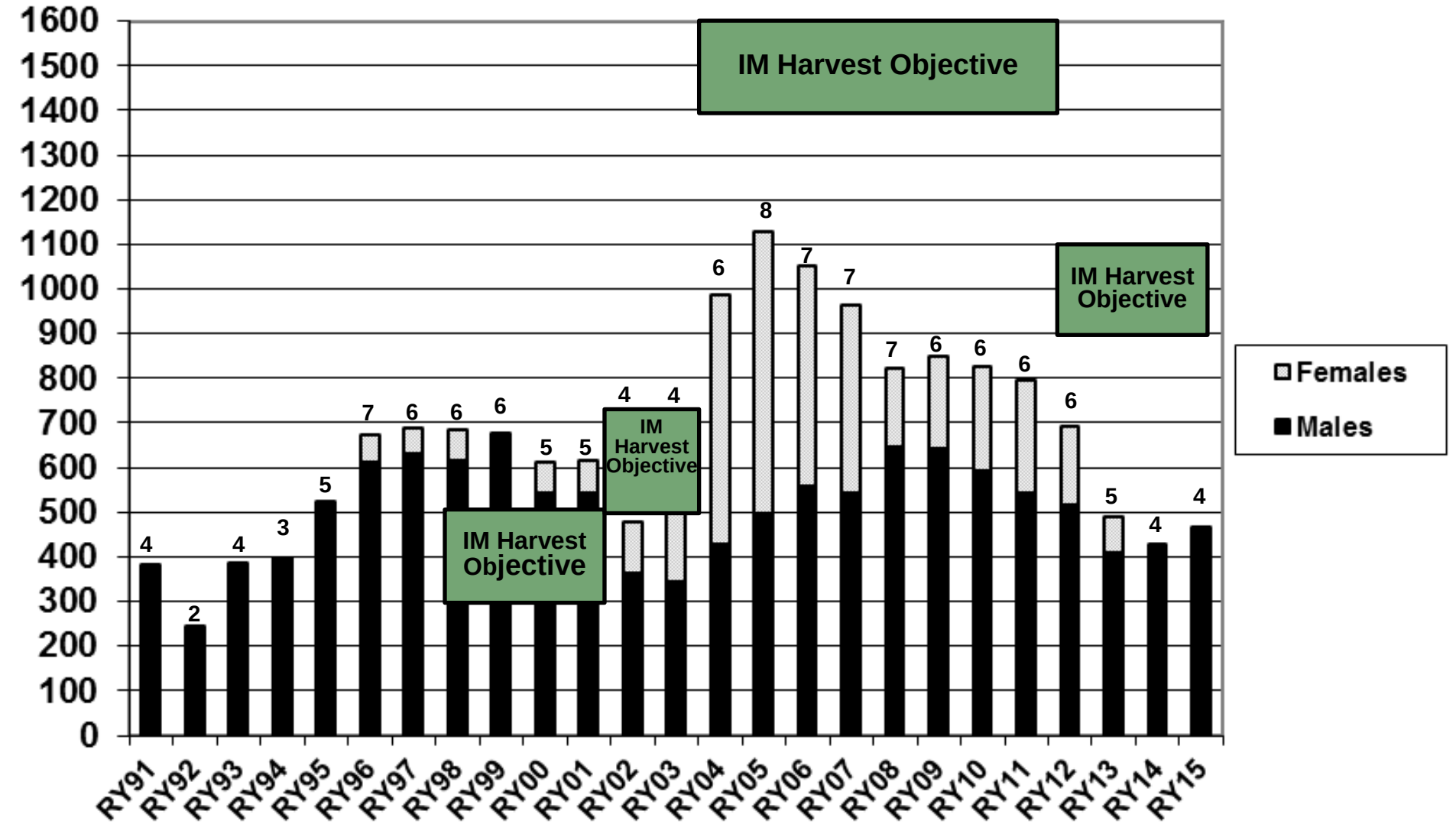
Potential to meet Intensive Management harvest objective: Uncertain pending board action on Proposal 137.

Potential to meet Intensive Management population objective: High (met)

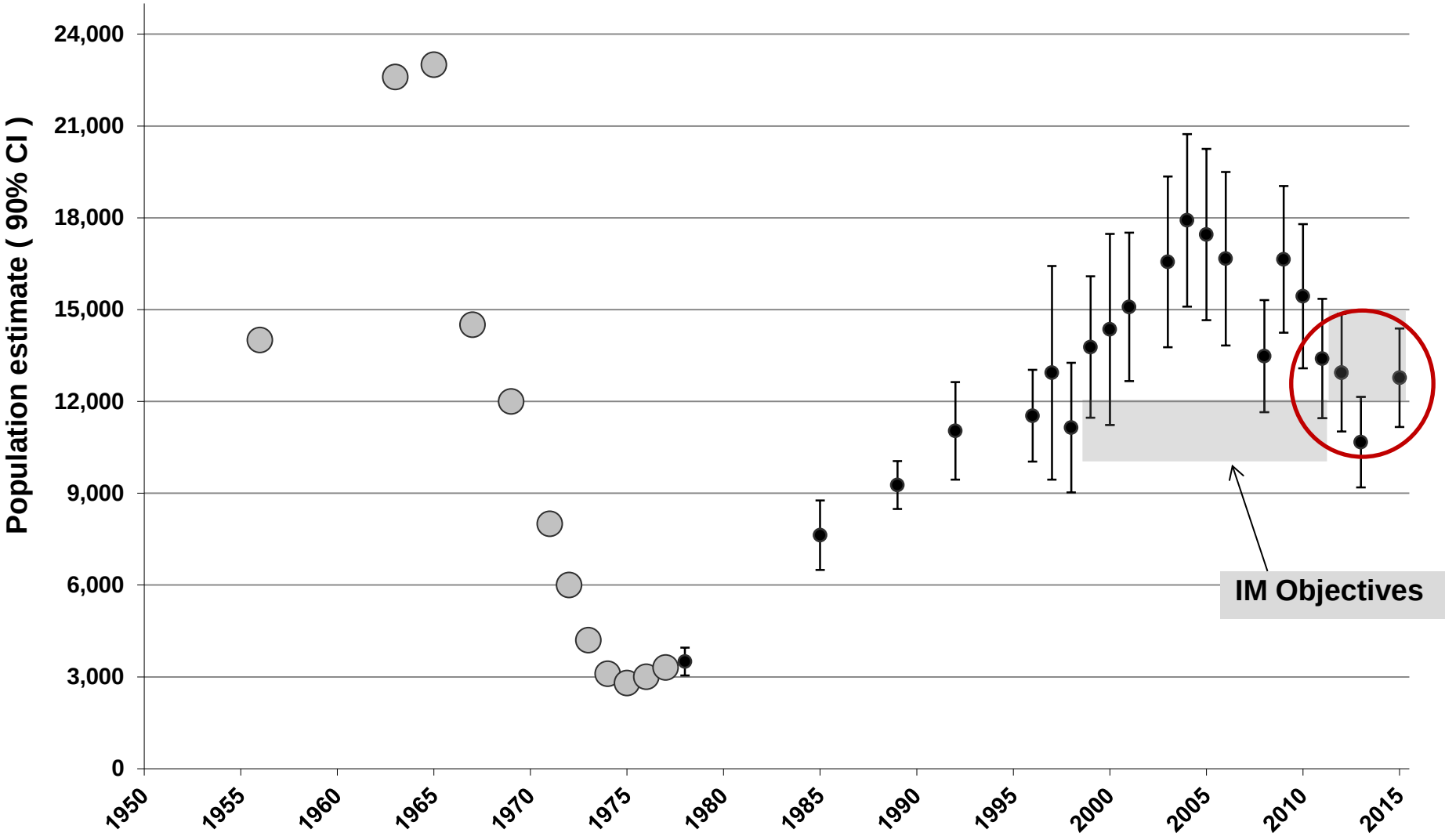
The department does not recommend implementing an Intensive Management (IM) plan that includes predator control for the following reasons:

- **Moose densities are relatively high at >2 moose/mi^2 (based on the 2015 pre- and post-hunt population estimate of >12,000 moose);**
- **Clear signals regarding improvements in the nutritional condition of the moose population have not yet been detected (i.e., the moose population may still be nutritionally stressed in which case increasing moose numbers/density would not be justified);**
- **The department will be capturing and weighing 10-month old calves again in March 2016 to better assess nutritional condition (i.e., substantiate low twinning rate estimates).**

Reported harvest and harvest rate of moose, Unit 20A, Regulatory Years (RY) 1991 through 2015

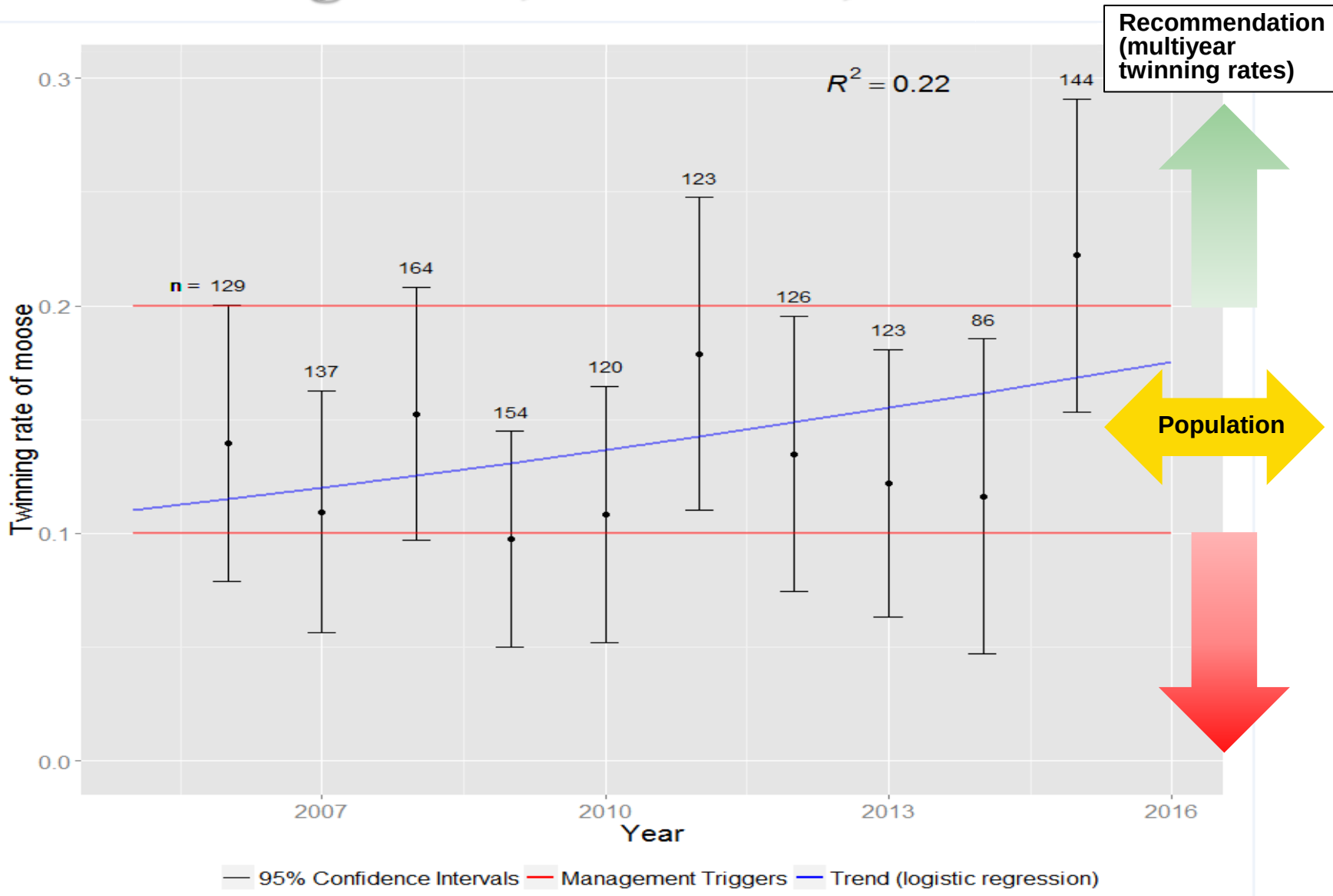


Pre-hunt moose population estimates, Unit 20A, 1956-2015



Feasibility Assessment - Moose Unit 20A

Twinning rates, Unit 20A, 2006-2015



Weight of 10-month old calves:

- Used to substantiate low twinning rates
- More sensitive index to condition
- Threshold = 385 lbs (Boertje et al. 2007)

Pounds	Pre-reduction	Post-reduction	Difference
Females	362 (n=191)	372 (n=77)	10 (*p*=0.08)
Males	364 (n=31)	397 (n=40)	**33 (*p*=0.003)**

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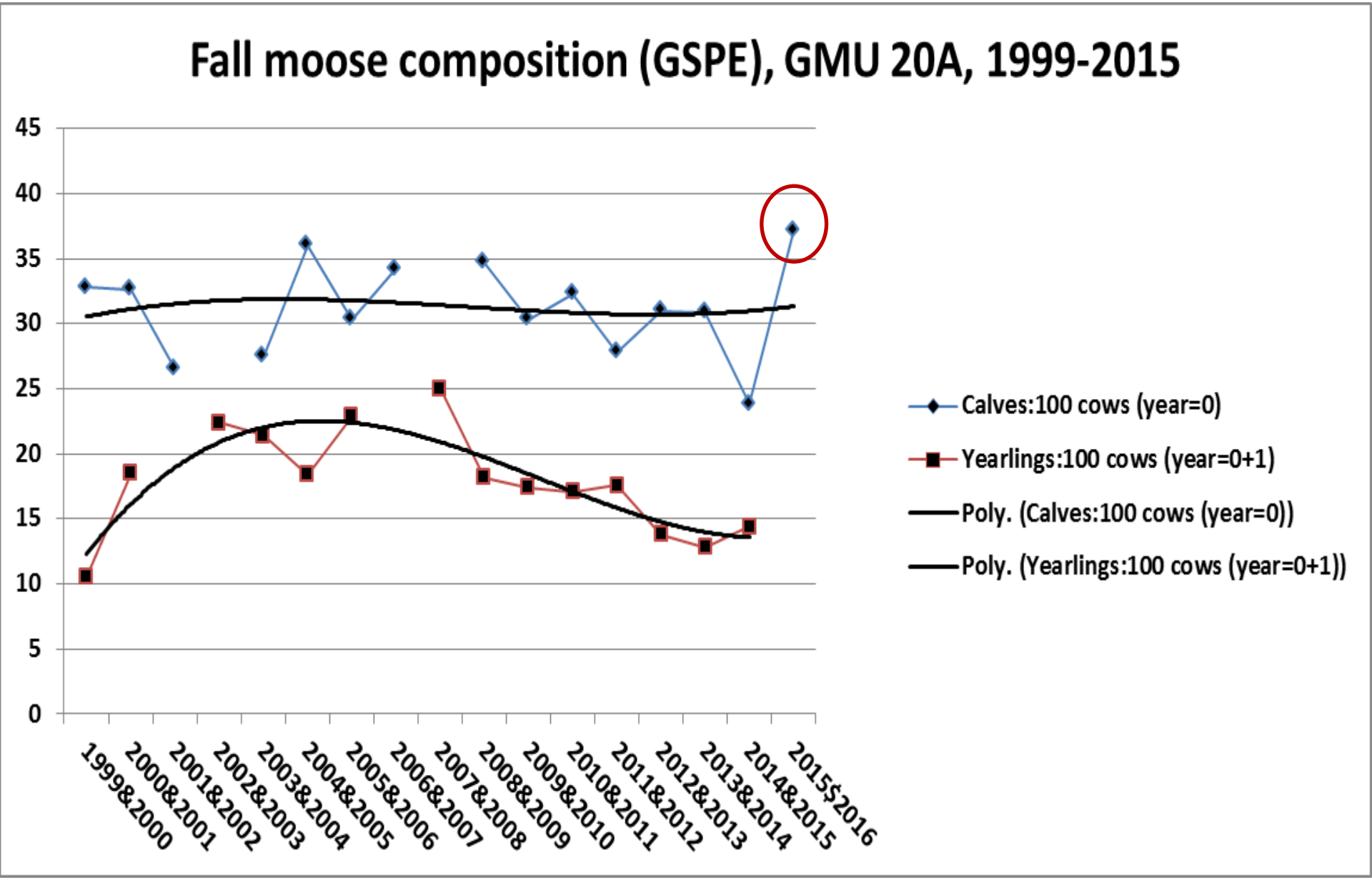
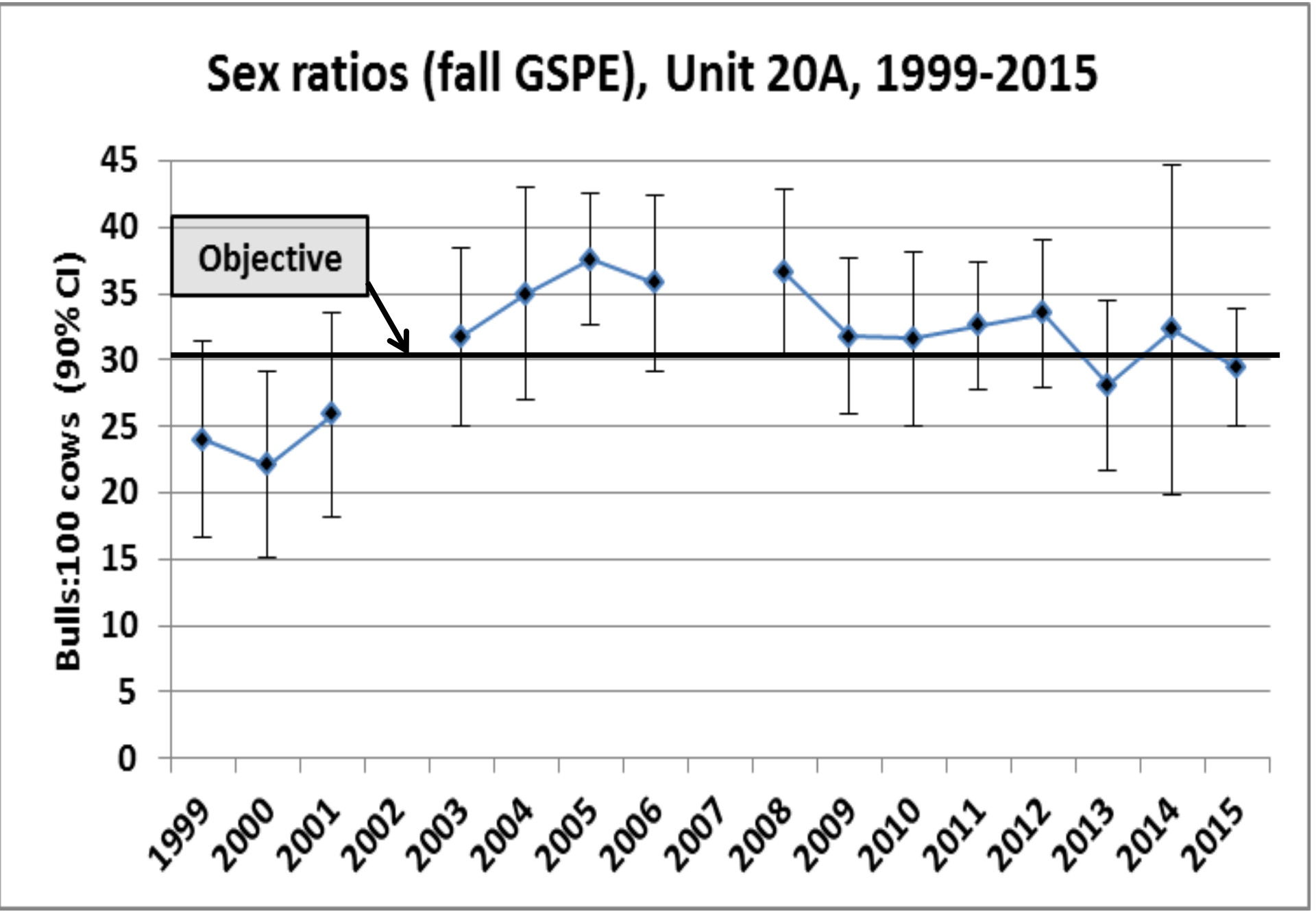
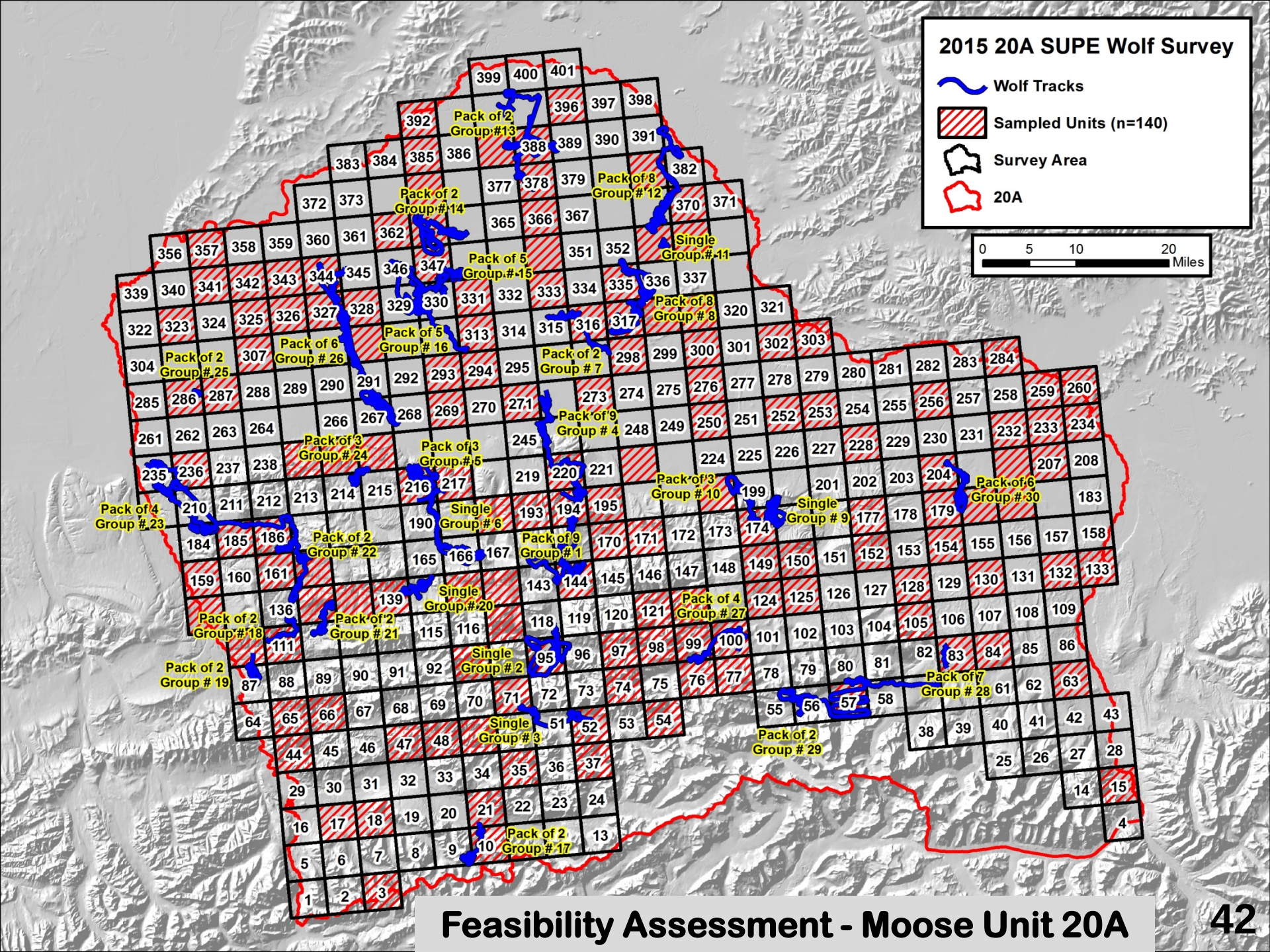

Fall moose composition (GSPE), GMU 20A, 1999-2015
45
40
35
30
25
20
15
10
5
0
1999&2000
2000&2001
2001&2002
2002&2003
2003&2004
2004&2005
2005&2006
2006&2007
2007&2008
2008&2009
2009&2010
2010&2011
2011&2012
2012&2013
2013&2014
2014&2015
2015&2016
Calves:100 cows (year=0)
Yearlings:100 cows (year=0+1)
Poly. (Calves:100 cows (year=0))
Poly. (Yearlings:100 cows (year=0+1))


Sex ratios (fall GSPE), Unit 20A, 1999-2015
Bulls:100 cows (90% CI)
45
40
35
30
25
20
15
10
5
0
Objective
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015



Feasibility Assessment - Moose Unit 20A

FEASIBILITY ASSESSMENT FOR MAINTAINING OR INCREASING SUSTAINABLE HARVEST OF MOOSE IN UNIT 20A

Potential to meet Intensive Management harvest objective: Uncertain pending board action on Proposal 137.

Potential to meet Intensive Management population objective: High (met)

The department does not recommend implementing an Intensive Management (IM) plan that includes predator control for the following reasons:

- **Moose densities are relatively high at >2 moose/mi^2 (based on the 2015 pre- and post-hunt population estimate of >12,000 moose);**
- **Clear signals regarding improvements in the nutritional condition of the moose population have not yet been detected (i.e., the moose population may still be nutritionally stressed in which case increasing moose numbers/density would not be justified);**
- **The department will be capturing and weighing 10-month old calves again in March 2016 to better assess nutritional condition (i.e., substantiate low twinning rate estimates).**

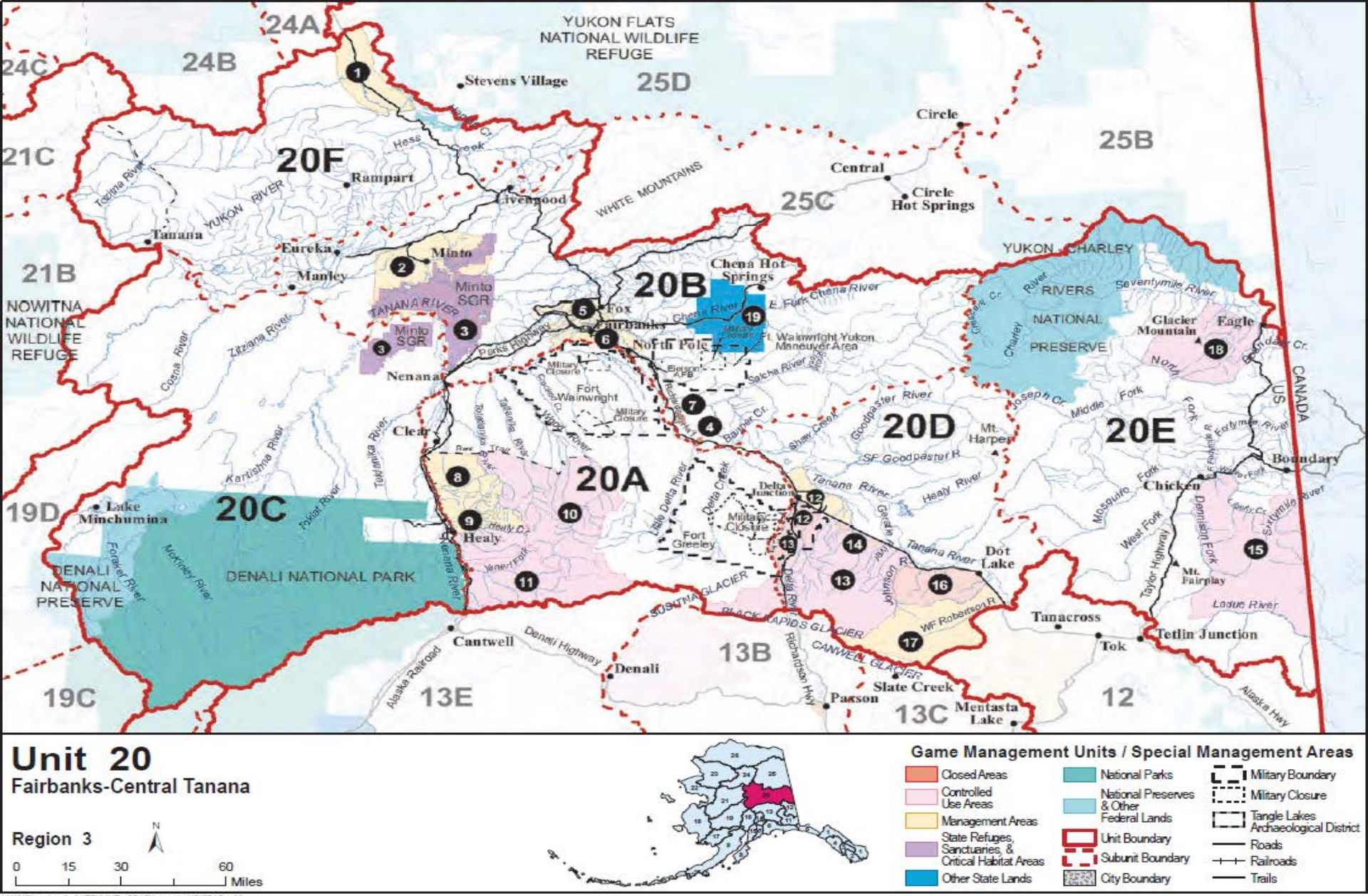
Proposal 141– Wolf / Unit 20C

Submitted by: Denali National Park and Preserve (DNP&P)

What will the proposal do?

- **Shorten the wolf hunting season in the Stampede Corridor (Wolf Townships) from August 10 – May 31 to August 10 – April 15.**

Department Position: Neutral



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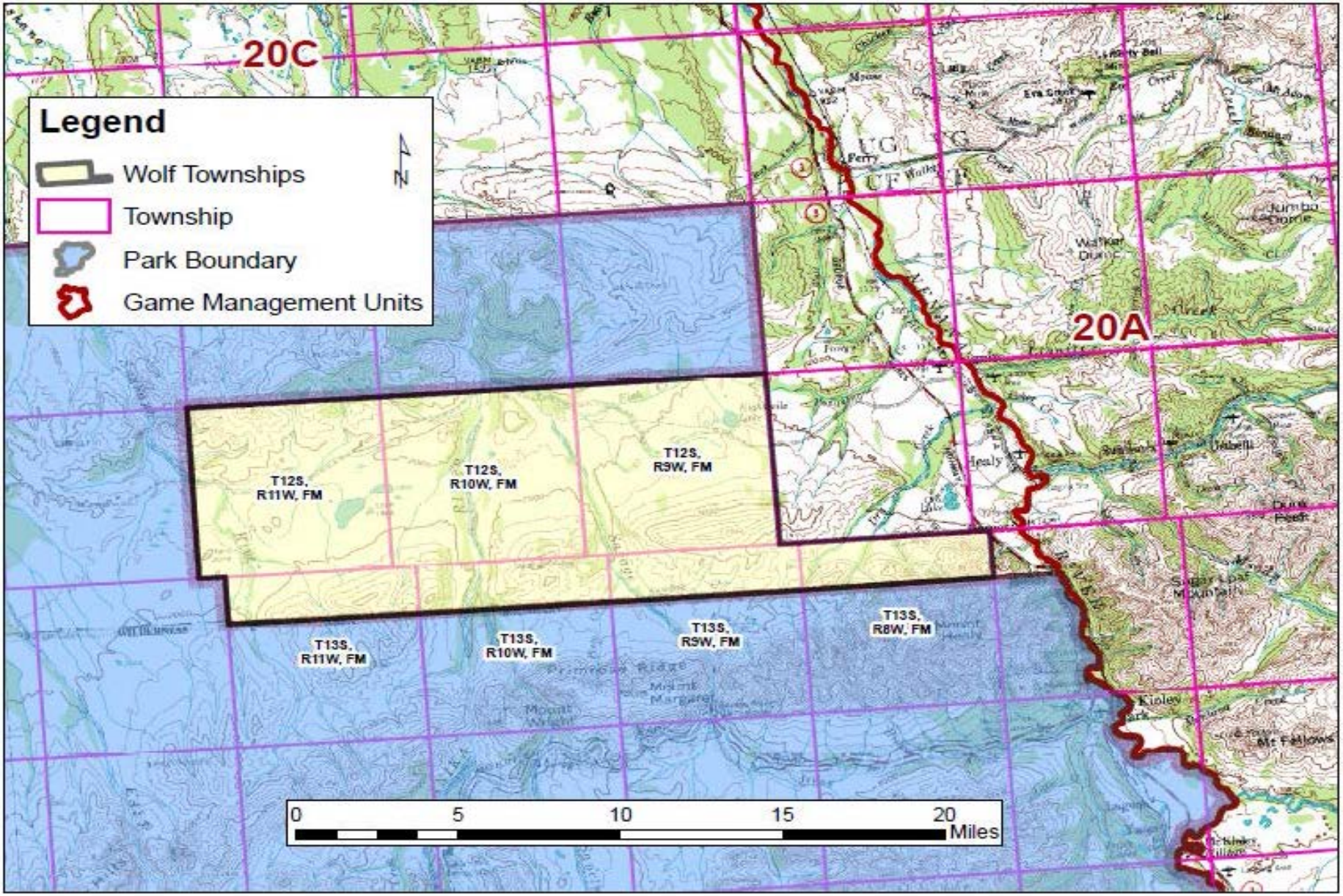
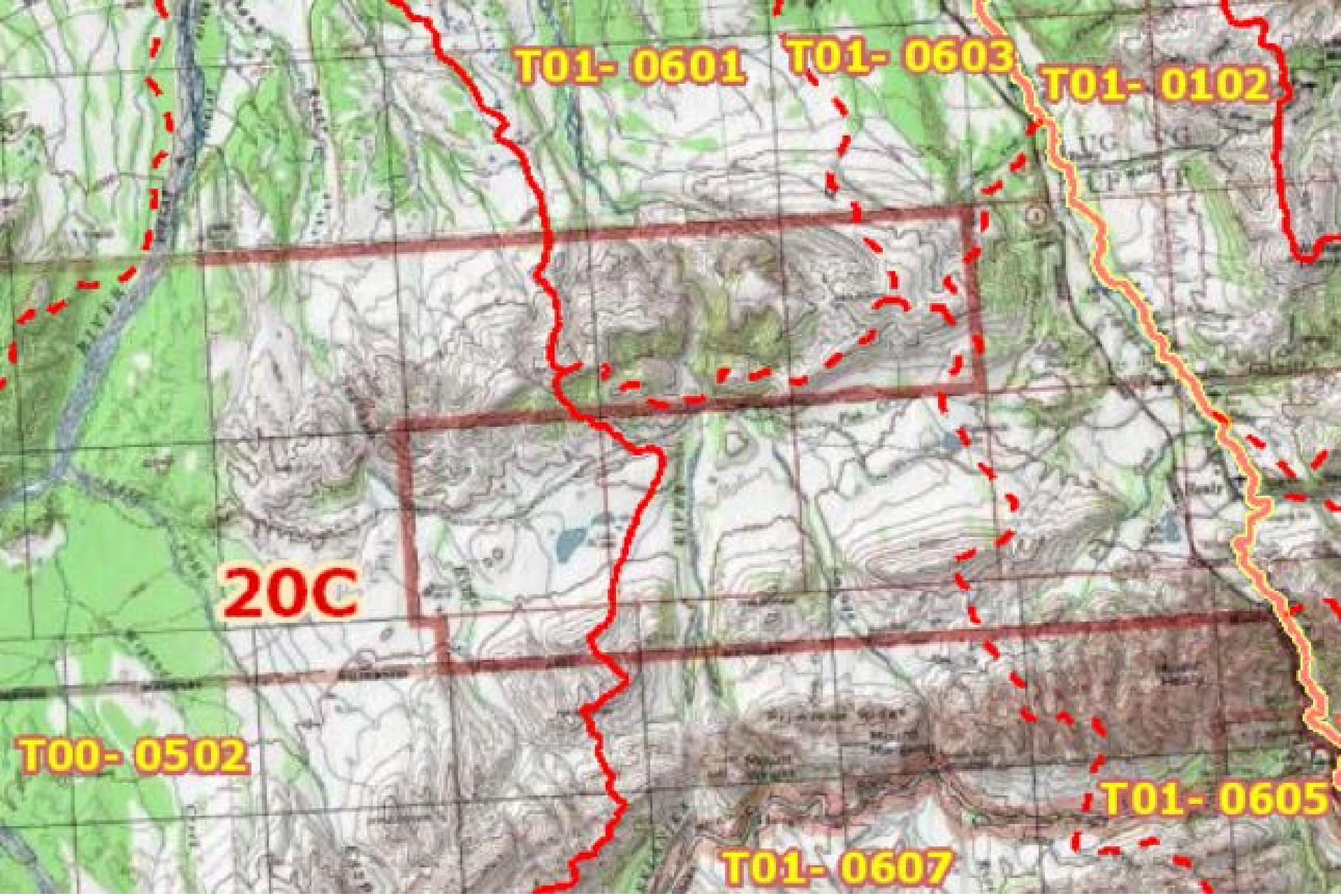
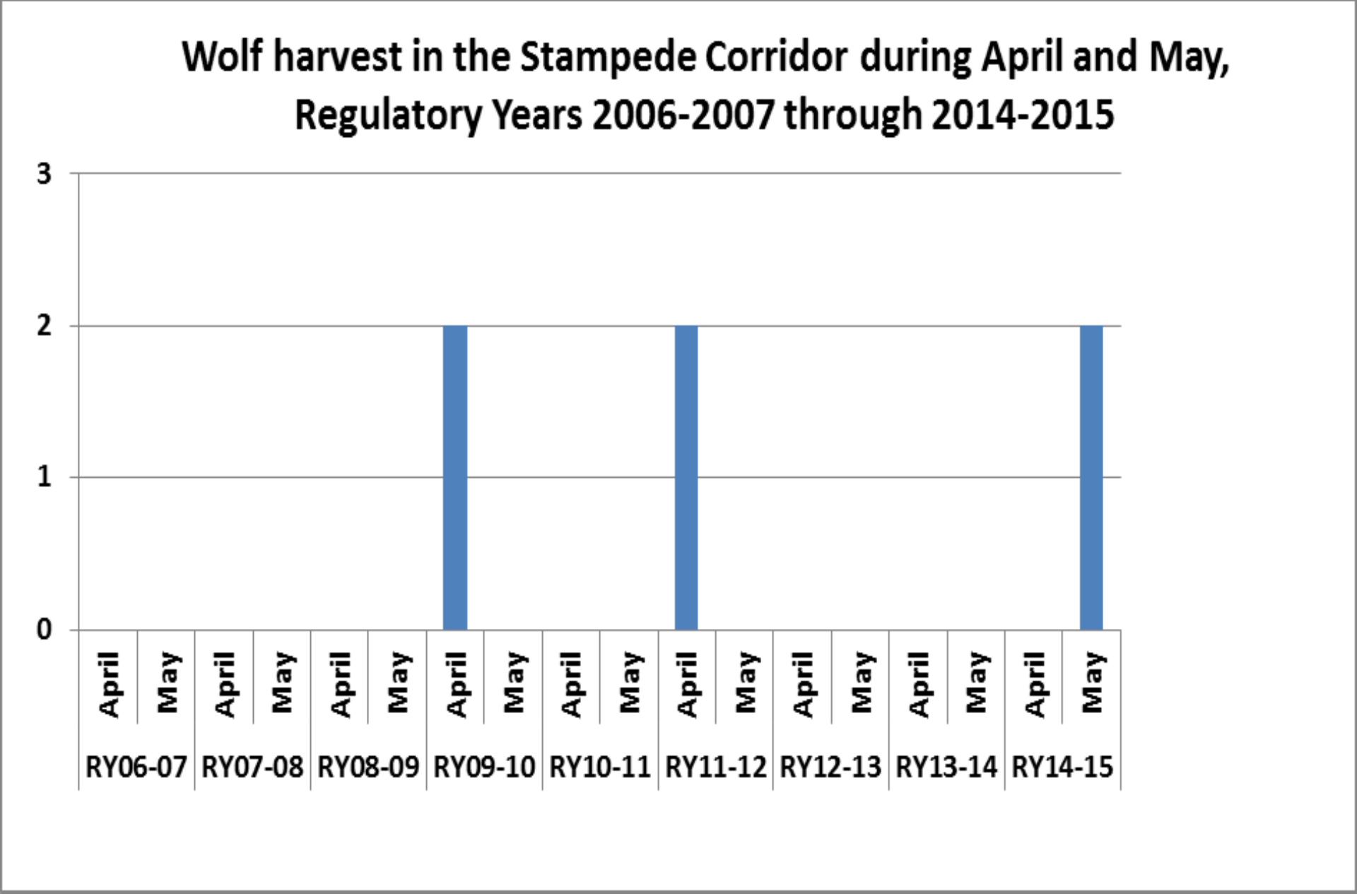
Proposal 141 - Wolf / Unit 20C

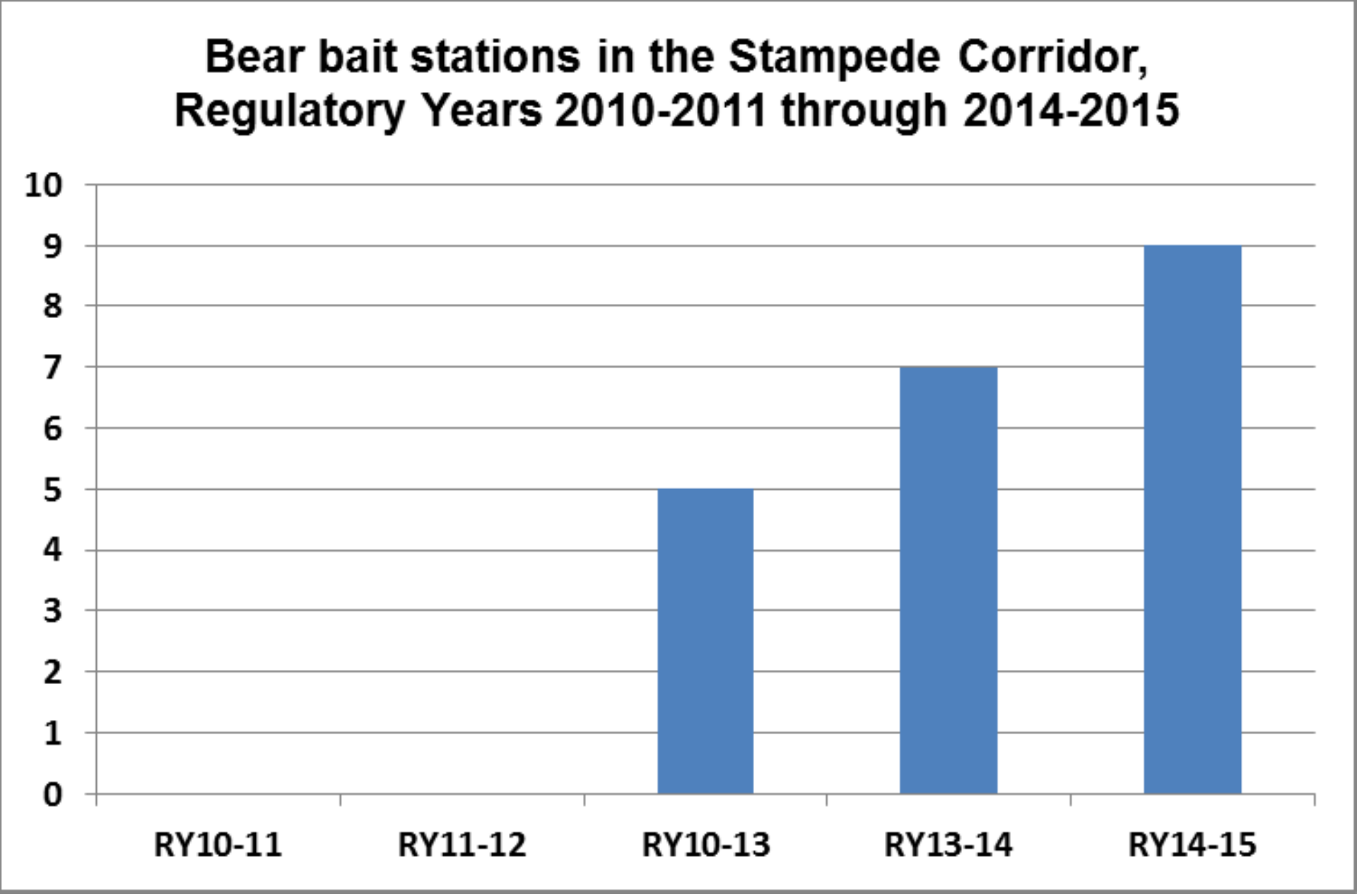


Proposal 141 - Wolf / Unit 20C



Proposal 141 - Wolf / Unit 20C


Wolf harvest in the Stampede Corridor during April and May, Regulatory Years 2006-2007 through 2014-2015
3
2
1
0
April
May
RY06-07
RY07-08
RY08-09
RY09-10
RY10-11
RY11-12
RY12-13
RY13-14
RY14-15


Bear bait stations in the Stampede Corridor, Regulatory Years 2010-2011 through 2014-2015
10
9
8
7
6
5
4
3
2
1
0
RY10-11
RY11-12
RY10-13
RY13-14
RY14-15

Proposal 141– Wolf / Unit 20C

RATIONALE:

- **This is an allocation issue**
- **A detailed analysis completed in 1996 indicated wolf viewing opportunity not measurably influenced by reductions in harvest adjacent to DNP&P;**
- **Existing biological data show that the harvest of wolves outside the park is not a factor for sustainability of populations or packs within or outside of DNP&P;**
- **Viewing opportunities for the public in DNP&P depend mostly on where wolves den, where they make kills, and the predominant vegetation types along the viewing routes;**
- **Stampede Corridor area managed under the Tanana Basin Area Plan (TBAP), which includes recreational hunting and trapping.**

Proposal 141– Wolf / Unit 20C

Submitted by: Denali National Park and Preserve (DNP&P)

What will the proposal do?

- **Shorten the wolf hunting season in the Stampede Corridor (Wolf Townships) from August 10 – May 31 to August 10 – April 15.**

Department Position: Neutral