Feasibility Assessment for Intensive Management in a Portion of Unit 3

Presentation Outline

Intensive Management (IM) Law

- **Map of Unit 3**
- **Map of area proposed for IM**

Unit 3 Deer

- **IM Population and harvest objectives**
- **Amount necessary for subsistence**
- **Deer hunting regulations**
- **Unit 3 harvest trend**
- **Measures of deer abundance**
- **Harvest by island**
- **Pellet group densities**
- **Factors affecting deer numbers**

Presentation Outline

Unit 3 Wolves
- **Harvest trend**
- **Method of take**
- **Wolf population estimate**

Wolf Removal: an experimental plan
- **Proposed IM activity**
- **Data needs**
- **ESA listing petition**
- **Estimated wolf population**
- **Treatment area removal target**
- **Measuring progress toward IM objectives**
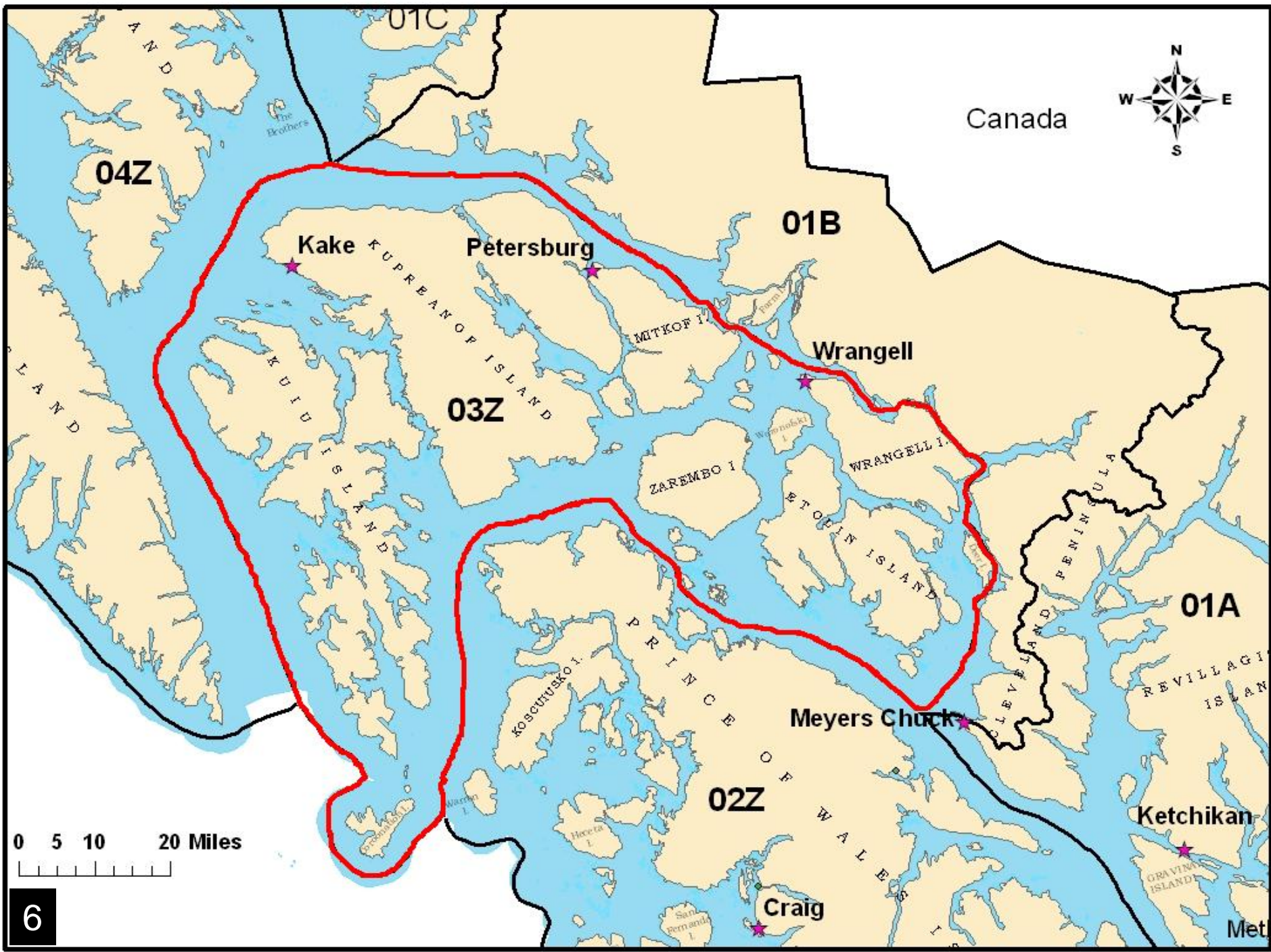
Summary

Intensive Management (IM) Law

- IM Law passed by AK Legislature in 1994
- It directs the BOG to Identify ungulate populations that are especially important food sources for Alaskans.
  - **Board made a positive IM finding for Unit 3 deer in 2000**
- Where a positive IM determination is made, the BOG sets population and harvest objectives in regulation.
  - **Unit 3 deer pop. objective (15,000) and harvest objective (900 per yr)**
- If a population or harvest is below its respective IM objective, the BOG must consider various factors and adopt regulations to provide for IM programs to achieve the population and harvest objectives.
  - **Unit 3 has failed to achieve the IM deer harvest objective since 2005**

Intensive Management (IM) Law

If IM objectives are not met, the BOG must consider IM actions, including …

1. Reducing or eliminating non-resident hunting
   - **See Proposal 14 (Lindenberg Deer)**
2. Reducing or eliminating resident hunting
   - **See Proposal 14 (Lindenberg Deer)**
3. Liberalizing hunting and trapping regulations for predators
   - **Wolf hunting season extended by 1-month in fall 2011**
4. Implementing habitat improvement projects
   - **Not feasible due to land ownership patterns**

If these actions do not (or are unlikely to) achieve the IM population and harvest objectives, the BOG "must" consider predator control.

04Z

01C

Canada

Kake

Petersburg

01B

KUPREANOF ISLAND

KUIU ISLAND

MITKOF I.

Wrangell

03Z

ZAREMBO I.

WRANGELL I.

ETOLIN ISLAND

01A

KOSCIUSKO I.

PRINCE OF WALES

Meyers Chuck

CLEVELAND PENINSULA

REVILLAGIGEDO ISLAND

Warren I.

Heceta I.

02Z

Ketchikan

San Fernando I.

Craig

GRAVINA ISLAND

Met

0 5 10   20 Miles

6

Unit 3 Deer

Unit 3 Intensive Management Objectives

IM Population	Population Objective	Harvest Objective
Unit 3	15,000	900

- **IM population & harvest objectives set in Fall 2000**

- **Based on average harvest 1994 - 1998 plus 10 %**

- **The Unit 3 deer population and harvest have been below the IM objectives since 2005**

Amount Necessary for Subsistence

ANS	Finding	Objective
Unit 3	Positive	150 - 175

- **ANS consistently achieved**

Deer Hunting Regulations

Unit 3 currently has among most restrictive
deer seasons and bag limits in the Region

Season length: 2 weeks to 4-months

Bag Limit: 1 to 2 bucks

GMU 3 Estimated Deer Harvest
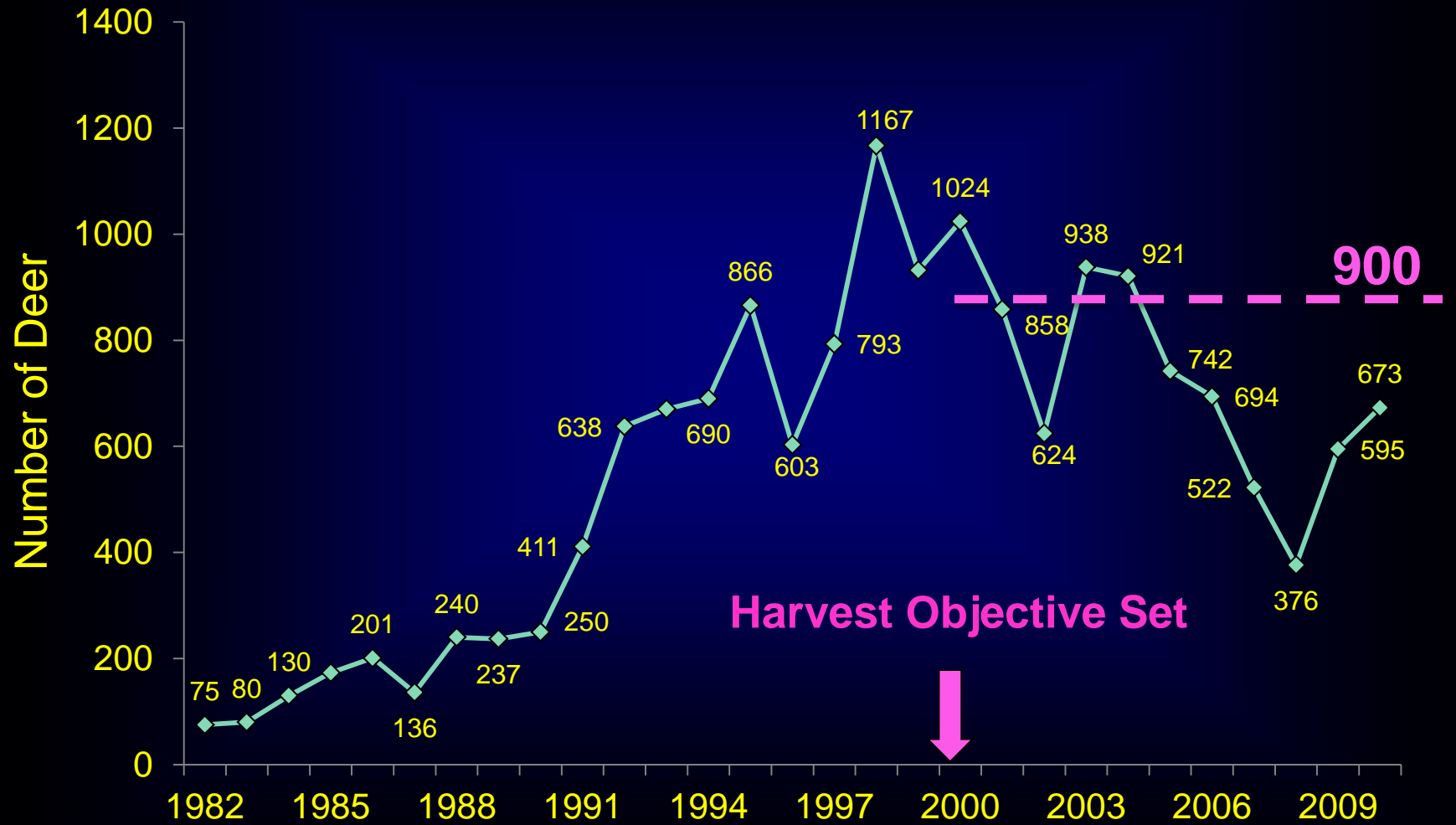
Current Measures of Deer Abundance

- *Deer hunter harvest reports (mandatory)*

- *Traditional pellet-group surveys*

  - *Provide only general trends in deer abundance over a number of years*
  - *Not a precise measure of deer abundance*
  - *Factors other than deer density can affect pellet group density (i.e. winter weather & snowfall)*
  - *Results must be interpreted carefully*
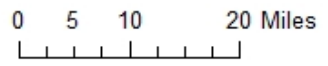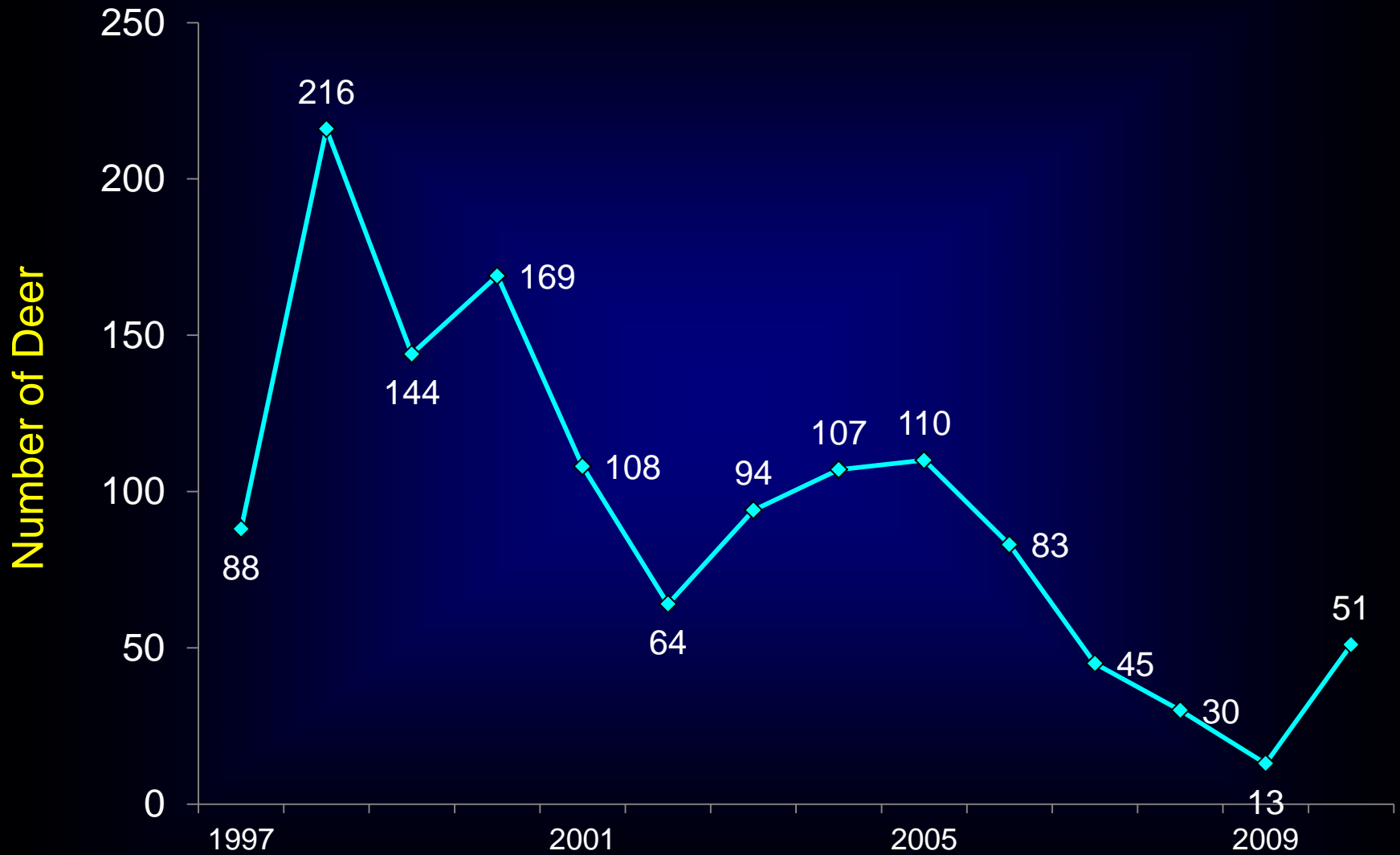 - *Dept. is testing a new DNA based approach to pellet-group transects*
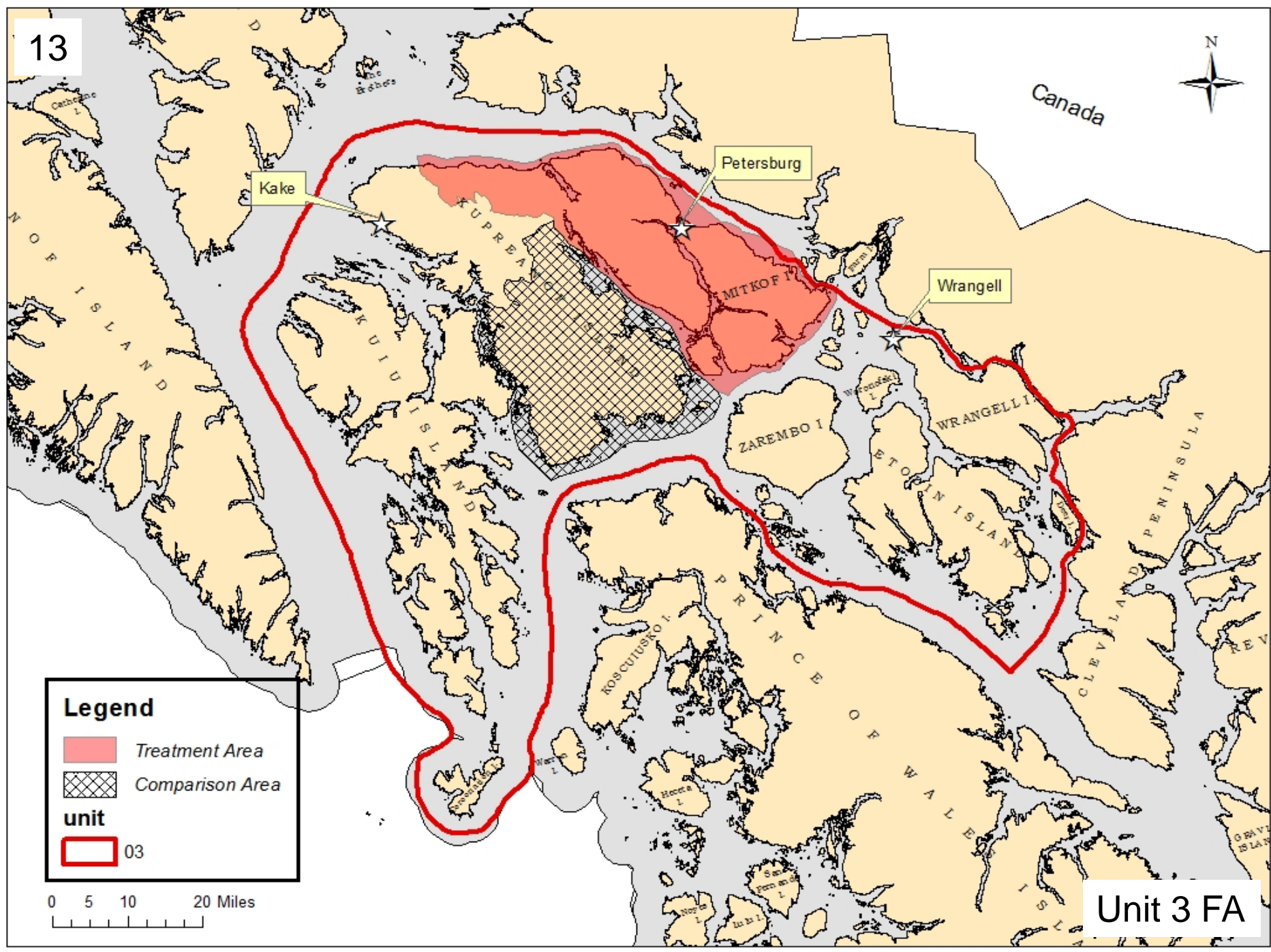
Unit 3 FA

Mitkof Island Deer Harvest

Unit 3 FA

N
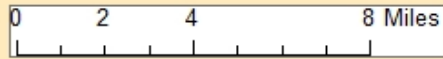
LINDENBERG PENINSULA

MITKOF ISLAND

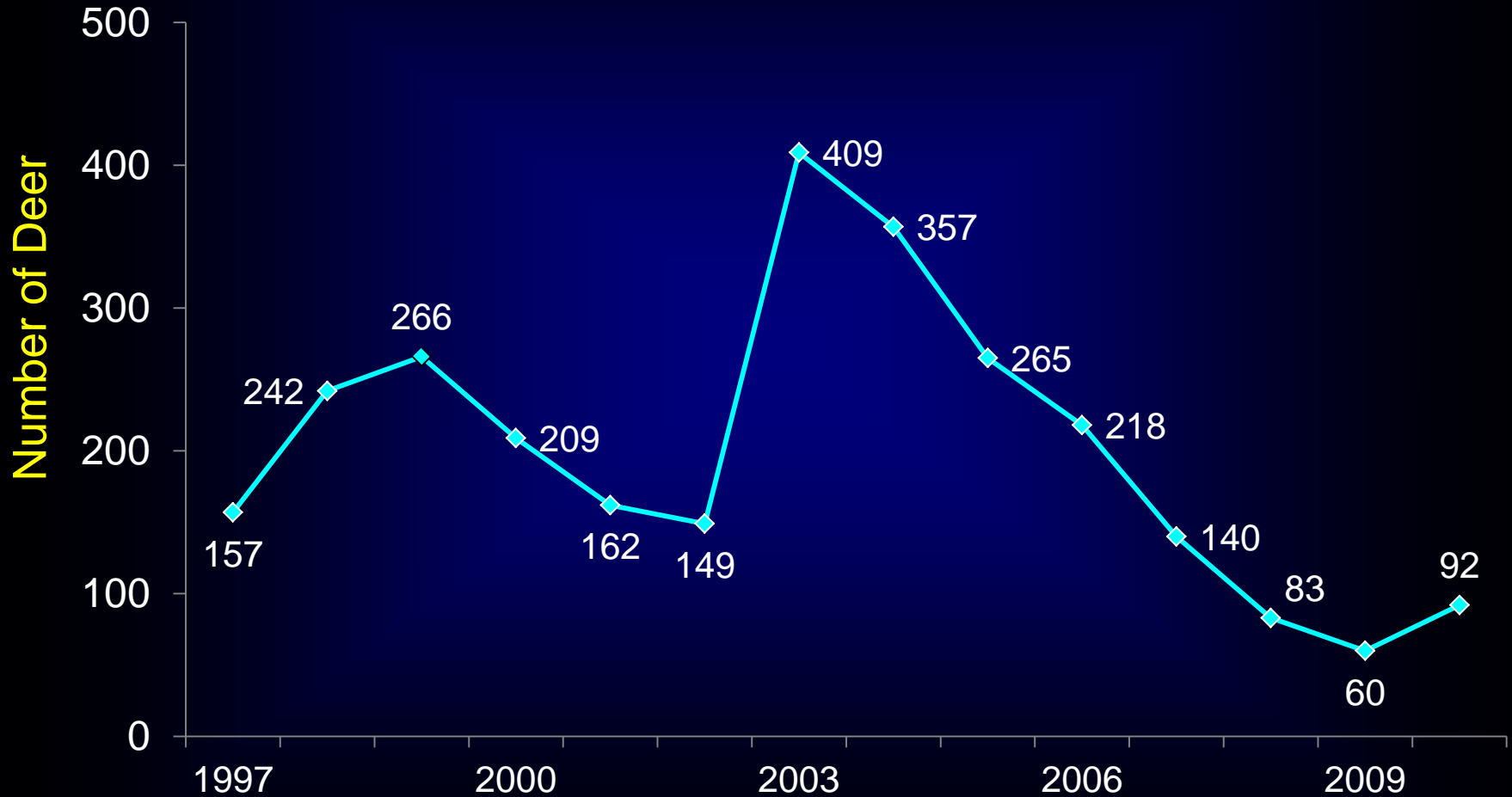**MITKOF IS. DEER PG TRANSECTS**

0   2   4   8 Miles

Unit 3 FA

Mitkof Island Pellet Group Density
(Woewodski VCU 448)

16
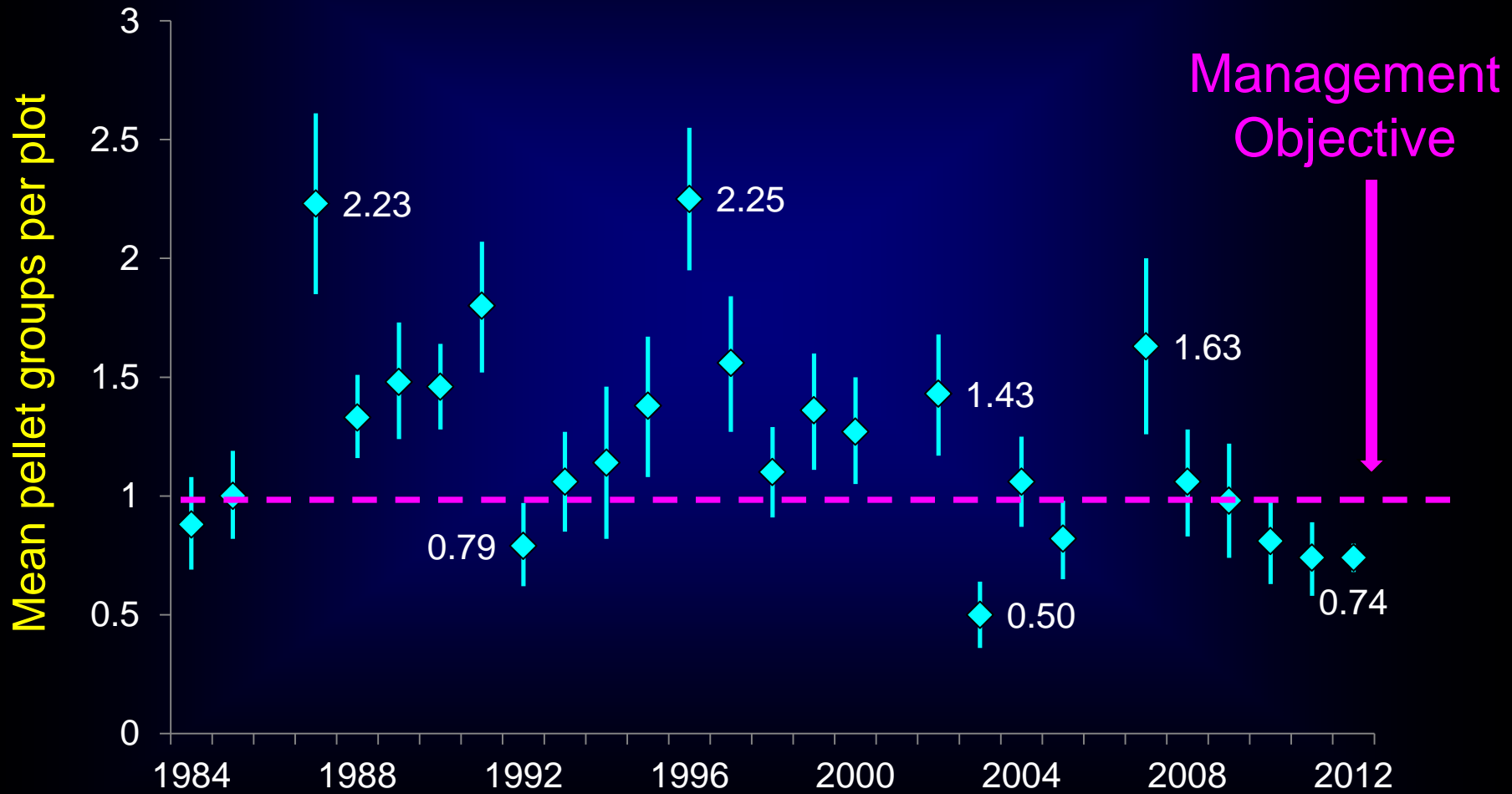
Kupreanof Island Deer Harvest

South Lindenberg Pellet Group Density
(East Duncan VCU 437)

Mean pellet groups per plot

1.12
0.78
1.04
1.89
1.37
0.64
0.60

Objective
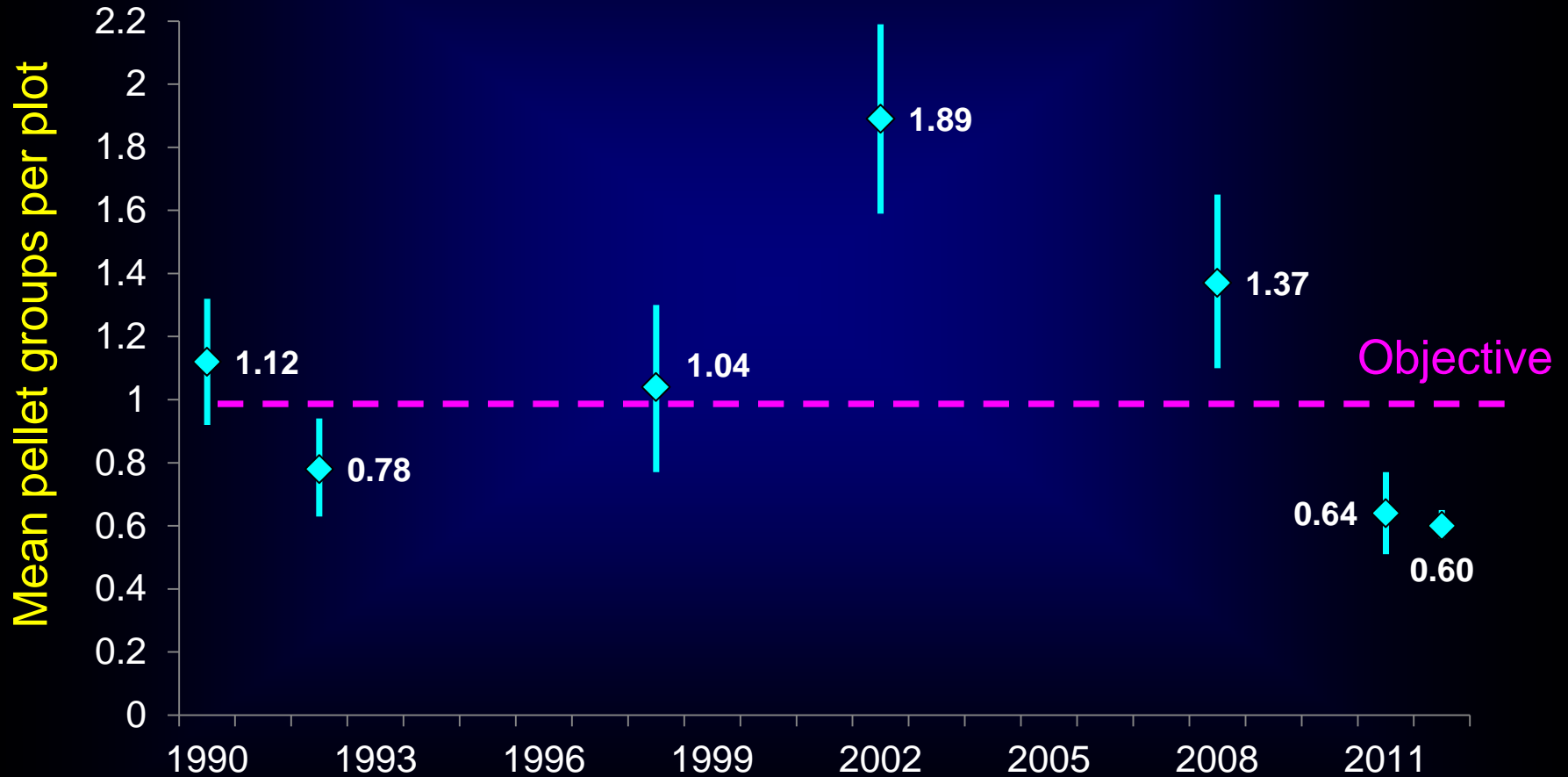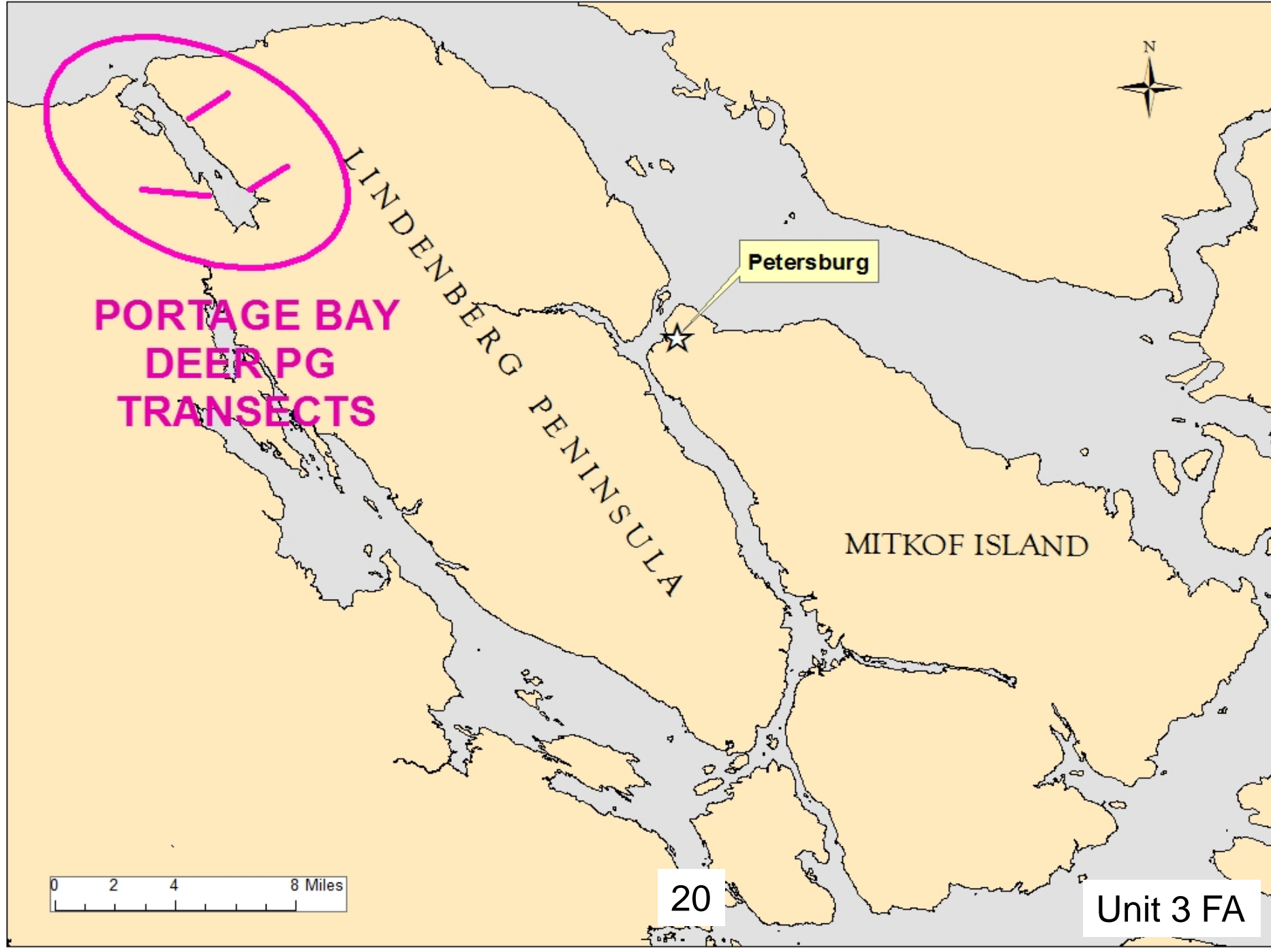
PORTAGE BAY
DEER PG
TRANSECTS

LINDENBERG PENINSULA

MITKOF ISLAND

Petersburg

N

0   2   4   8 Miles

20

Unit 3 FA

North Lindenberg Pellet Group Density
(Portage Bay VCU 442)

Objective

Mean pellet groups per plot

0.43 0.43 0.39 0.63

N
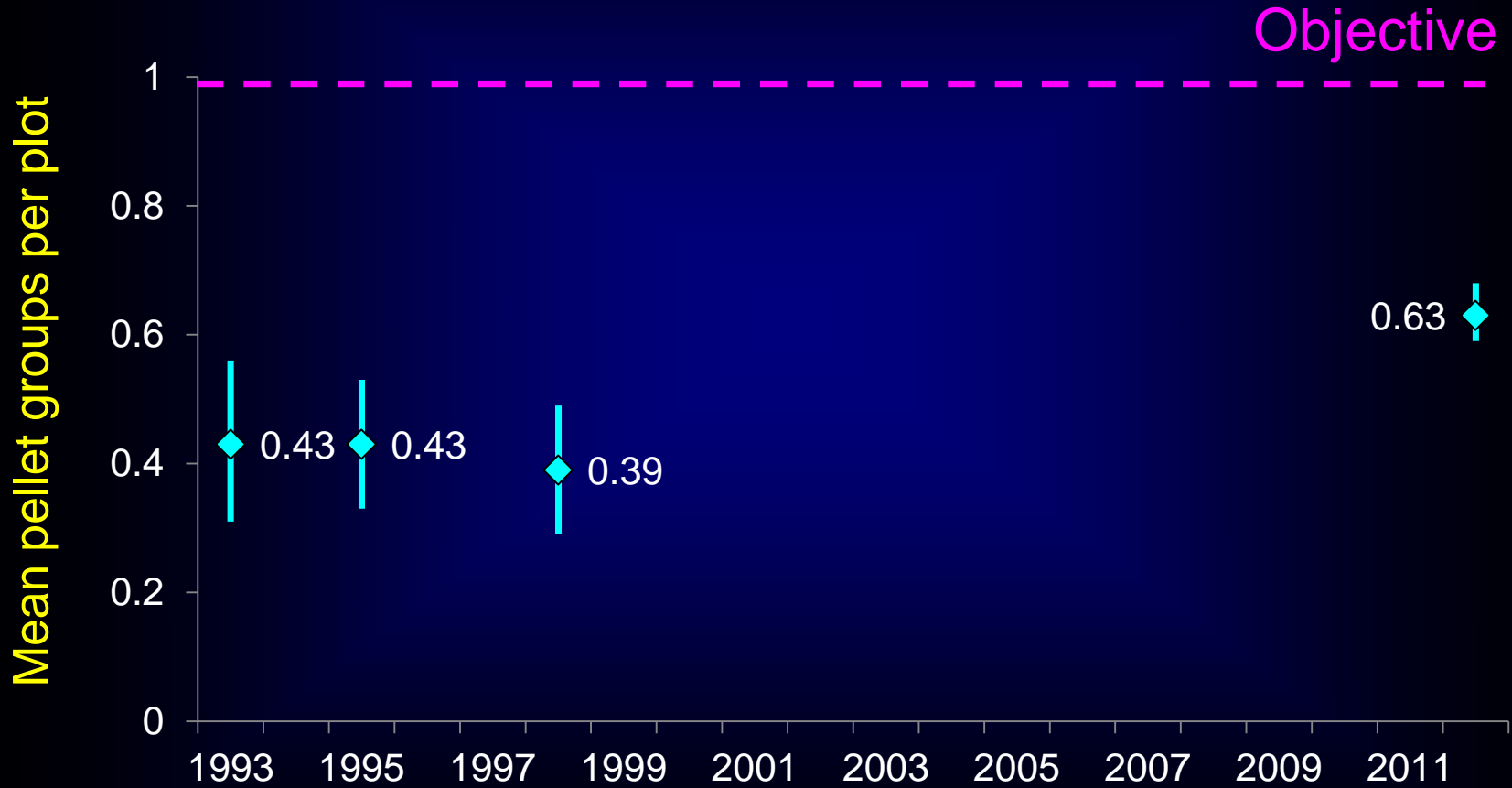
LINDENBERG PENINSULA

Petersburg

MITKOF ISLAND

CASTLE RIVER DEER PG TRANSECTS

| 0 | 2 | 4 | 8 Miles |

Unit 3 FA
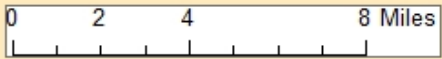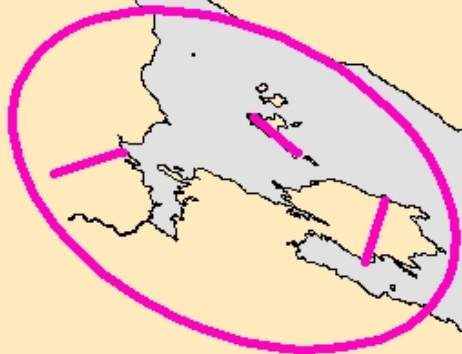
Castle River Pellet Group Density (VCU 442)
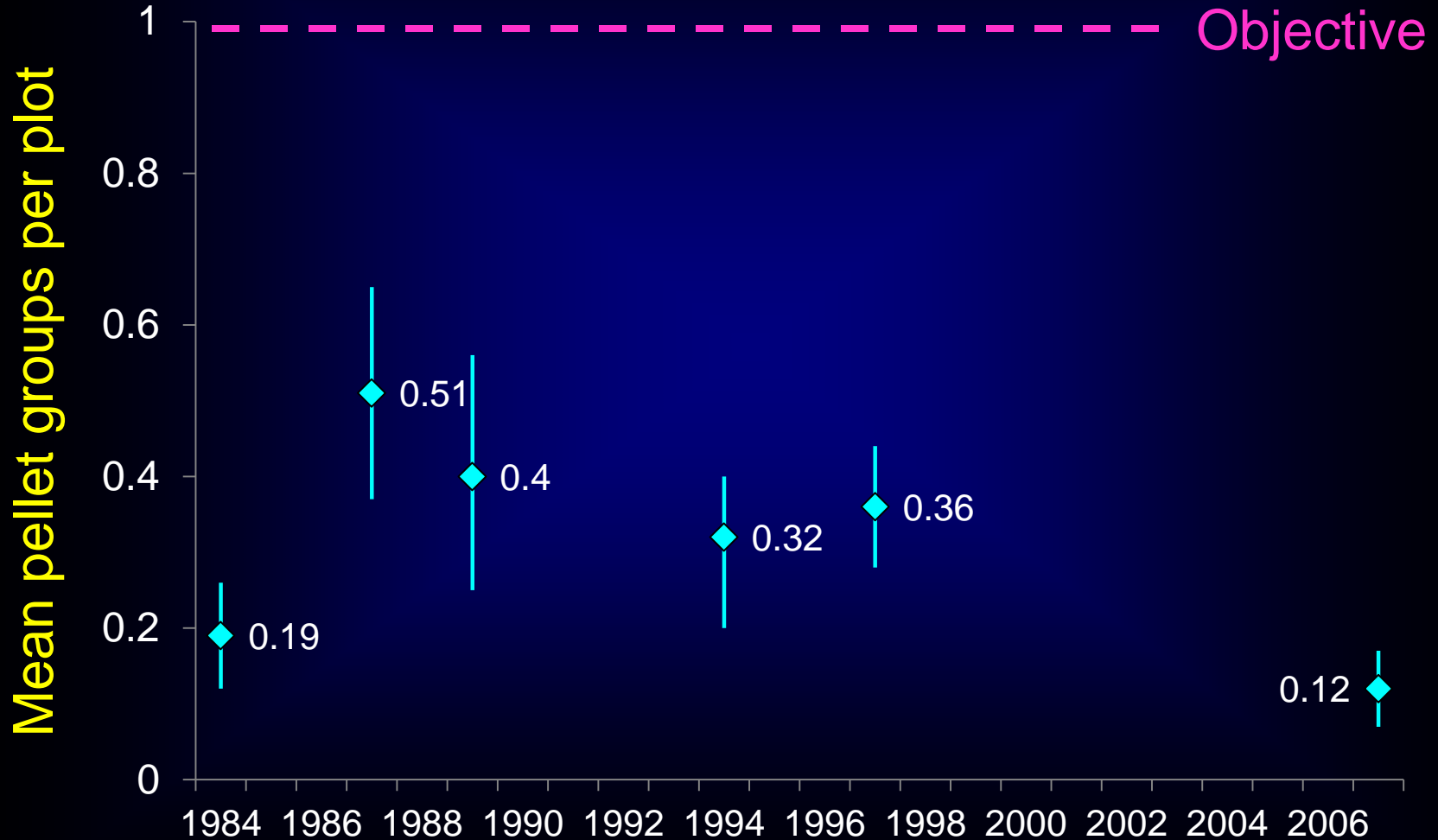
Zarembo Island Deer Harvest
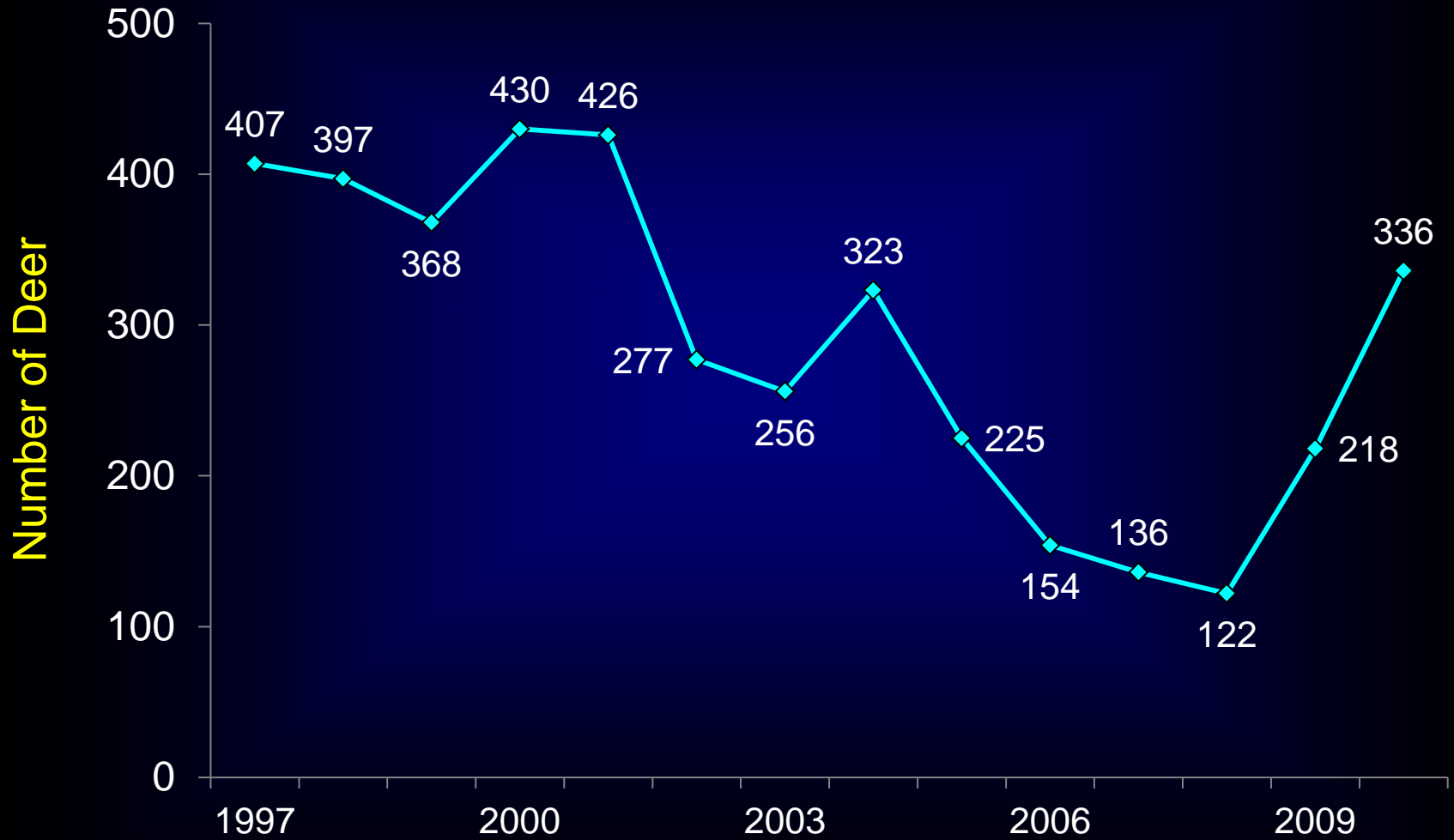
Factors Affecting Deer Populations

- *Deep snow winters*
- *Predation by wolves and bears*
- *Reductions in deer carrying capacity and important winter habitat*
- *Increased moose distribution & abundance*
- *Federal Designated hunter provision*

Unit 3 Wolves

Unit 3 FA

Unit 3 Wolf Harvest 1979-2011

Number of Wolves

No closed season,
No bag limit

1979 1982 1985 1988 1991 1994 1997 2000 2003 2006 2009

16, 12, 14, 16, 17, 7, 10, 10, 9, 10, 22, 19, 51, 26, 48, 54, 40, 59, 43, 34, 57, 59, 53, 73, 39, 41, 60, 44, 21, 55, 40, 54, 97

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Unit 3 FA

Unit 3 Wolf - Method of Take (2000-09)

other
2%

shot
39%

trapped
59%
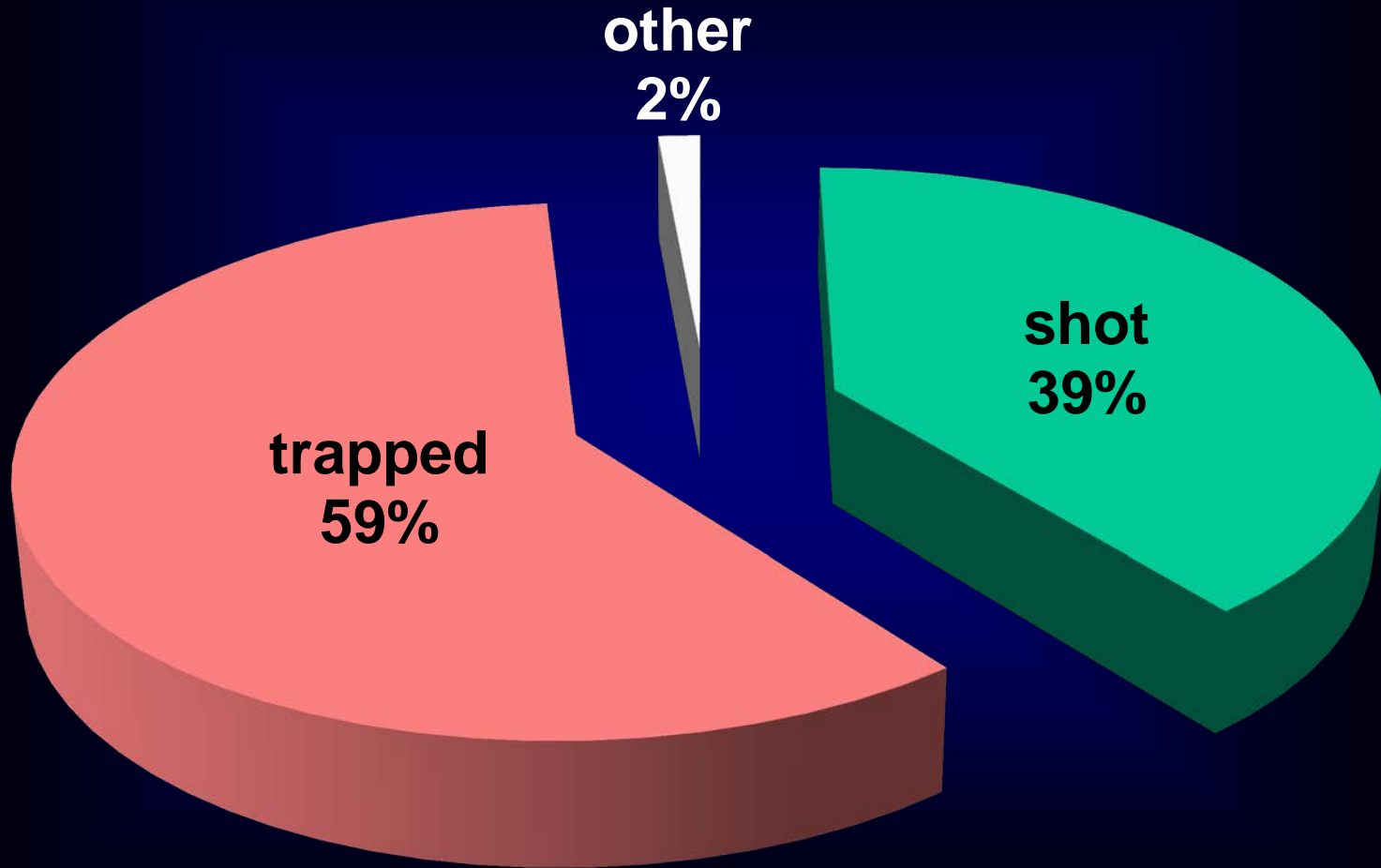
Wolf Population Estimates

- **No precise population estimates are available for Unit 3 wolves**

- **Unit 3 "estimate" is based on inferences from extensive wolf research conducted in adjacent Unit 2 (*Prince of Wales Island*).**

Estimation Parameters

Average home range size for pack …
- 304 km2 (117 mi^2) with SD = 40 km^2 (15 mi^2)

Average pack size …
- 8 wolves with SD = 1.5
- Plus 2 nonresident wolves
- Average of ~10 wolves per pack area

Estimated Unit 3 Wolf Population

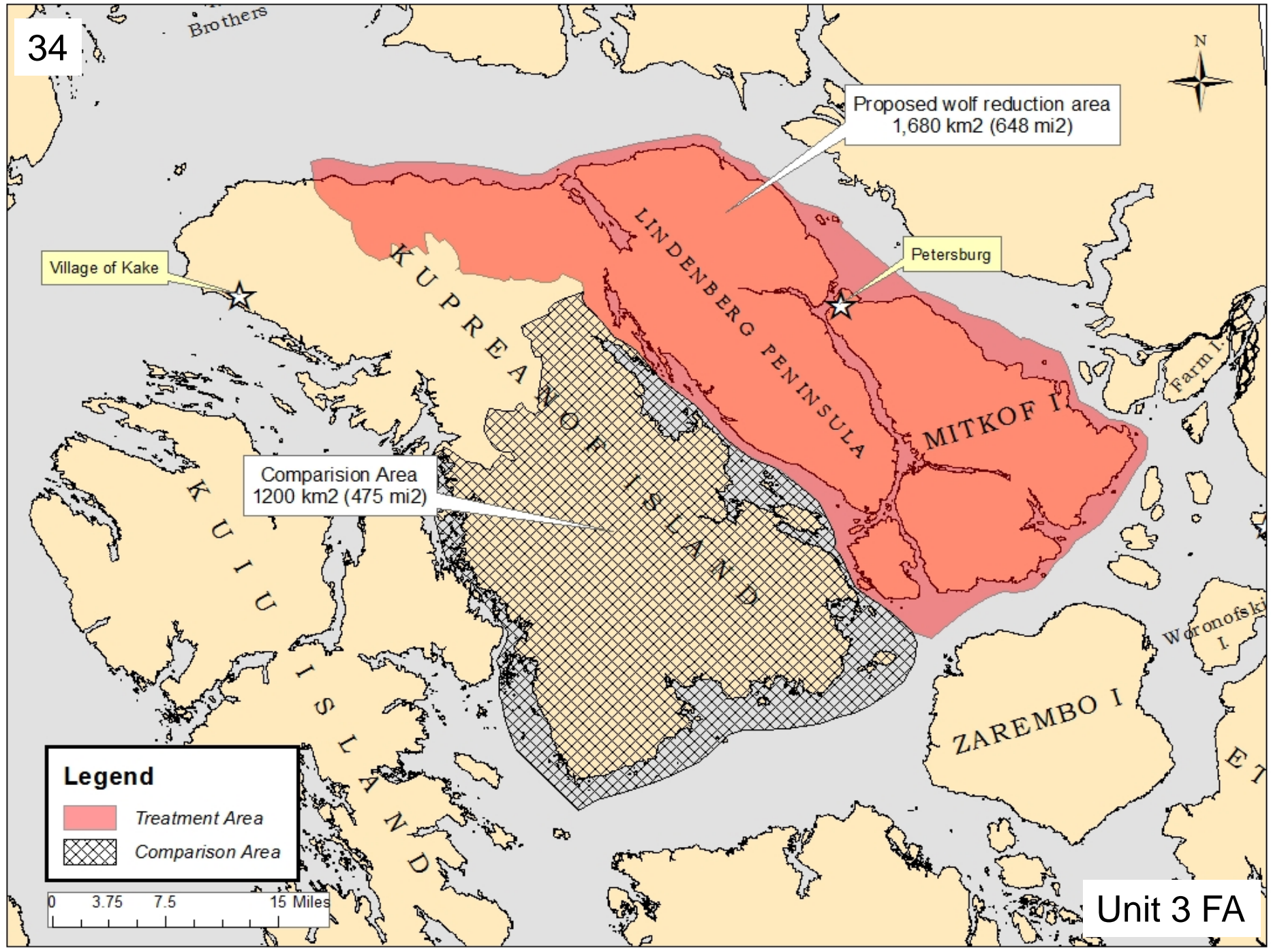| Population Estimate	Minimum Estimate	Maximum Estimate	Min. Density (Wolves per 1000 km^2)	Max Density (Wolves per 1000 km^2)	Number of Packs
250	130	380	17.3	50.7	~ 23

Major Unit 3 Islands = 2900 mi^2 or ~7500 km^2

Wolf Removal: *"an experimental approach to increase deer numbers in a portion of Unit 3"*

Proposed Activity…

- Hire 1 or 2 "experienced" trappers to intensively trap wolves in identified treatment area.

- Trapping would occur during the established trapping season (Nov 10 – Apr 30), and use standard trapping methods.

- Treatment area is not a "closed system" … wolves from adjacent non-treatment areas could easily move in to replace those that are removed .

- Continue trapping efforts for 4-5 years to maintain wolf population at 20% of pre-existing levels to address reproduction and immigration.

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Proposed wolf reduction area
1,680 km2 (648 mi2)

Petersburg

Village of Kake

LINDENBERG PENINSULA

KUPREANOF ISLAND

MITKOF I.

Comparision Area
1200 km2 (475 mi2)

KUIU ISLAND

Brothers

Farm I.

Woronofski I.

ZAREMBO I.

ET

N

Legend

Treatment Area

Comparison Area

0   3.75   7.5   15 Miles

Unit 3 FA

Experimental Aspects and Data Needs

- Would be first IM effort in SE Alaska
  - effectiveness of trapping alone unknown
- Traditional IM methods (aerial shooting) not feasible
- Can we measure progress toward IM objectives?
  - Accurately measure hunter harvest and CPUE?
  - Obtain "good" data on deer and wolf numbers?
  - Detect & measure changes in deer and wolf abundance?

  Unlike moose & caribou in other regions, we cannot survey deer and wolves from the air in Region I

ESA Listing Petition

- The U.S. Fish and Wildlife Service is currently reviewing a petition to list the *Alexander Archipelago wolf* as threatened or endangered under the Endangered Species Act.

- Although the department does not have conservation concerns for wolves anywhere in Alaska, the petition to list wolves in Southeast AK may result in opposition to this IM program.

Estimated Wolf Population

Kuiu + Kupreanof + Mitkof + Woewodski
- Land Area: 5335 km^2 or 2060 mi^2
- 10 wolves per 308 km^2
- Estimated 180 wolves

Treatment Area
- Land Area: 1680 km^2 or 649 mi^2
- 10 wolves per 308 km^2
- Estimated ~ 60 wolves

Removal Target (80%) = 50 wolves

Treatment Area Removal Target

- **Target removal (80%) = 50 wolves**

- **Treatment area = 22% of Unit 3 area**

- **Target of 50 = 20% of unitwide population. Or … 28% of the wolf population in the 4-island complex**

- **If 50 wolves are removed from treatment area, and harvest on the remaining portion of the 4 island complex continues at average historical levels (~ 33 wolves / year), approximately 45% of the wolf population in the 4-island complex would be removed.**

Measuring Progress Toward IM Objectives

- *Monitor trend in reported deer harvest*
- *Monitor CPUE (hunter days per deer)*
- *Monitor trend in deer abundance*

  - *Traditional pellet-group counts*
  - *DNA based pellet-group analysis*
  - *Camera-trap surveys*
  - *Alpine trend count surveys*
  - *Winter track-count surveys (deer and wolves)*
  - *Roadside spotlight surveys*

Summary

- *There is currently no formal proposal for Board consideration*

- *The Department's intent here is simply to provide an overview of a "potential" IM action we are considering*

- *A Feasibility Assessment outlining this experimental IM concept has been prepared and submitted for Board review & comments*

- *At this point … we are seeking Board direction as to whether or not we should develop a formal IM proposal for future Board consideration*