

# UNIT 3 – DEER

## PROPOSAL 179A

**Intensive Management Plan for Deer  
in a Portion of Unit 3**

- **Department Proposal**

**Department Recommendation:**

**Adopt**

# Presentation Outline

## *Unit 3 and Proposed Treatment Area*

- Maps of Unit 3 and IM Area

## *Unit 3 Deer*

- IM population and harvest objectives
- How IM objectives were established
- ANS
- Unit 3 estimated deer harvest
- Treatment area deer harvest
- Factors affecting deer populations
- Current measures of abundance

## *Unit 3 Wolves*

- Unit 3 wolf harvest
- Population estimation parameters
- Population estimates

# Presentation Outline

## *Intensive Management Plan*

- Proposed IM activity
- Feasibility Assessment
- Operational Plan
  - Response metrics
  - Decision thresholds
- Study area map
- Wolf removal target
- Data needs

## *Data Needs*

- Research options

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CANADA

Juneau

05



01

Kake

Petersburg

04

03

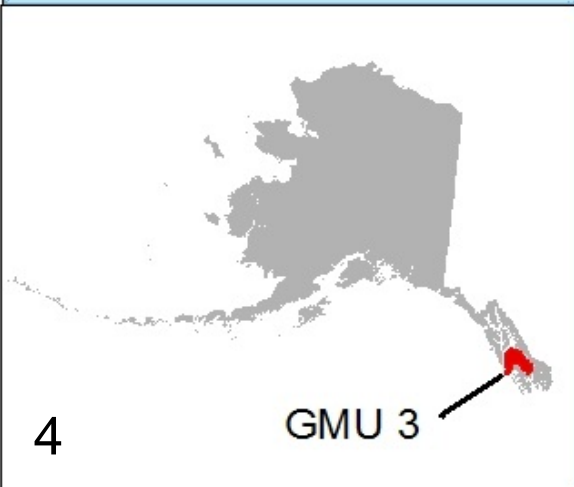
Sitka

Wrangell

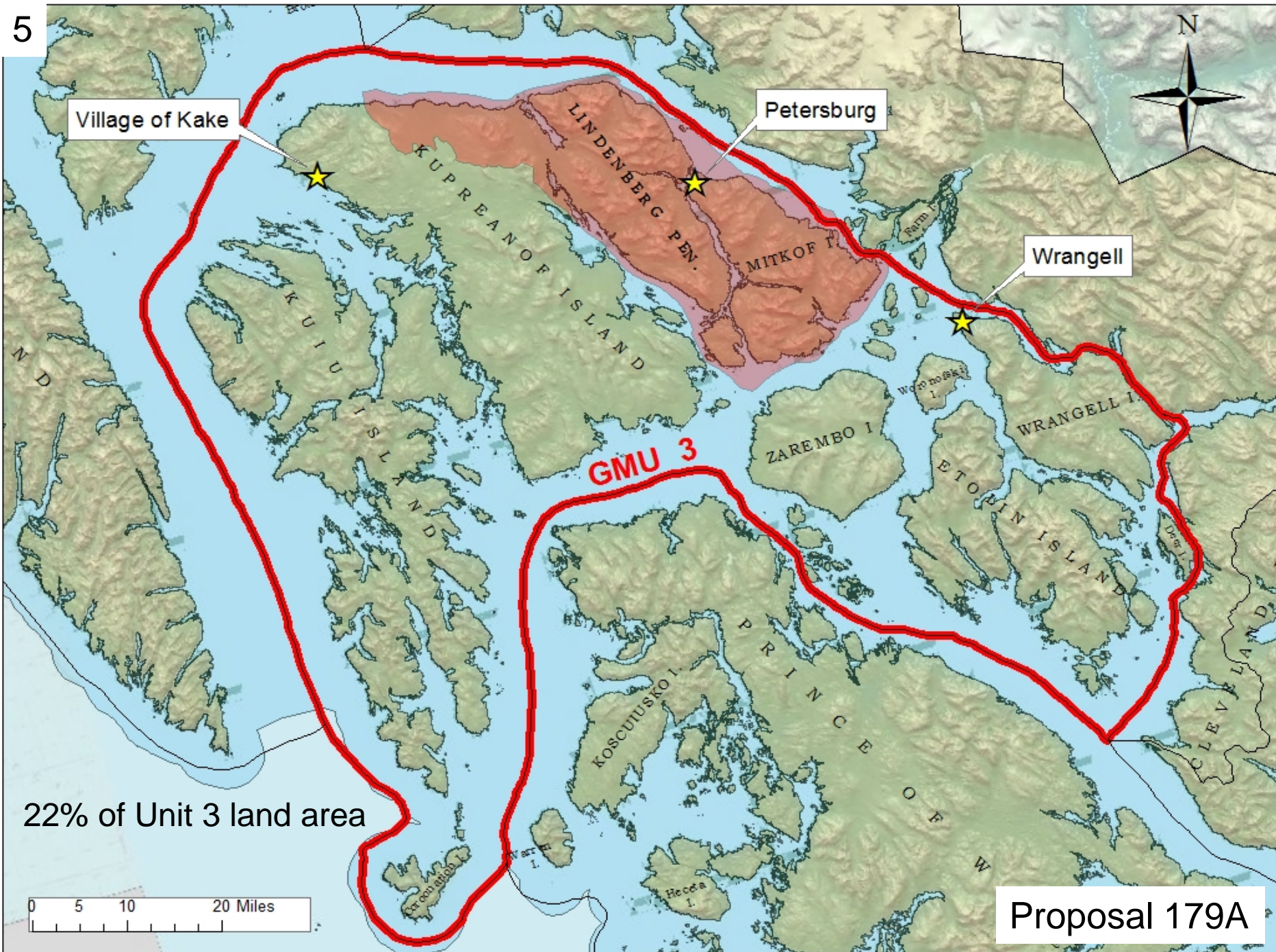


Ketchikan

02



5



Village of Kake

Petersburg

Wrangell

GMU 3

22% of Unit 3 land area

0 5 10 20 Miles

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# Unit 3 Deer



# IM Objectives for Unit 3 Deer

<u>IM Population</u>	<u>Population Objective</u>	<u>Harvest Objective</u>
Unit 3	15,000	900

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

# How Were the IM Objectives Derived?

Unit 3 IM Objectives were set in fall 2000

## Harvest Objective (900 deer)

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

## Population Objective (15,000 deer)

- Based on US Forest Service estimate of (1995) deer winter habitat capability in Unit 3
- Area Biologist's subjective assessment of where the deer population stood relative to carrying capacity (K)
- Finally, the desired deer density relative to estimated K



# Amount Necessary for Subsistence

ANS

Finding

Objective

Unit 3

Positive

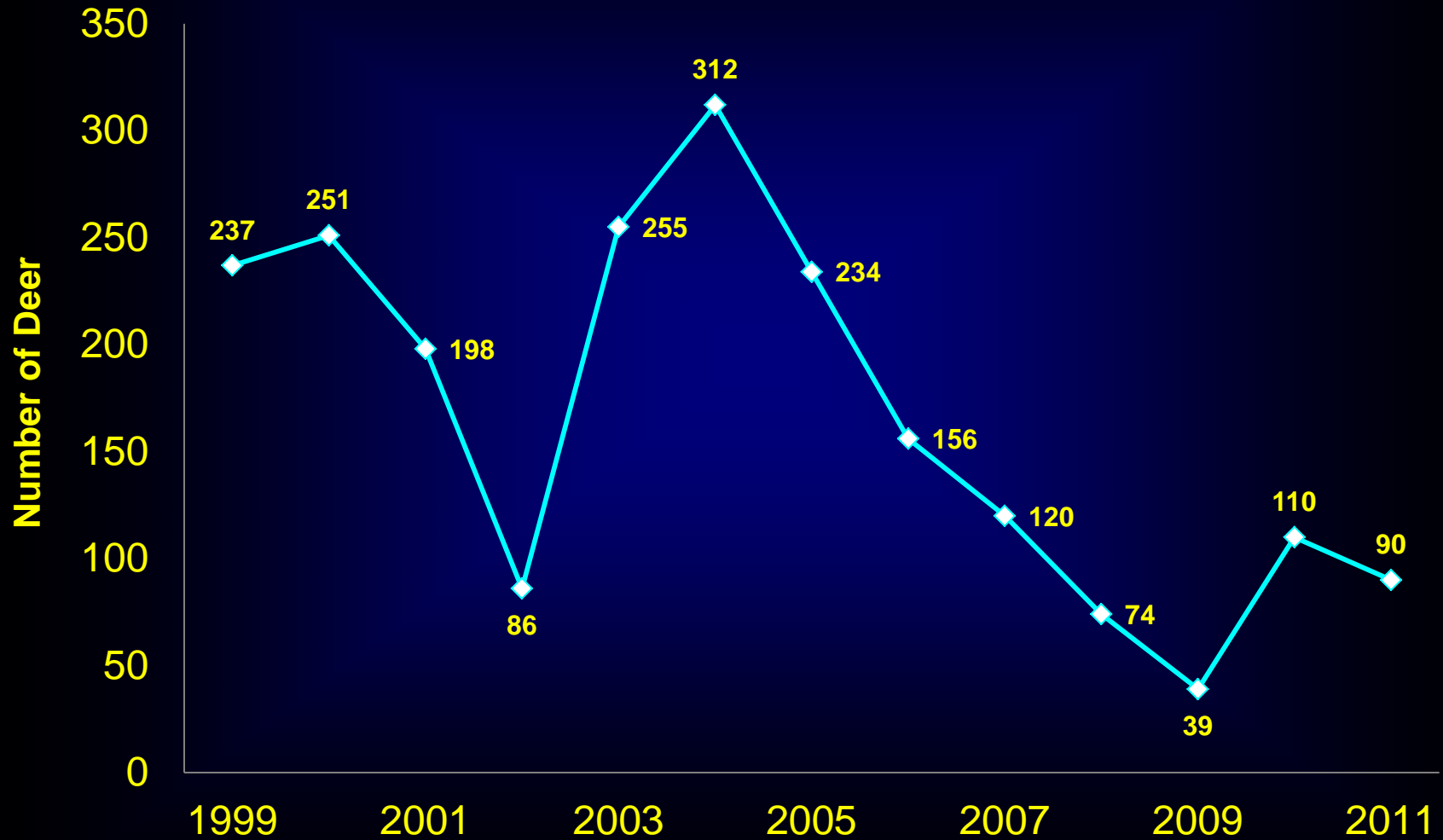
150 – 175 deer

- ANS consistently achieved

# GMU 3 Estimated Deer Harvest



# Treatment Area Deer Harvest



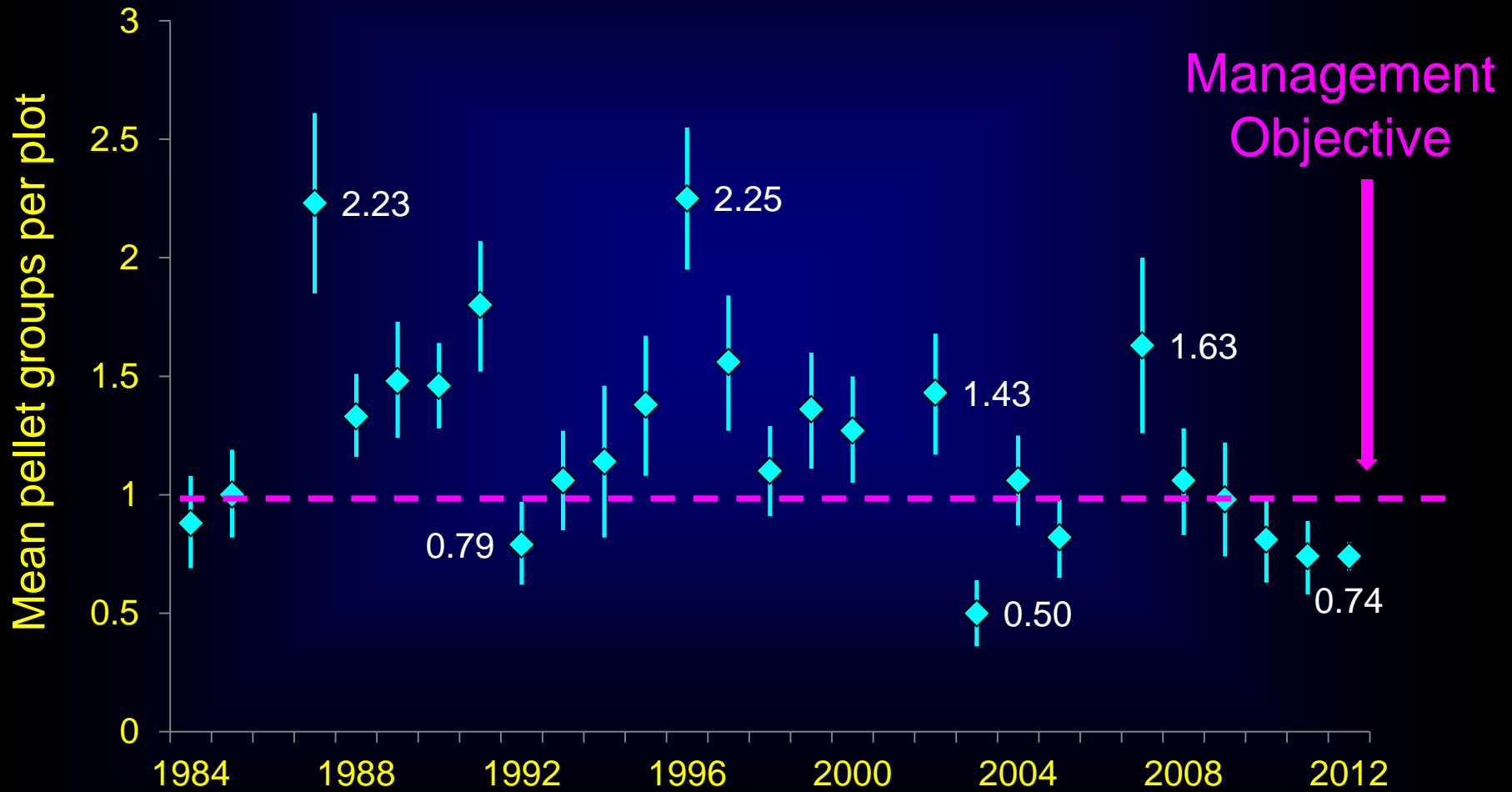
# Factors Affecting Deer Populations

- *Deep snow winters*
- *Predation by wolves and bears*
- *Reductions in deer carrying capacity and important winter habitat*
- *Increased moose distribution & abundance*
- *Hunter harvest*

# Current Measures of Deer Abundance

- *Deer 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*
  - *Department is testing a new DNA based approach to pellet-group transects*

# Mitkof Island Pellet Group Density (Woewodski VCU 448)

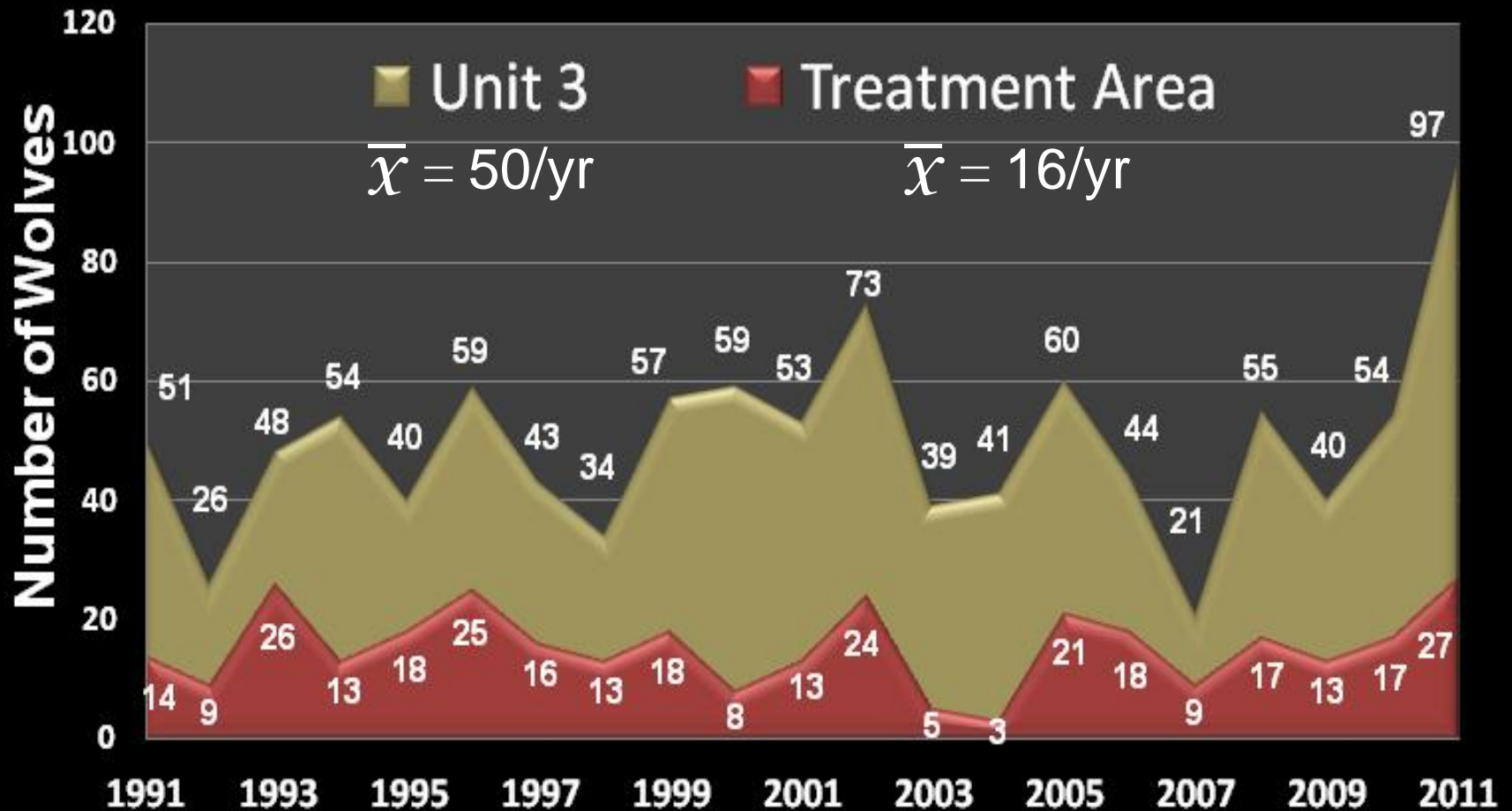


# Unit 3 Wolves



# Wolf Harvest

## Unit 3 and Treatment Area





# 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*).

# Wolf Estimation Parameters

## Average home range size for pack ...

- 304 km<sup>2</sup> (117 mi<sup>2</sup>) with SD = 40 km<sup>2</sup> (15 mi<sup>2</sup>)

## Average pack size ...

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

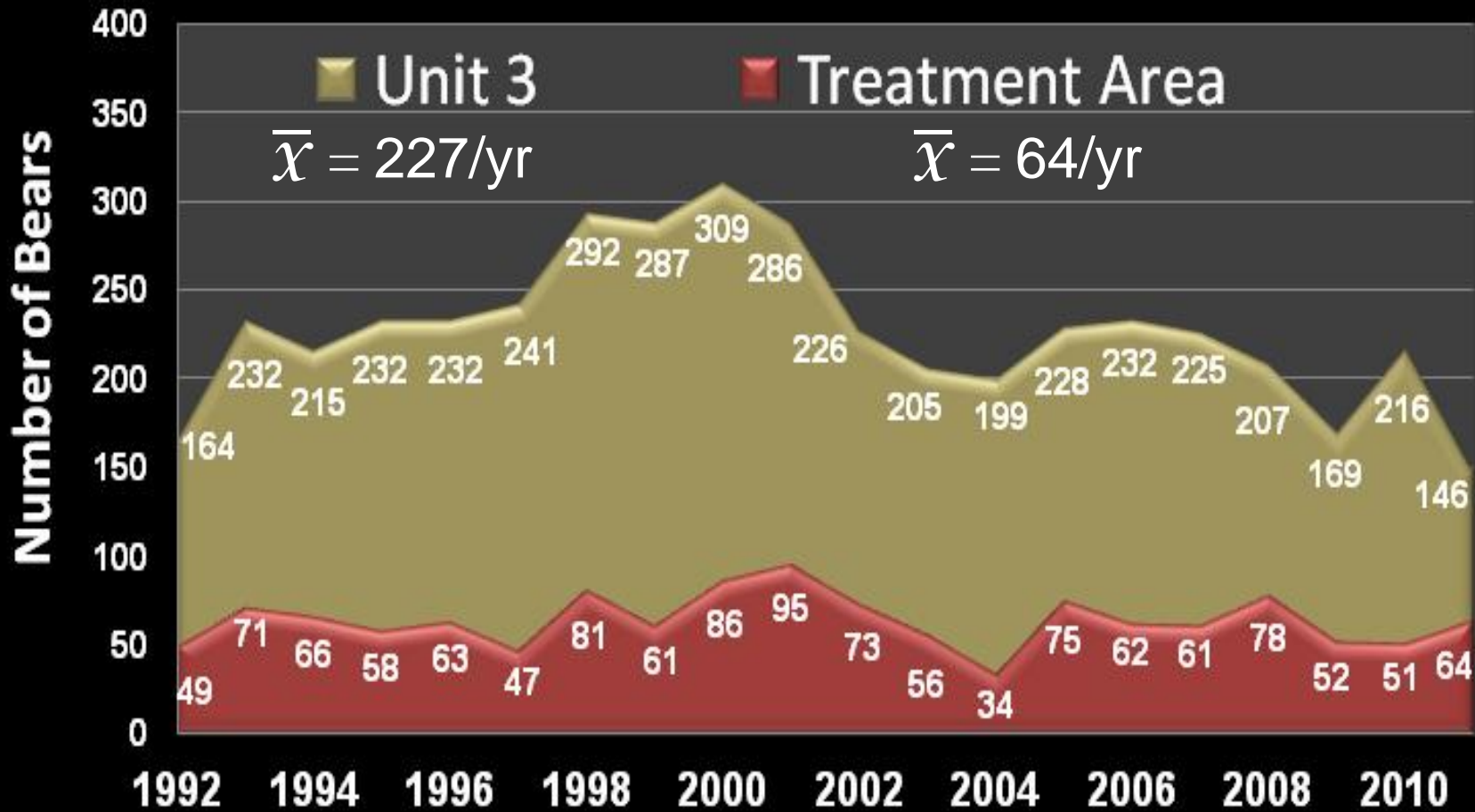
# Estimated Unit 3 Wolf Population

Population Estimate	Minimum Estimate	Maximum Estimate	Min. Density (Wolves per 1000 km <sup>2</sup> )	Max Density (Wolves per 1000 km <sup>2</sup> )	Number of Packs
<b>250</b>	<b>130</b>	<b>380</b>	<b>17.3</b>	<b>50.7</b>	<b>~ 23</b>

Major Unit 3 Islands = 2900 mi<sup>2</sup> or ~7500 km<sup>2</sup>

# Black Bear Harvest

## Unit 3 and Treatment Area



# Intensive Management



# Proposed IM Activity...

- Hire 1 or 2 “experienced” trappers to intensively trap wolves within designated treatment area.
- Trapping would occur during the established trapping season (Nov 10 – Apr 30), using standard trapping techniques.
- 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 (10 wolves) to address reproduction and immigration.
- Time Frame ... Fall 2014 – June 30, 2019

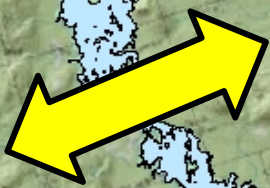
23

**Unit 3**

**UNIT 1B  
MAINLAND**

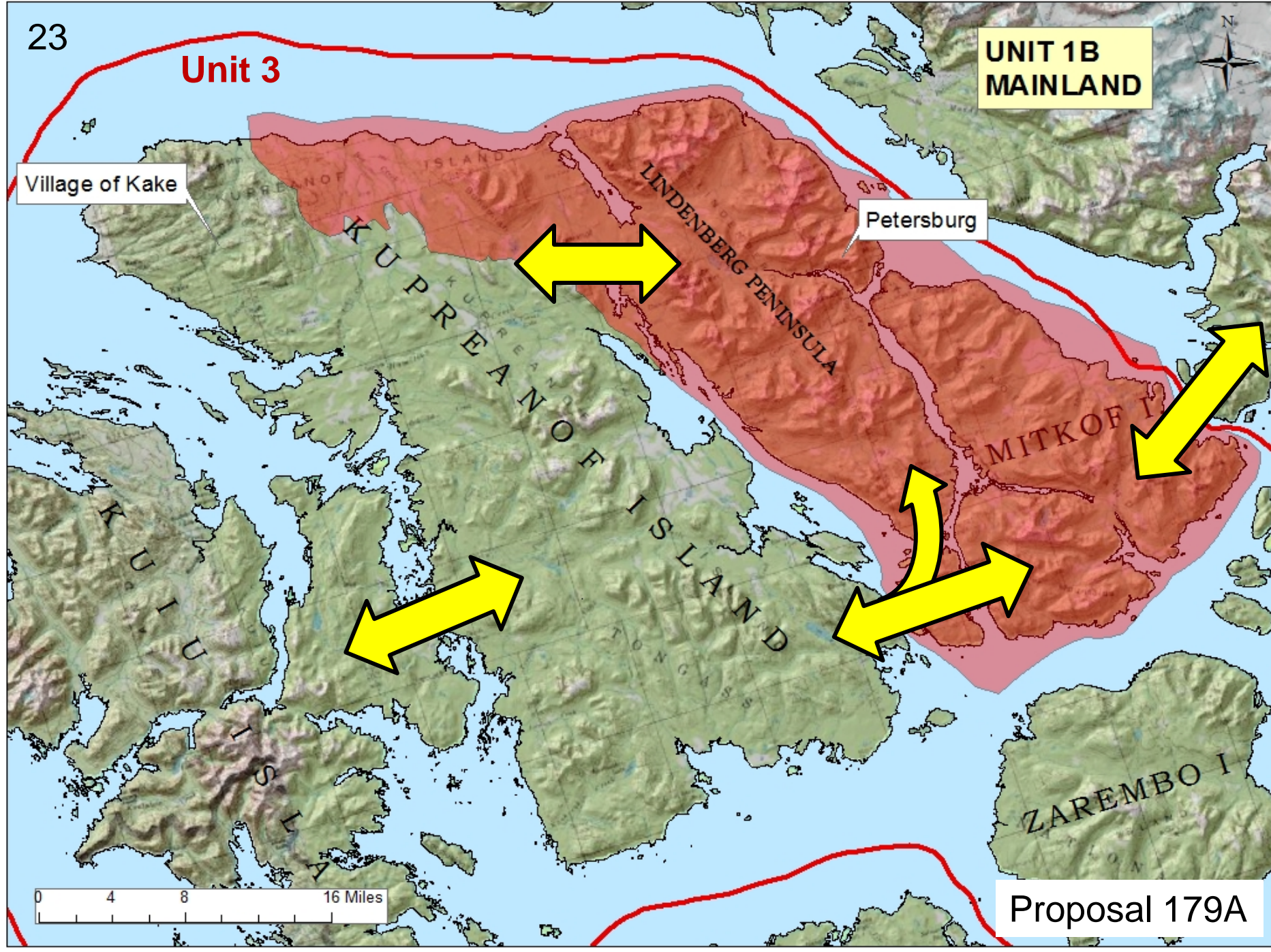
Village of Kake

Petersburg



0 4 8 16 Miles

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# Feasibility Assessment

- Land ownership patterns suitable for IM actions
- Numerous factors potentially contributing to low deer numbers
- Wolf control alone may not return the deer population or harvest back to IM objective levels
- Numerous pre-treatment data needs for both deer and wolves
- Wolf removal may allow reallocation of deer from wolves to human harvest






Unit 1B  
Mainland

Petersburg

Village of Kake


KUPREANOF ISLAND  
LINDENBERG PENINSULA  
MITKOF I.  
ZAREMBO I


**Legend**

 Treatment Area


**Land Status**

**LSNOTES**


 Federal Admin USFS


 State of Alaska

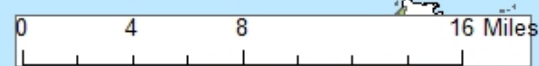
 Sealaska Regional Corp

 City of Petersburg

 Organized Village of Kake

 Kake Tribal Corporation

 City of Kupreanof



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# Operational Plan

(response metrics)

- **Monitor trend in reported deer harvest**
- **Monitor CPUE (hunter days per deer)**
- **Monitor trend in deer abundance**
  - *Traditional and path-sampling 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*

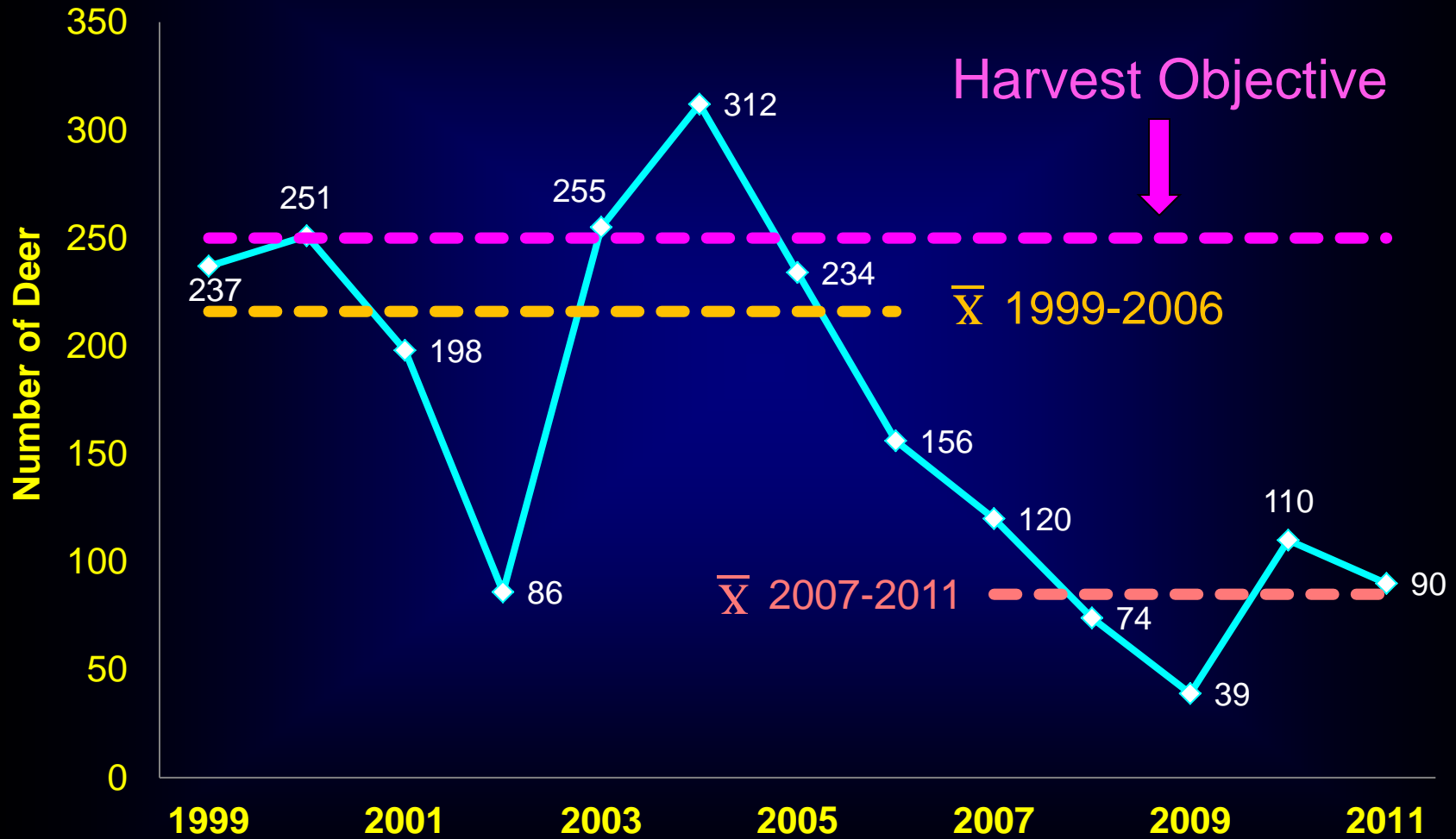
# Operational Plan

(decision thresholds)

## Deer

- if deer abundance is reliably determined to have tripled in the treatment area, control will be suspended.
- if deer abundance has not increased significantly relative to the program objective within 3- 5 years we will reevaluate the program, make changes or suspend it.

# Deer Harvest Objective For Treatment Area

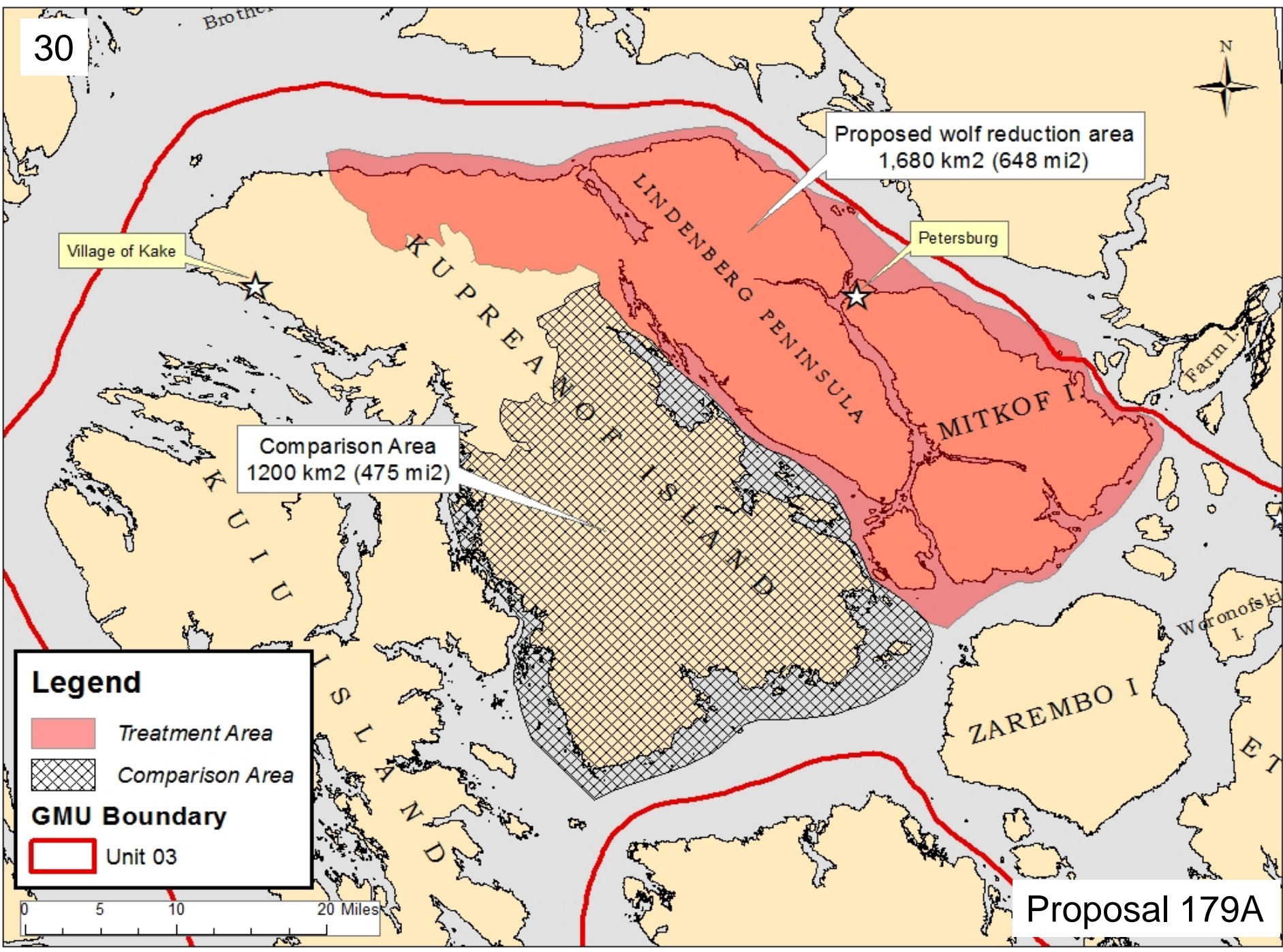


# Operational Plan

(decision thresholds)

## Wolves

- if indices of wolf abundance indicate that wolf control has been effective (i.e. most wolves have consistently been removed from the treatment area each year), but indices of deer abundance have not measurably changed in the treatment area, the program will be reevaluated.
- if the wolf population estimate for the treatment area reliably falls below the minimum management objective of 10 wolves, predator control activities will be suspended





Proposed wolf reduction area  
1,680 km<sup>2</sup> (648 mi<sup>2</sup>)

Village of Kake


Petersburg

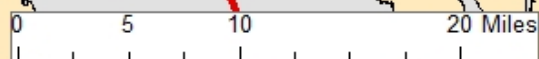
Comparison Area  
1200 km<sup>2</sup> (475 mi<sup>2</sup>)

**Legend**

-  Treatment Area
-  Comparison Area

**GMU Boundary**

-  Unit 03



# Estimated Wolf Population

## Kuiu + Kupreanof + Mitkof + Woewodski

- Land Area: 5335 km<sup>2</sup> or 2060 mi<sup>2</sup>
- 10 wolves per 308 km<sup>2</sup>
- Estimated 180 wolves

## Treatment Area

- Land Area: 1680 km<sup>2</sup> or 649 mi<sup>2</sup>
- 10 wolves per 308 km<sup>2</sup>
- Estimated ~ 60 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 estimated wolf population in the 4-island complex
- If normal hunter and trapper harvest continues as historic levels (~ 16 wolves / year) within the treatment area , then we would need to remove about 34 additional wolves to achieve desired 80% reduction
- Continue trapping effort as necessary to maintain wolf population in treatment area at 10 wolves.



# Data Needs

- Would be first IM effort in SE Alaska
  - effectiveness of trapping alone is 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

# Research Options

- Deer
  - Browse evaluation
  - Traditional pellet group surveys / path sampling / DNA?
  - Alpine trend count surveys
  - Snow track surveys
  - Spotlight surveys
  - Camera trap surveys
  - Radio telemetry study
- Wolves
  - Snow track surveys
  - Camera trap surveys
  - Hair snaring
  - Radio telemetry study

# 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.

# RECOMMENDATION

## Proposal 179A

**Intensive Management Plan for Deer  
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**Department Recommendation**

**Adopt**