

Deer & Tick Management Data Summary



Town of Shelter Island
2019



Overview

- What we're tracking
 - What we're seeing
 - Where we're going
 - What it costs
 - Summary
- Questions/Comments



Measuring Progress

- Browse Survey
- Camera Survey
- Corn Consumption
- Deer-Vehicle Collisions
 - Doxycycline Rx
 - Harvest Data
- Spotlight Survey
 - Tick Drags



Browse Survey

Ten-Tallest Method

Advantages

- Direct measurement
- Minimal investment

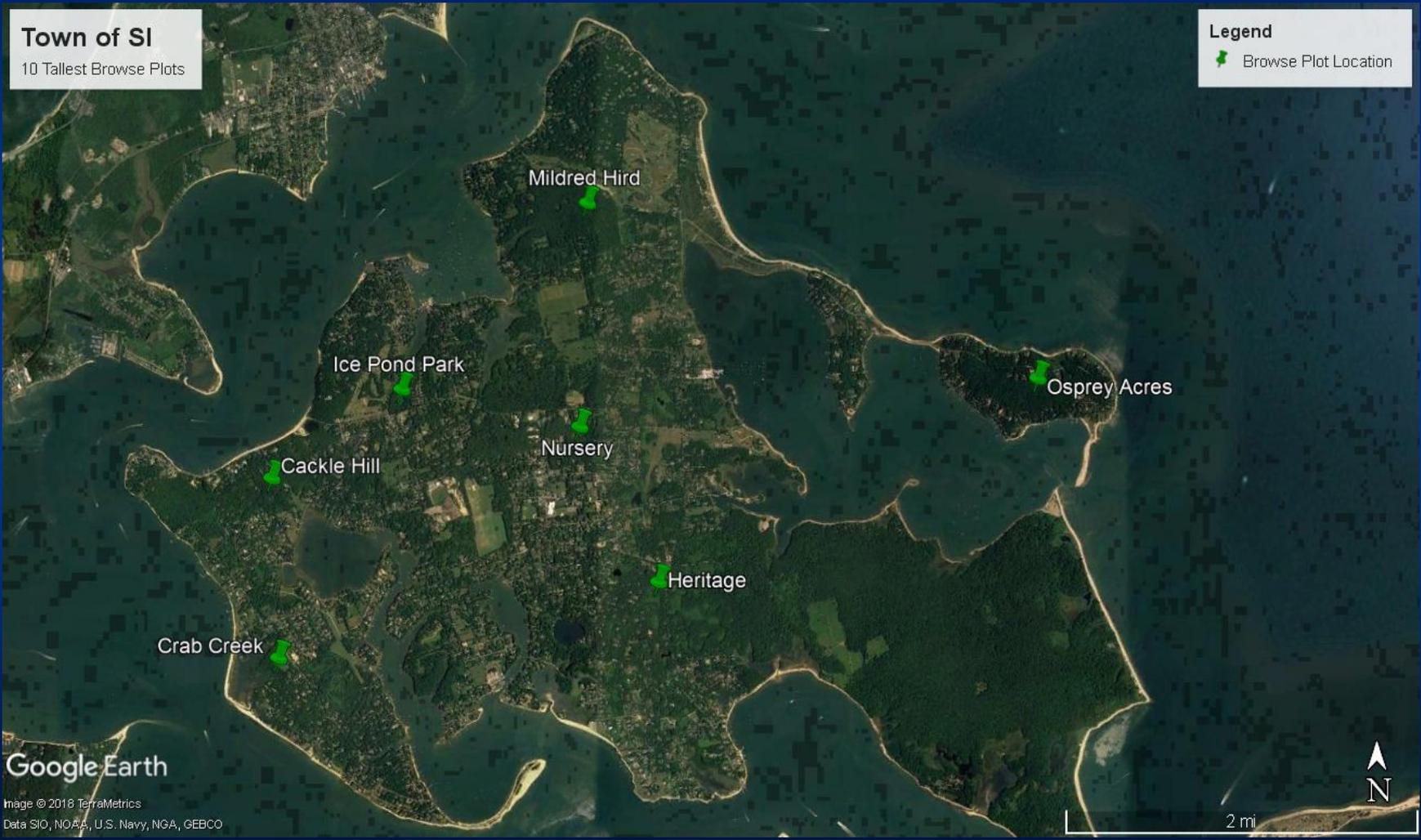
Disadvantages

- Long return interval
- Herbivory variability



Browse Survey

Ten-Tallest Method

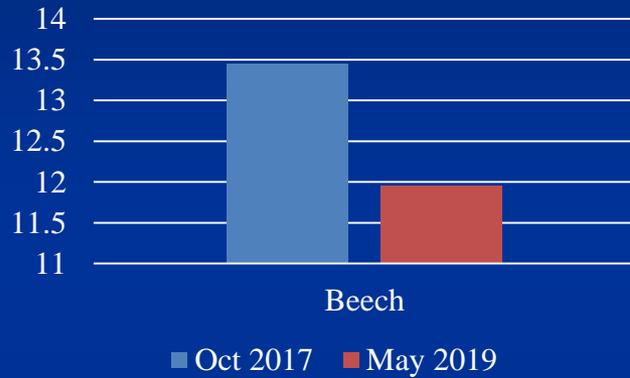




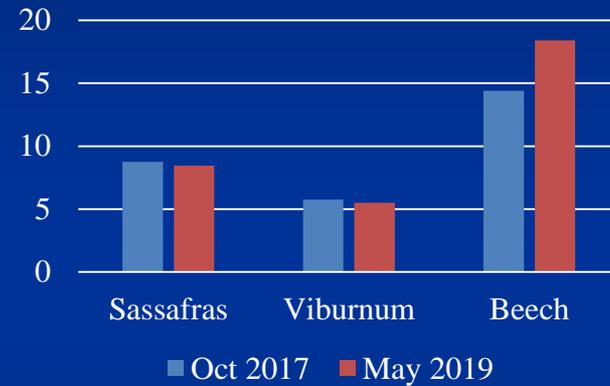
Browse Survey

Ten-Tallest Method

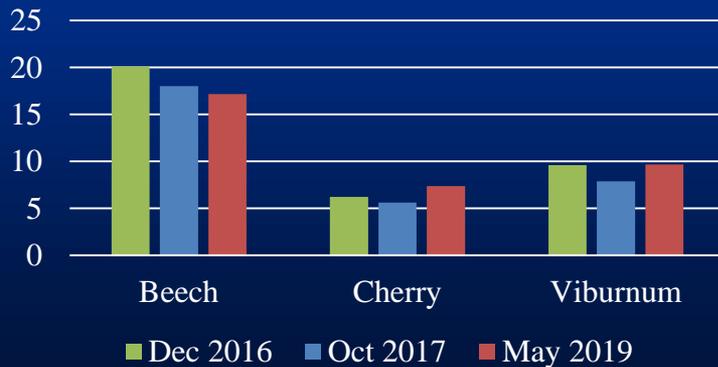
Crab Creek



Cackle Hill



Mildred Hird



Osprey Acres





Camera Survey

Branch-antlered Buck Method

Advantages

- Passive measurement
 - Widely used

Disadvantages

- Time intensive
- Observer bias/error



Camera Survey

Branch-antlered Buck Method



Town of SI Camera Survey
2016 & 2017

Legend
📌 Camera Site

Google Earth

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image © 2019 TerraMetrics
© 2018 Google

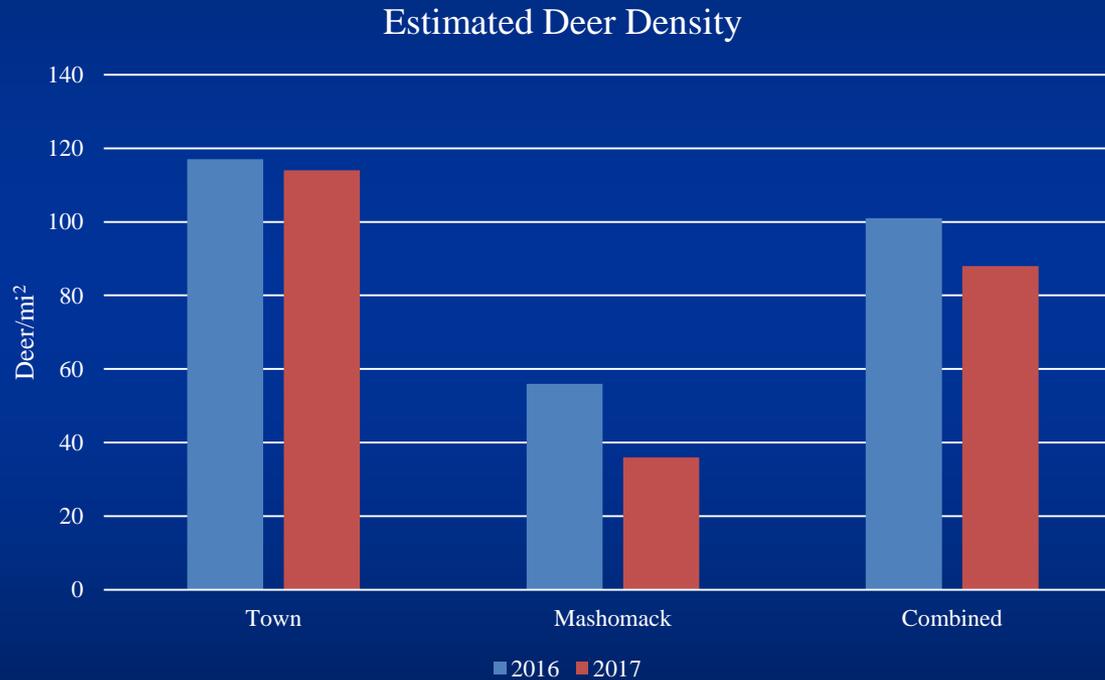
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Camera Survey

Branch-antlered Buck Method





Corn Consumption

Advantages

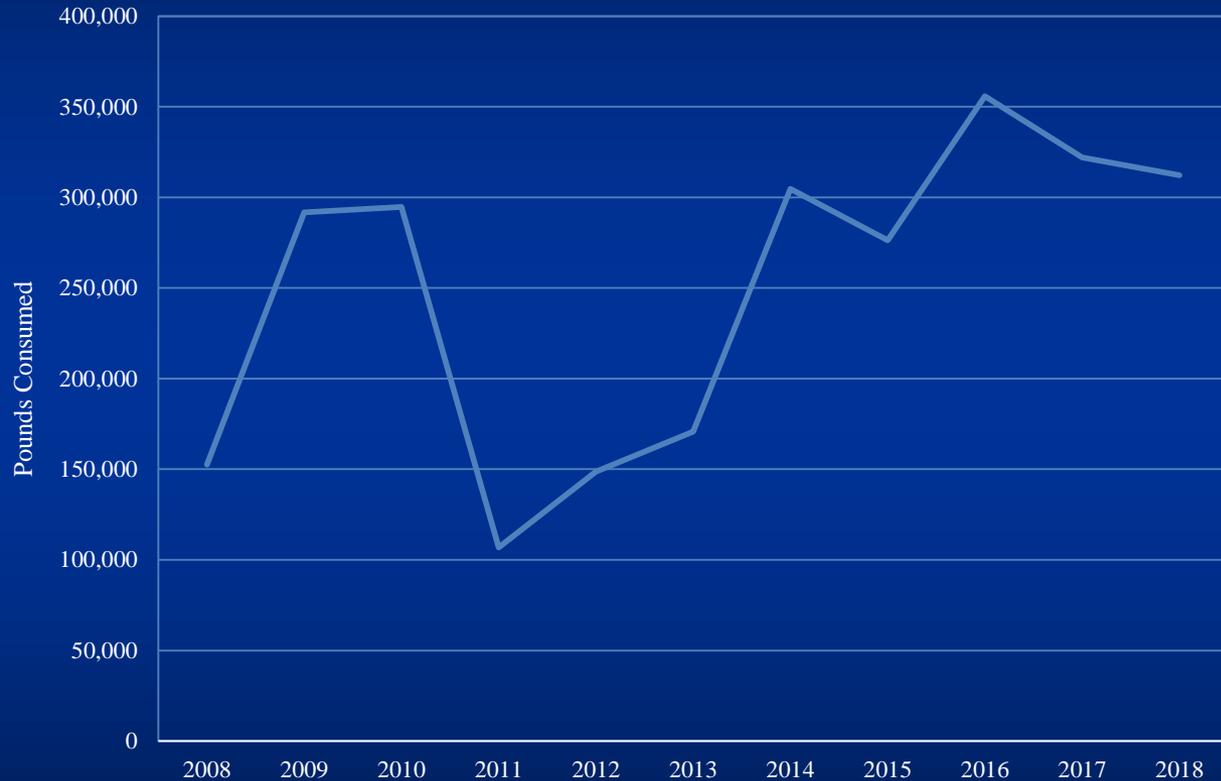
- Regional density indicator
 - Population indicator

Disadvantages

- Non-target use
- Preference variability



Corn Consumption



Units deployed

60 60 60 15 19 21 38 37 37 37 36



Deer-Vehicle Collisions

Advantages

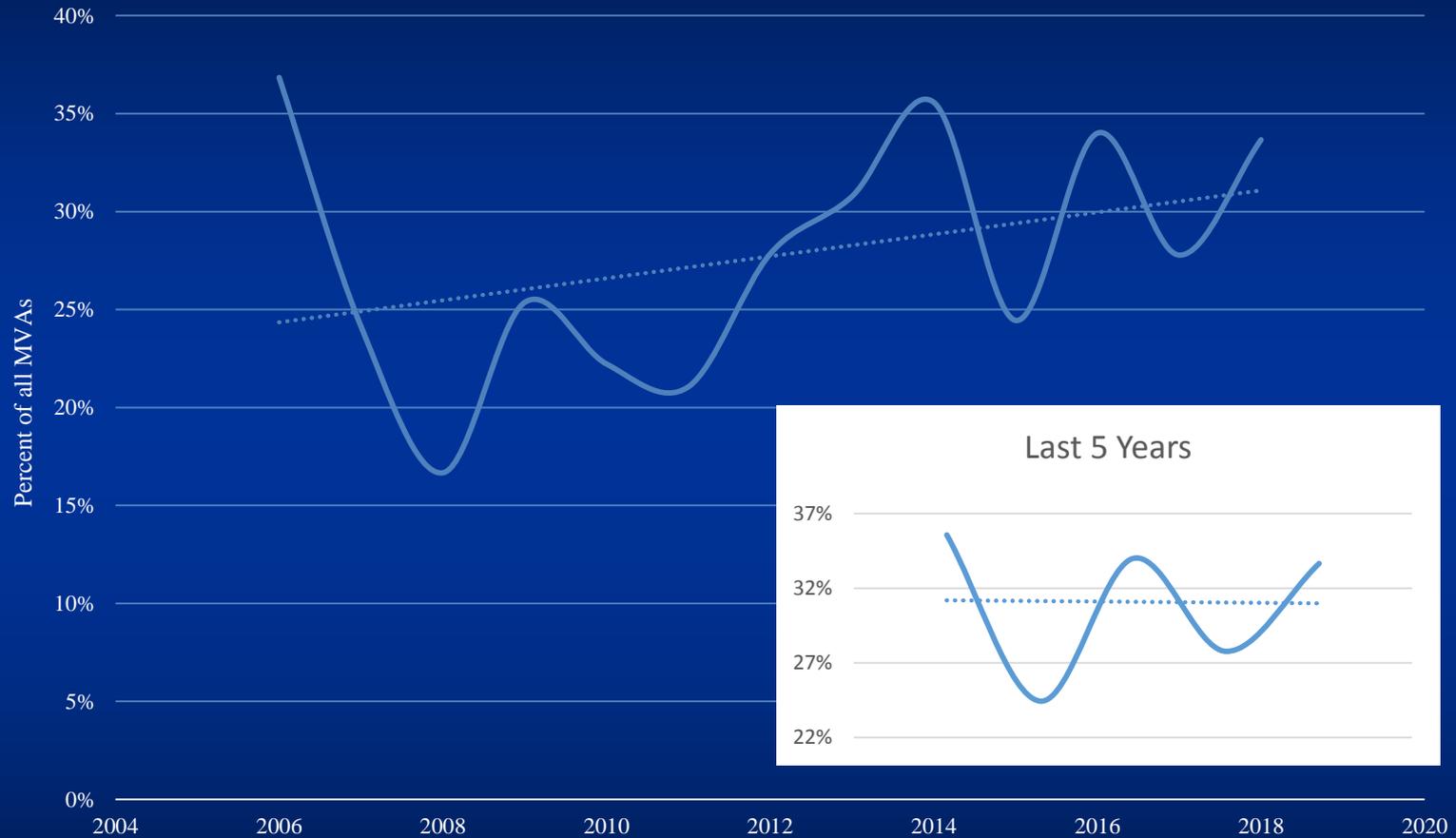
- Population indicator
- Long-term dataset

Disadvantages

- Small sample size
- Road use fluctuations



Deer-Vehicle Collisions





Doxycycline Use

Advantages

- Surrogate for disease data

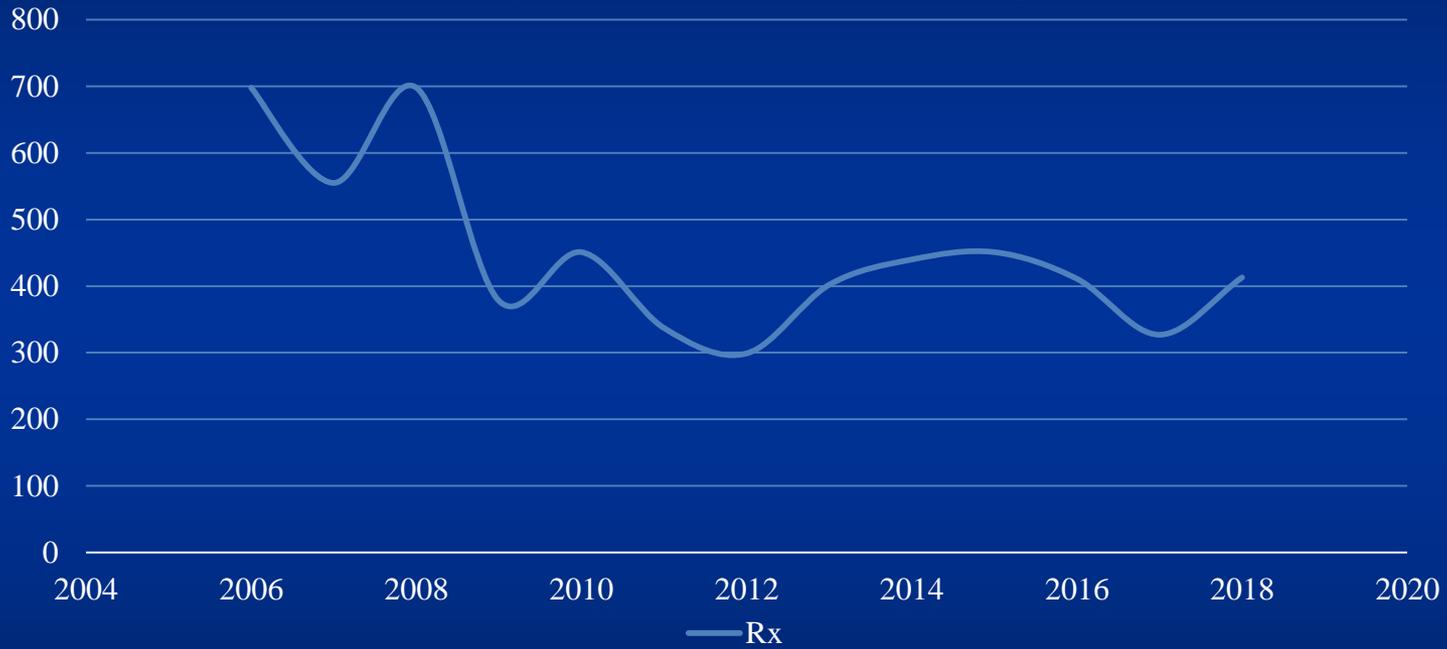
Disadvantages

- Other uses



Doxycycline Use

Doxy Rx filled at SI Pharmacy





Harvest Data

Advantages

- Long-term data set
- Indirect measure of impact

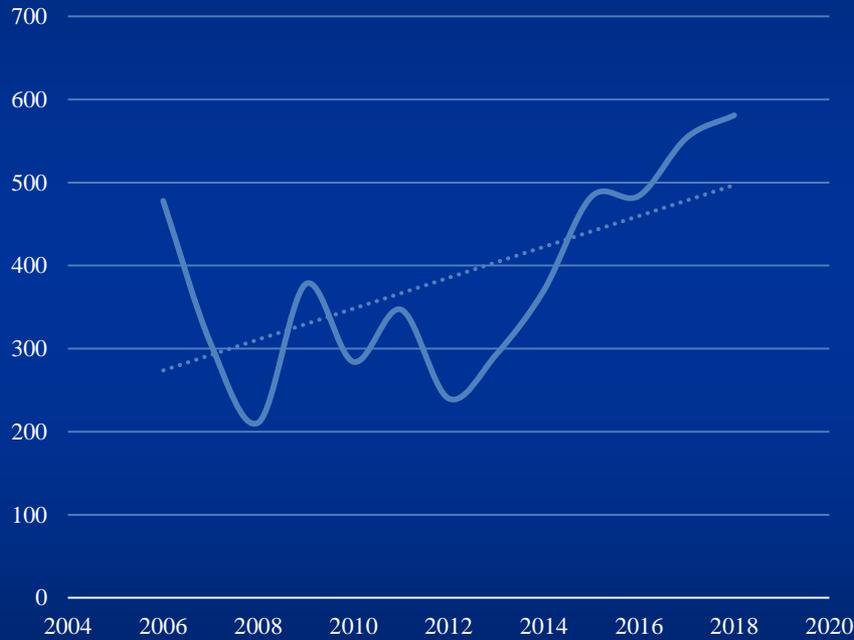
Disadvantages

- Population driven
- Productivity variability

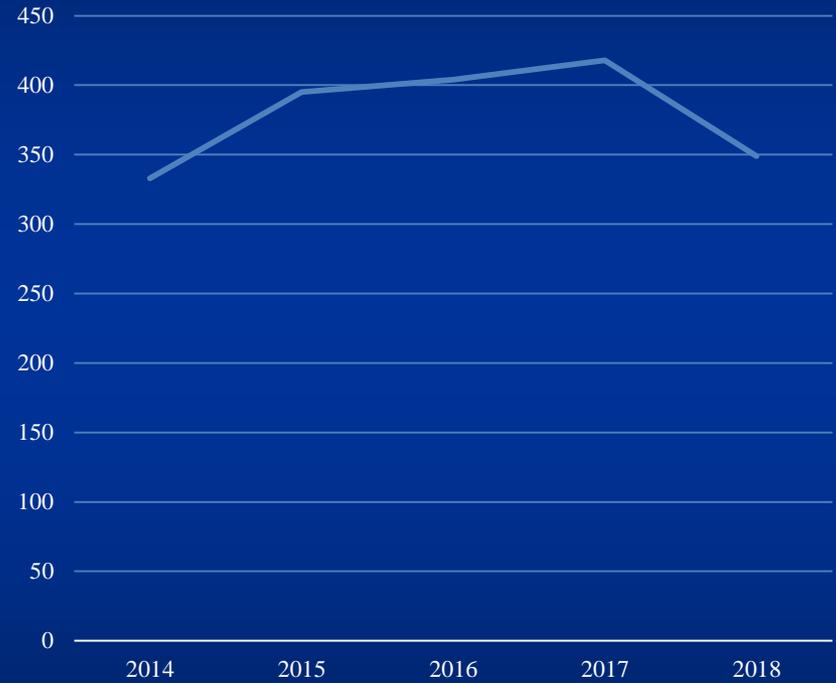


Harvest Data

Reported Harvest April 1- March 31



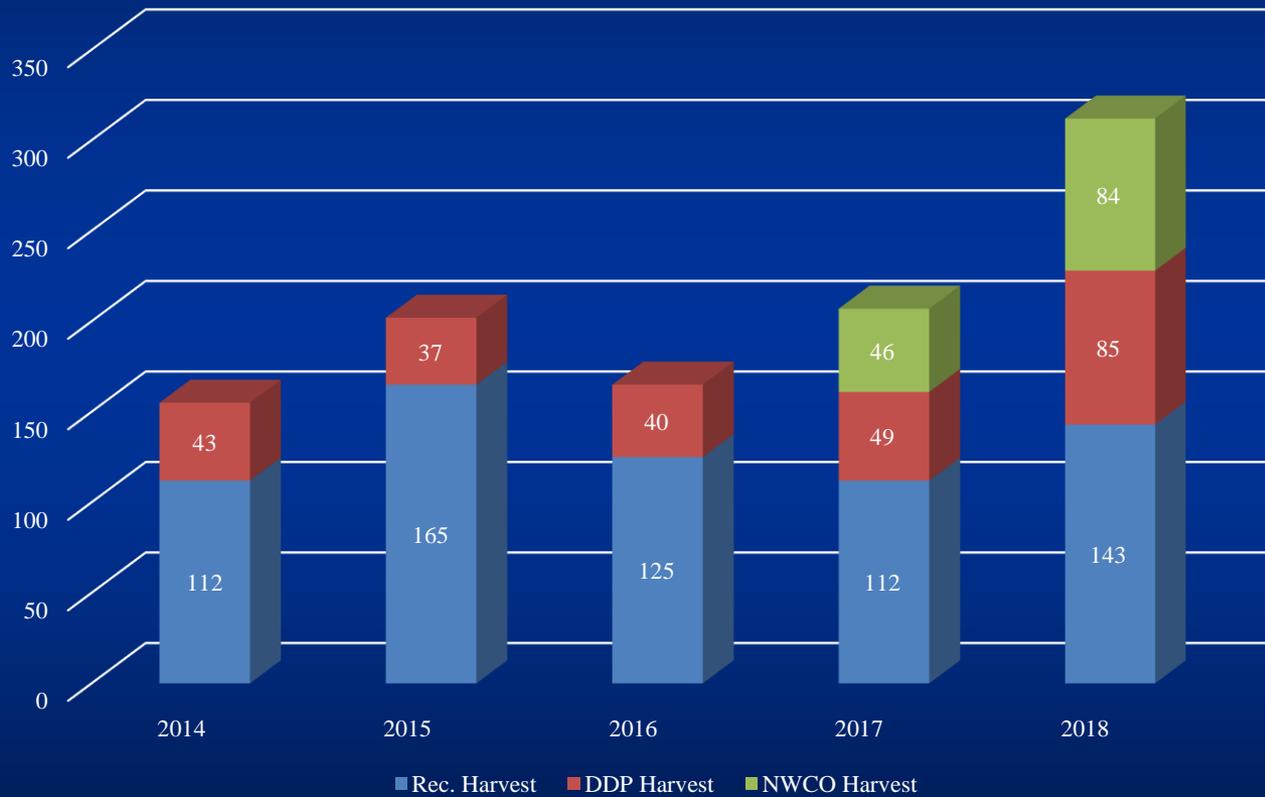
Reported Recreational Harvest





Harvest Data

Harvest from Town Managed Lands





Spotlight Survey

Jester & Dillard Method

Advantages

- Regional distribution
- Minimum population data

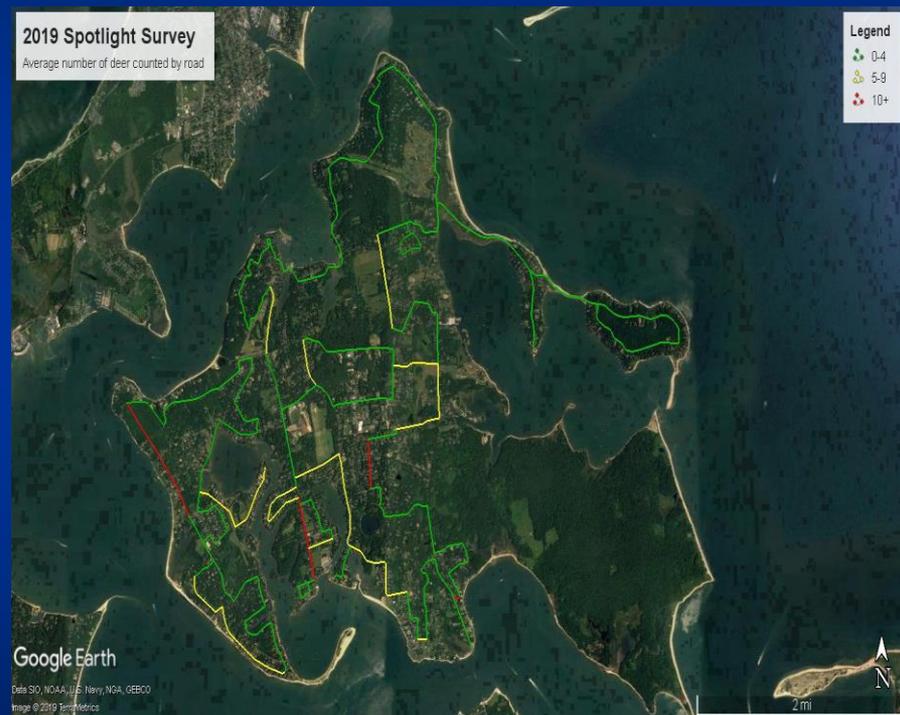
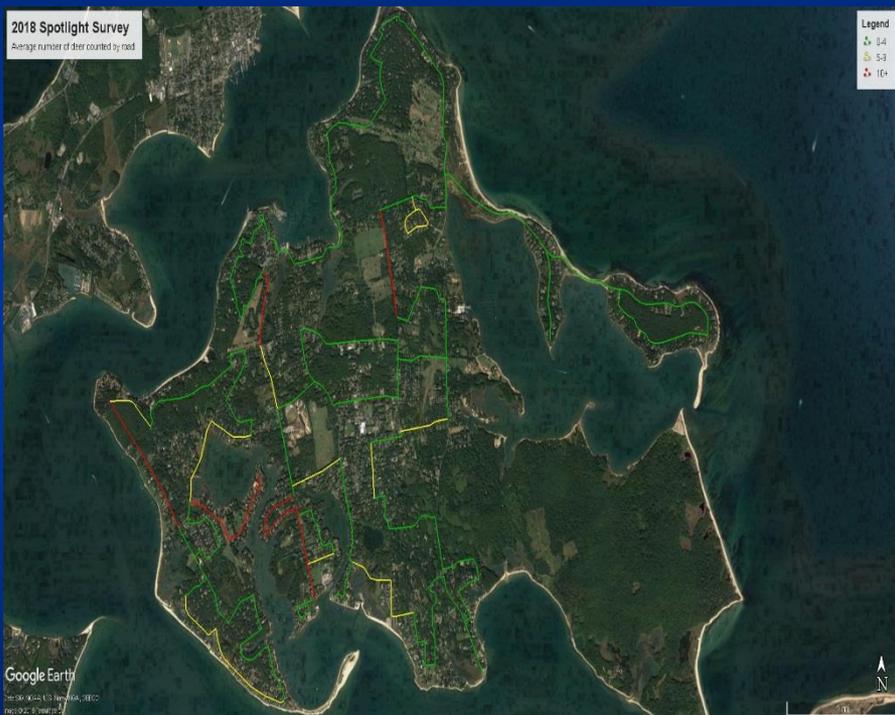
Disadvantages

- Observer bias/error
- Poor scalability



Spotlight Survey

Jester & Dillard Method





Tick Drags

Advantages

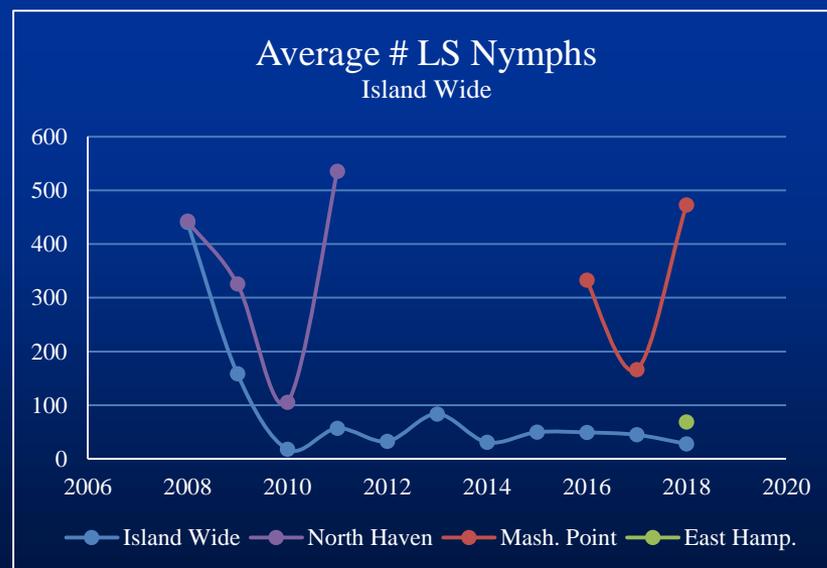
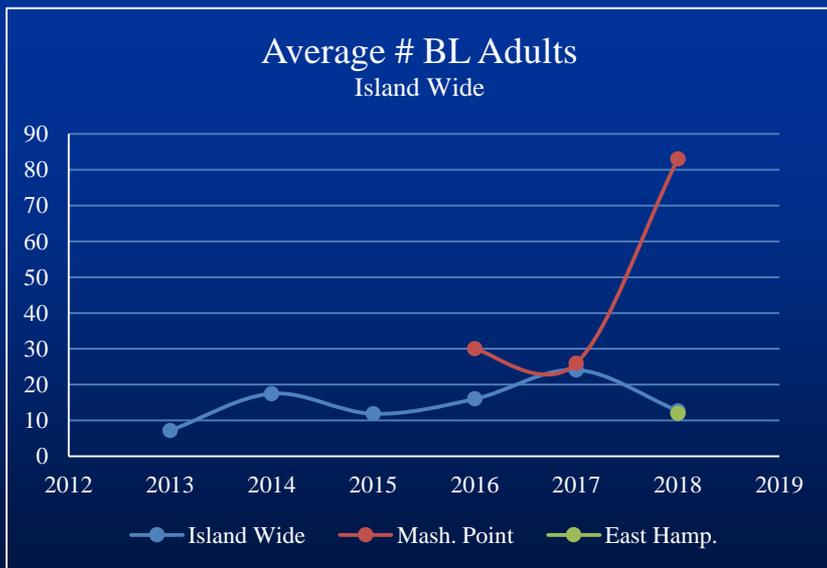
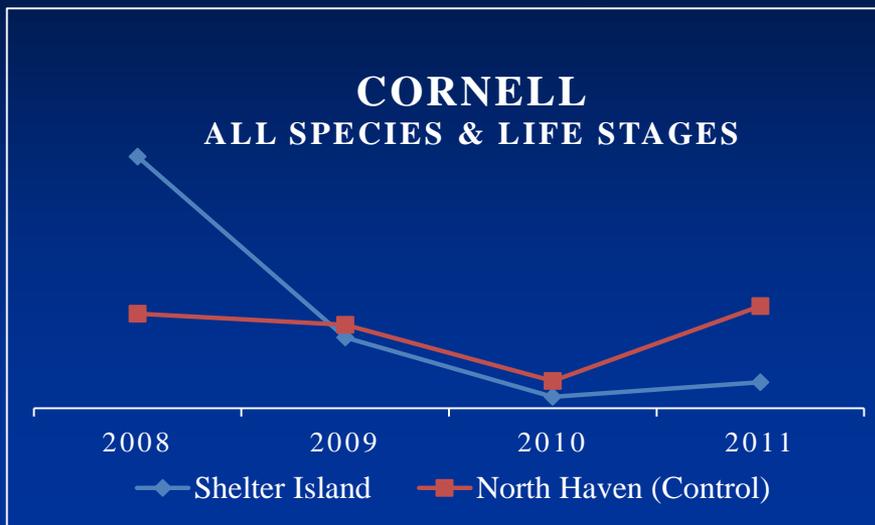
- Long-term data set
- Comparability

Disadvantages

- Limited control data
- Regional variability



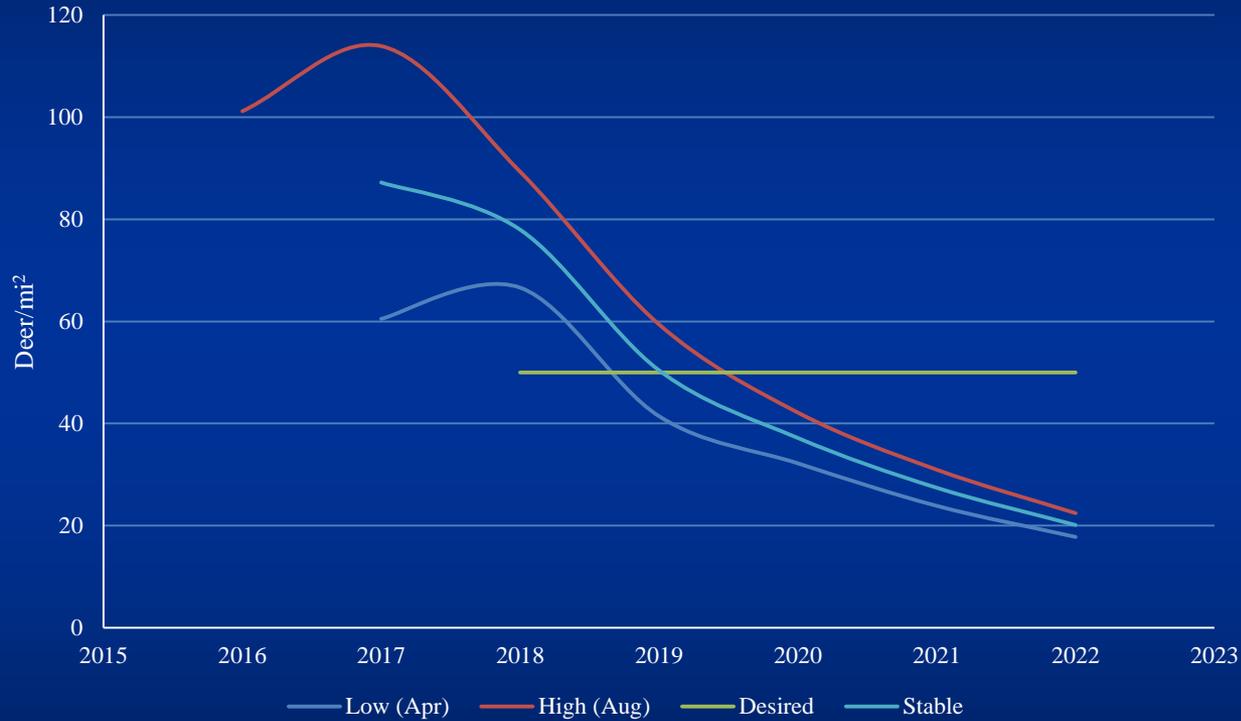
Tick Drags





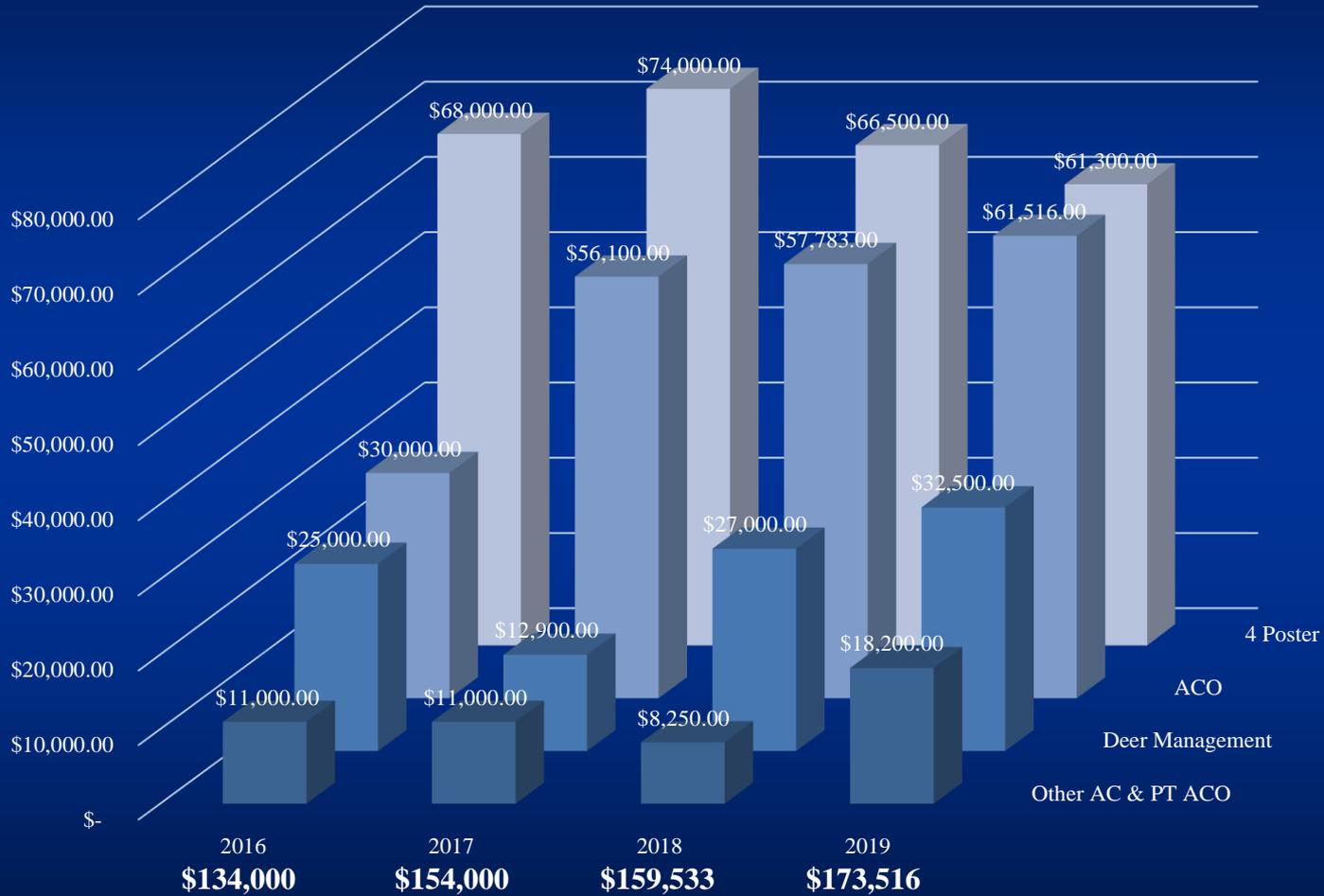
Population Modelling

Potential Deer Population Trend





Program Costs





Summary

- Browse survey indicates variability in population island-wide
- Camera survey suggests an island-wide decrease from '16-17
- Environmental factors appear to drive corn consumption while deer density remains high
- DVC rate is stable for last 5 years
- Doxy Rx rate relatively stable over 4-P deployment
- Recent harvest appears to be effort driven
- Spotlight survey suggests high density regionalization
- Tick drags suggest plateau in mitigation
- Modelling indicates successful trajectory



Questions/Comments?

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