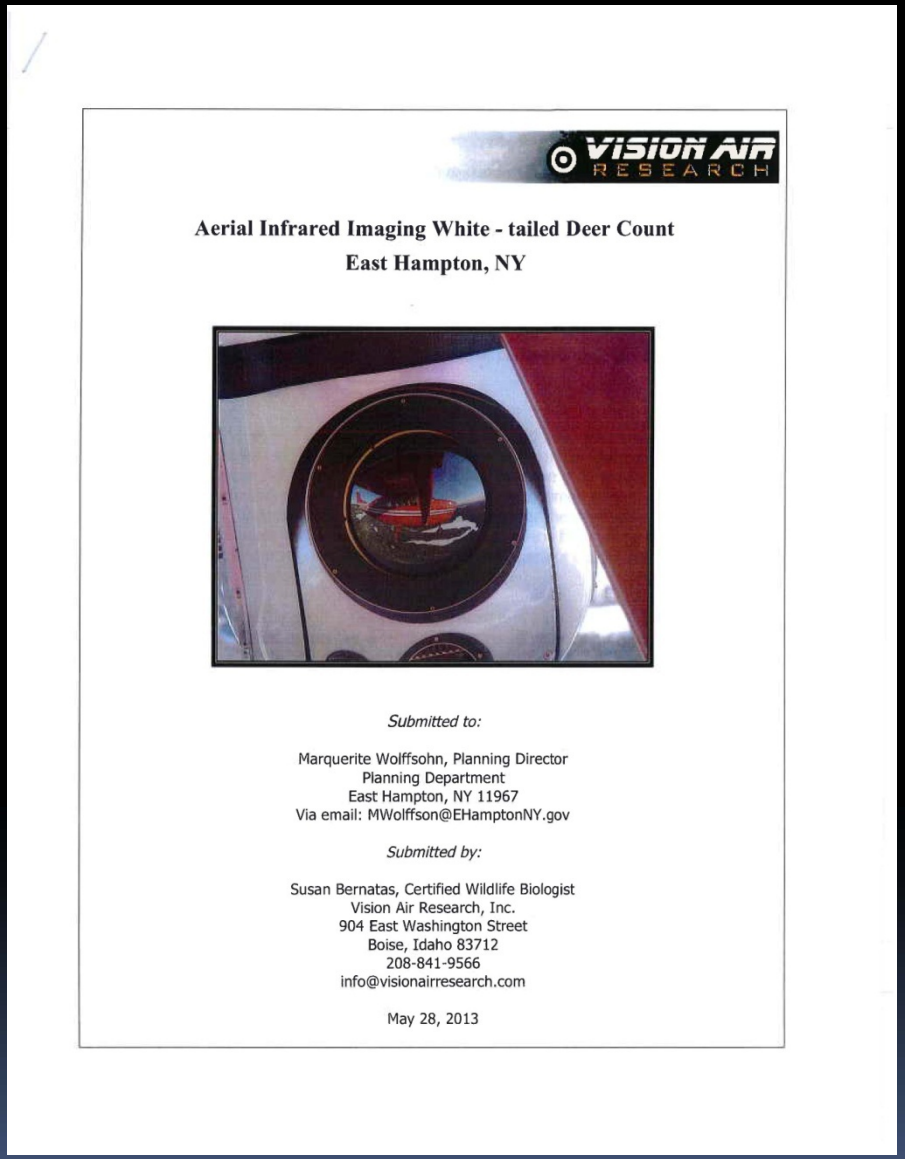
AERIAL INFRARED DEER SURVEY 2013

- March 9, 2013
- Between 2pm and 11pm
- East-West transects spaced 800 ft. apart at 1000 ft. above the ground
- Weather conditions good
- Observed 877 deer in 381 groups of 1-13 individuals



VISION AIR RESEARCH

Aerial Infrared Imaging White - tailed Deer Count
East Hampton, NY

Submitted to:

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May 28, 2013

Region 1 – 157 deer in 18.4 mi^2 = 8.5/mi^2

Region 2 – 72 deer in 10.3 mi^2 = 6.9/mi^2

Region 3 – 308 deer in 18.0 mi^2 = 17.1/mi^2

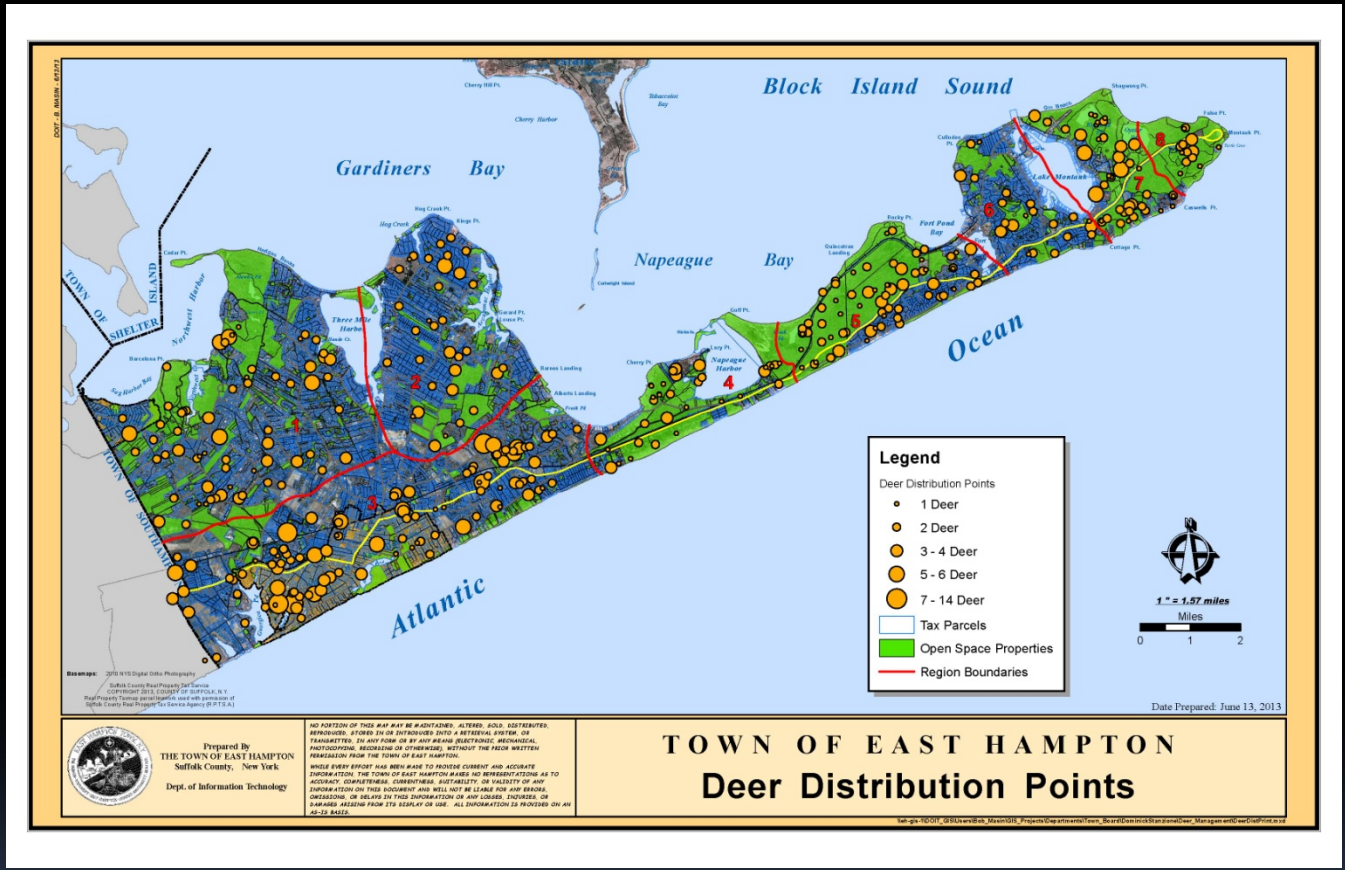
Region 4 – 62 deer in 4.4 mi^2 = 14.0/mi^2

Region 5 – 123 deer in 6.2 mi^2 = 19.8/mi^2

Region 6 – 42 deer in 4.5 mi^2 = 9.3/mi^2

Region 7 – 90 deer in 3.9 mi^2 = 23.1/mi^2

Region 8 – 23 deer in 1.7 mi^2 = 13.6/mi^2



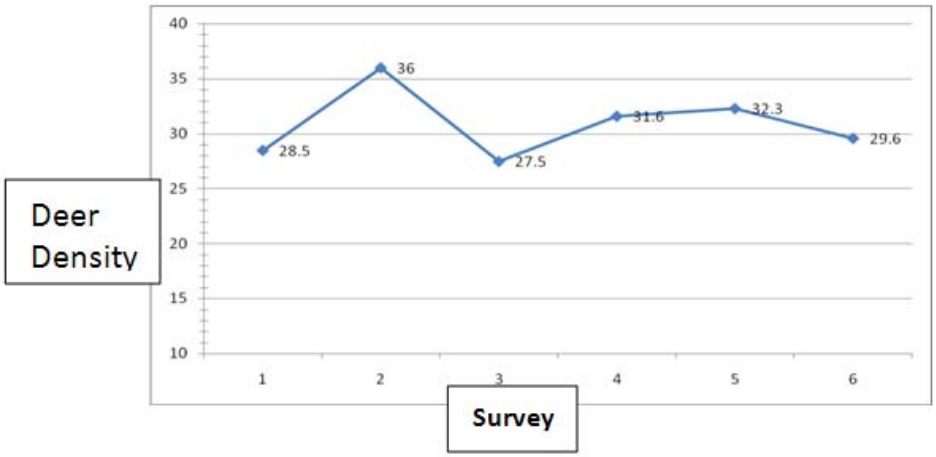
Did FLIR count all the deer?

- Obviously, no. We have many more deer than were seen. FLIR surveys can provide lower numbers than the actual numbers of deer under certain conditions.
- Deer density in the 8 "regions" shown on the map ranges from 6.9 to 23.1 deer per square mile. Dr. Paul Curtis of Cornell University predicts up to and exceeding 100 deer per square mile in some regions of our town.

This survey counted less deer than the 2006 survey. Does this mean that the population is reduced?

No. Statistically, 2 points are not a trend.

Graph 1: Demonstrates problem with using only 2 data points to estimate changes in deer density. This graph shows estimated deer densities from 6 surveys conducted during the same winter in Deer Management Zone 11. The first 2 data points were flown in the same month. If only the first 2 data points were used, the conclusion would be that the deer population increased from 28.5 to 36 deer per square mile (26% change). If you used 3 data points, you would have concluded that the population then decreased to 27.5 deer per square mile (24% change) (all during the same month).



Second, the 2 survey methods are not comparable

FLIR

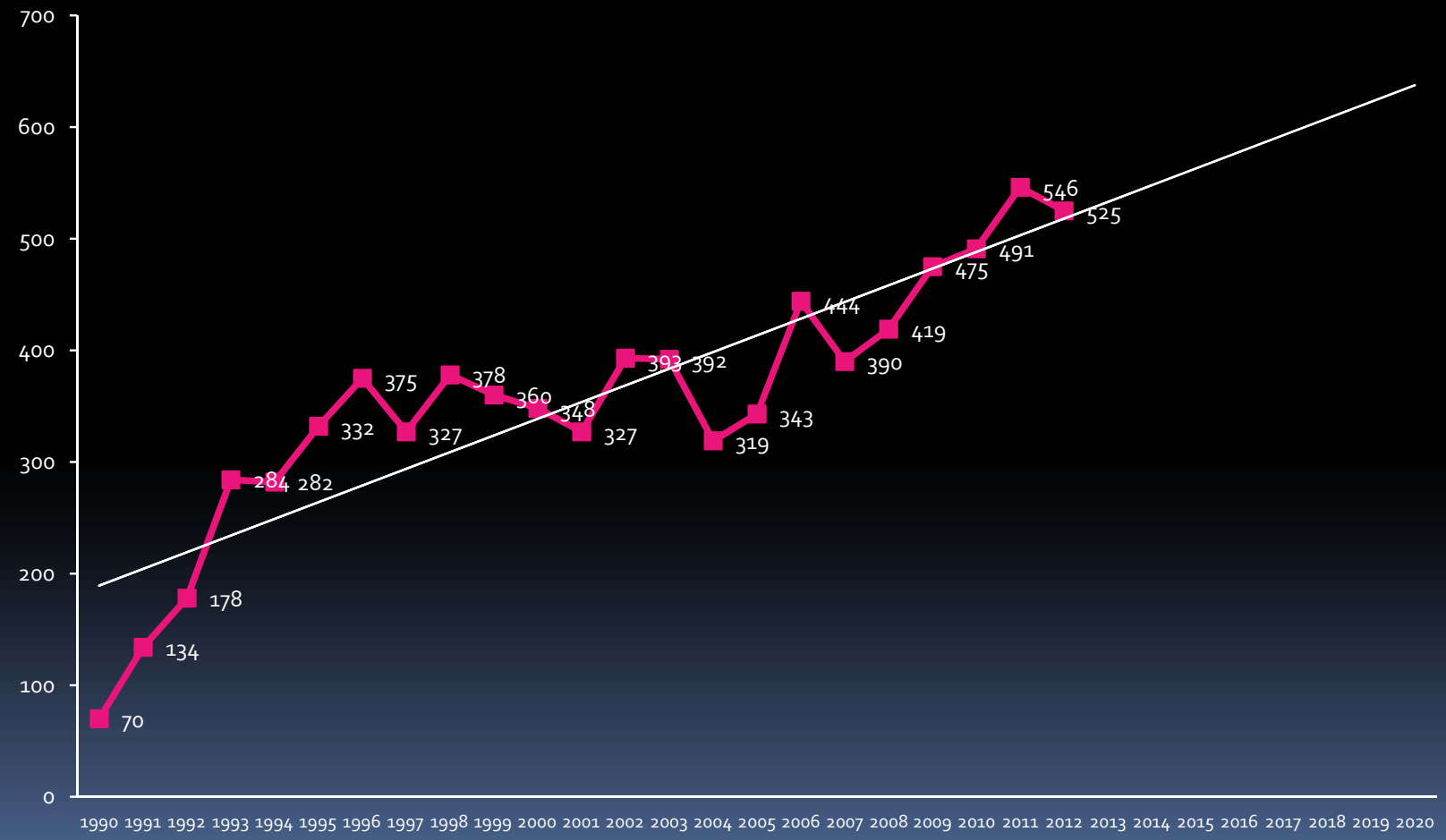
- One night
- Whole town
- Direct count of individuals

Roadside distance Sampling

- 27 nights
- Random samples near roads
- Calculation based on many counts

So, how do we know that FLIR undercounted deer in East Hampton?

NYSDEC Harvest Data 1990-2012



Collisions with vehicles

- DEC staff have informed us that the number of deer/vehicle collisions increases at a 1:1 ratio with the number of deer.

- The incidence of reported deer/vehicle collisions in East Hampton has increased from 25 in 2000 to 108 in 2011.

Environmental damage caused by too many deer

Many people will recognize this type of damage.

The same problem is extensive throughout our woodlands

… and in the forest interior as well as at the edge.

This middle layer is essential habitat for forest birds, including some that are declining in number.

Here is an example of a healthy forest edge…

…and here is an interior from 1990.

…and another.

This beech is in the process of losing the lower branches to browsing deer.

This sunny forest opening should look brushy with young oak trees.

Insects thinned the canopy here, but grass is thriving instead of saplings.

In addition to young trees we have lost wildflowers.

Old Stone Highway

1990

2013

Despite the results of the FLIR we still need to reduce the deer population to restore our biodiversity.

And to reduce deer/vehicle collisions

And hopefully to reduce the incidence of tick-borne diseases.

Next steps:

-Adopt the management plan.

-Meet with state and federal wildlife professionals to refine our plan of action.

-Begin to implement the other aspects of the plan.

This should not be a common sight.