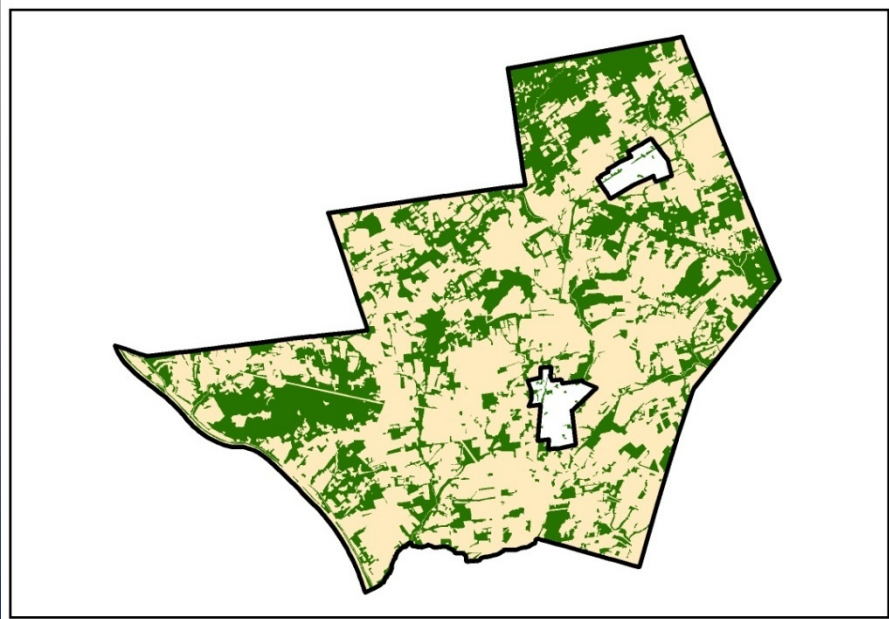
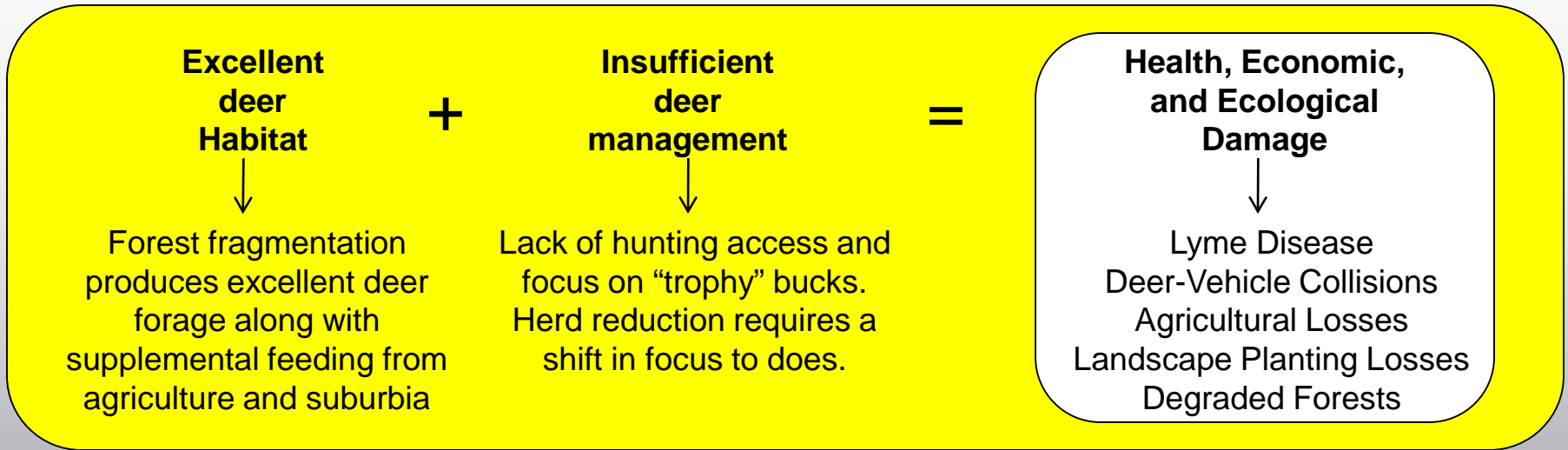


Hopewell Valley Deer Impacts and Management



**Michael Van Clef, Ph.D., Stewardship Director
Member, Deer Management Advisory Committee**

The Root of the Problem: Deer Overabundance

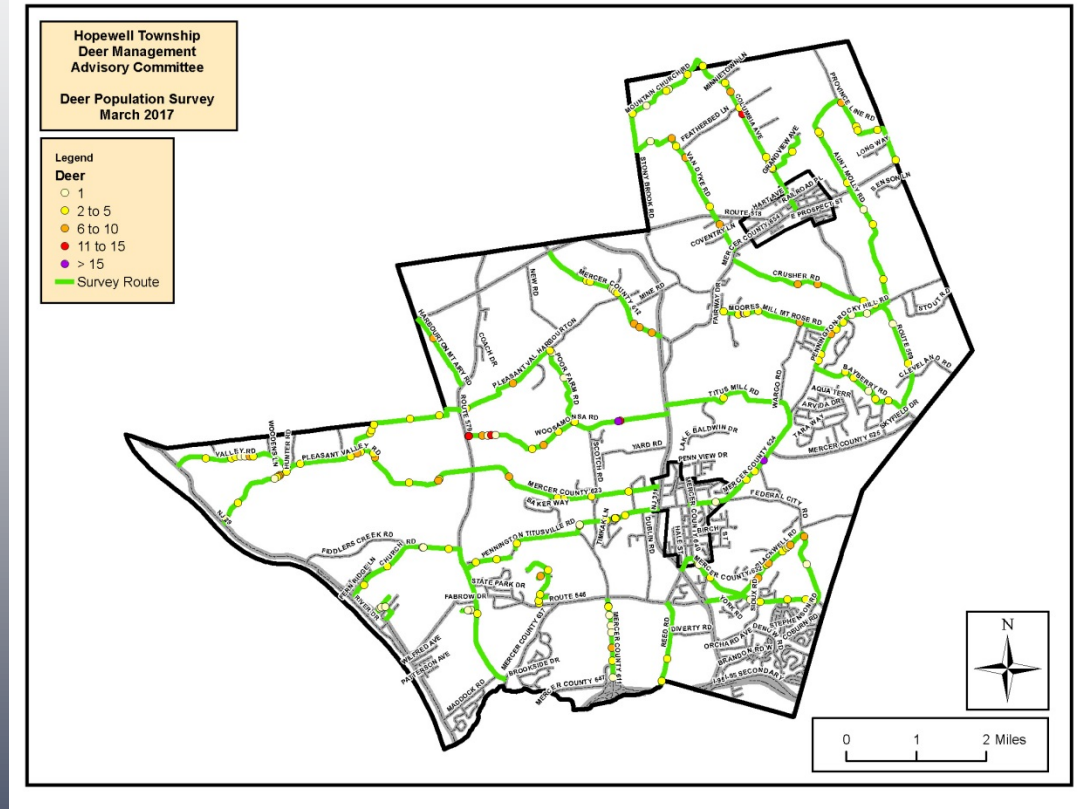


Forest Fragmentation in Hopewell Valley

While still containing over 15,000 acres of forest habitat (shown in green), forest edges, fields and suburban landscapes are numerous and serve as more productive deer habitat than forest interiors.

Deer Population Estimates

- Deer Counts in March 2017:
86 deer per square mile
Post-birthing estimate:
127 deer per square mile
- Published literature suggests that 10 deer per square mile is associated with low rates of Lyme disease, deer-vehicle collisions and healthy forests.
- Historic estimates also report 10 deer per square mile prior to European settlement of North America



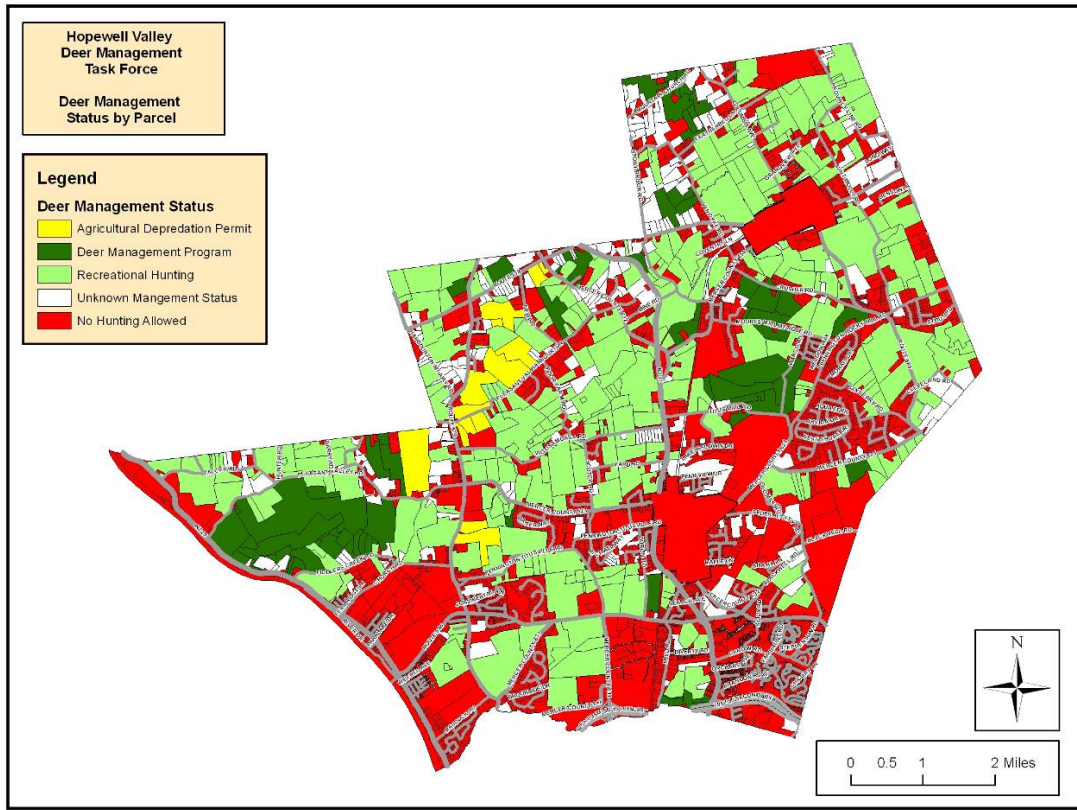
Public Sentiment

(surveys conducted in 2010 and 2016)

- Nearly 70% support deer herd reduction
 - About 15% are unsure
 - About 15% do not support deer herd reduction

What's been done
and what more can we do?

Below: Information from 2010



Highlights since 2010

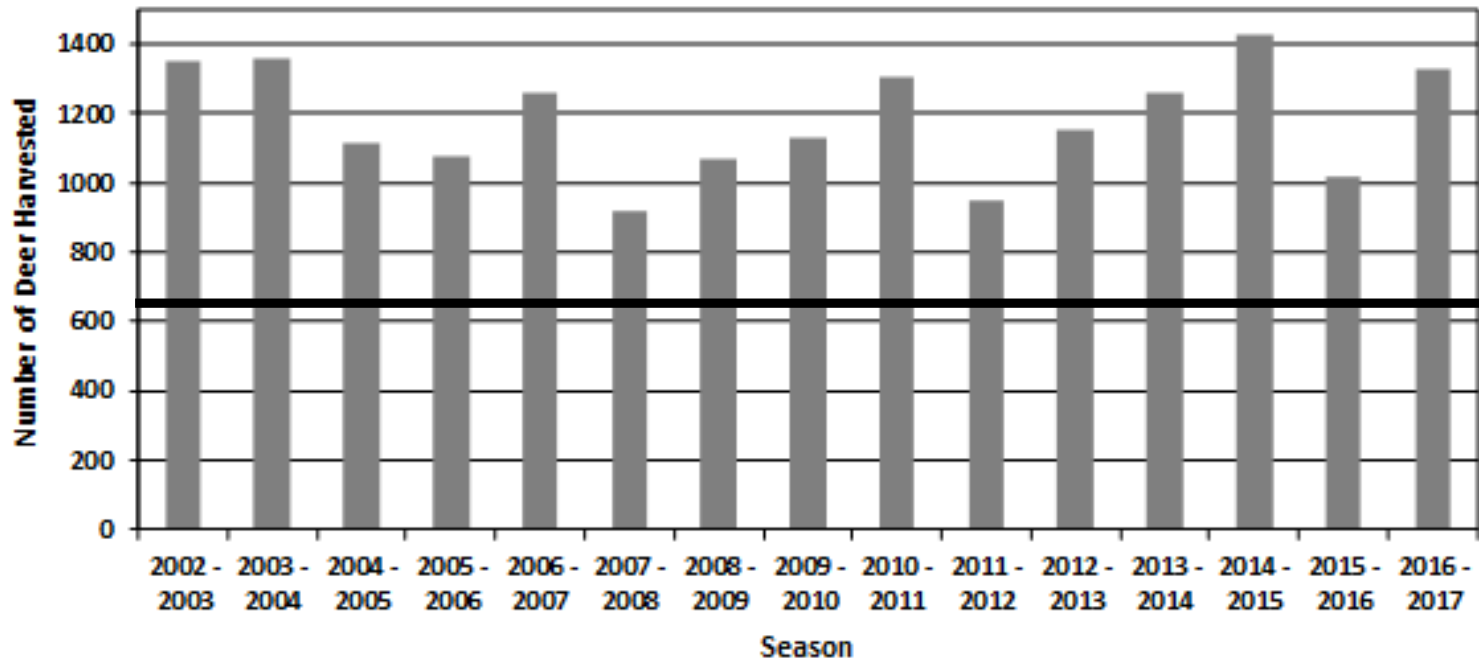
- Hopewell Township added 900 acres under DMP
- Mercer County added 850 acres under DMP
- FoHVOS encouraged private DMP's on 250 acres
- Increased use of agricultural depredation permits
- Other activities – outreach, public survey, DVC map, partnerships with other groups

Table 4. Summary of Parcel-level Deer Management Status in the Hopewell Valley

Hunting Status	Number of Parcels	Acres	% of Hopewell Valley*
Agricultural Depredation Permit	14	929	2
Deer Management Program	76	3346	9
Recreational Hunting	335	13578	36
No Hunting Access	6968	14944	43
Unknown Hunting Access	304	3729	10
Totals	7697	37601	100

* Hopewell and Pennington Boroughs were assumed to have no hunting activity, but their acreage totals were considered for calculations.

Hopewell Valley Deer Harvests



Prior to plan: Average harvest = 1,130

Since plan: Average harvest = 1,205 (7% increase)

Status of Goal Achievement

- **Goal #1 - Reduce Lyme disease**

The current number of cases was 39 (stated goal is 16 by 2019).

Public Survey – 26% of households reporting infection

- **Goal #2 - Reduce Deer-Vehicle Collisions**

The current number of collisions was 449 (stated goal is 142 by 2019).

Public Survey – 49% of households reporting a collision

- **Goal #3 - Reduce Agricultural Losses**

The current percentage of farmers reporting > \$5,000 of annual damage was 14% (stated goal is 7% by 2019).

Highly underestimated? Fencing option is being utilized by some farmers.

- **Goal #4 - Reduce Landscape Planting Losses**

The current percentage of households reporting deer damage was 84% (stated goal is 21% by 2019).

- **Goal #5 - Reduce Ecological Damage**

The current percentage of native shrub and tree cover within the deer browse zone was 19% (stated goal is 37% by 2019).

Noticeable improvements are uncommon and spotty.

Summary of Strategies

- **Strategy Set #1: Improvement of Hunting Access**
 - 1A) Encourage and facilitate hunting access on public and private lands
 - 1B) Develop strategies to access “pocket deer” in residential areas
- **Strategy Set #2: Improvement of Hunting Efficacy**
 - 2A) Encourage and facilitate coordinated hunting activities among neighboring landowners
 - 2B) Encourage and facilitate use of Agricultural Depredation Permits by farmers
 - 2C) Encourage and facilitate Deer Management Programs that focus harvests on female deer
 - 2D) Encourage and facilitate program for venison donation to local food banks
 - 2E) Consult with the NJ Division of Fish & Wildlife and other wildlife professionals to facilitate strategies 1A through 2D
- **Strategy Set #3: Avoidance of Deer Impacts**
 - 3A) Improve awareness of methods that reduce Deer Vehicle Collisions
 - 3B) Improve awareness of methods that reduce Lyme disease
 - 3C) Improve awareness of methods that reduce landscape damage
 - 3D) Discourage the intentional feeding of deer in non-hunting situations

DMAC Goals - 2018

- Strategy Sets #1 and #2 (Improvement of Hunting Access and Efficacy)
 - Planning and continued implementation of the Township deer management program
 - Encouraging improved access and efficacy on both public and private lands
 - Development of cooperative and coordinated approaches for deer management with the Township Agricultural Advisory Committee and broader agricultural community as well as non-profit conservation groups and County land managers
 - Encouraging the establishment of a local butcher to become certified as an approved venison donation service with Hunters Helping the Hungry
- Strategy Set #3 (Avoidance of Deer Impacts)
 - Provide outreach and warning signage to minimize deer vehicle collisions
 - Perform outreach on Lyme disease prevention and use of deer resistant landscaping

Potential Expanded Effort?

Community Based Deer Management Permit

- Utilized by counties and municipalities (e.g., Princeton, Millburn, Essex, Union)
- Requires in-depth Division of Fish & Wildlife application
 - DMAC has all justification data readily available
 - Specific implementation plan must be developed
 - Should include all Hopewell Valley municipalities
- Allows expanded deer management options
 - Use of paid professional and/or volunteer hunters
 - Professionals typically charge \$200-\$400 per deer (includes butchering)
 - Allows expansion of hunting season and hunting options (e.g., nighttime spotlight hunting, use of rifles)
 - Strongly suggests that venison be taken by hunters or donated to food banks
 - Typical butchering charge for donations is \$70 per deer

Population Reduction Goals

- Estimated herd size: 8,000
- If goal is 10 per square mile, then 7,200 would need to be harvested in a single year
- Average annual hunting harvest is 1,200 + annual car collisions of 500 = 1,700 deer 'harvested' annually...

...And this rate only maintains herd size...

An ambitiously modest proposal?

Double current annual harvest by taking an additional 1,700 deer to reduce population by 25% (65 per square mile)

- Current Significant Efforts
 - Implement DMAC-identified strategies from previous slide
- Significant Additional Effort - Community Based Deer Management Plan
 - Recruit volunteer hunters or pay professional hunters
 - Cost Estimate: If only professional hunters = \$340K to \$680K (includes fees and venison donation)
 - Cost Estimate: If only volunteer hunters = \$120K (venison donation only).
 - May require professional hunters if not enough volunteer hunters can be recruited. Professional hunters can include currently unaffiliated but highly skilled hunters that would likely charge significantly less than existing professional organizations.
 - Venison donation cost can be reduced by hunters taking some harvested deer.
 - Recruit landowners and determine site-specific strategies (Required for application)
 - Requires significant planning and outreach
 - Carefully coordinated deer drives would be required to meet harvest goals
 - Cost Estimate: Paid project coordinator (??). Could be minimized if knowledgeable volunteers can be recruited (hunters & farmers, land trusts, municipal and county staff)