

Suburban Deer Management and Community Response

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An Important Resource

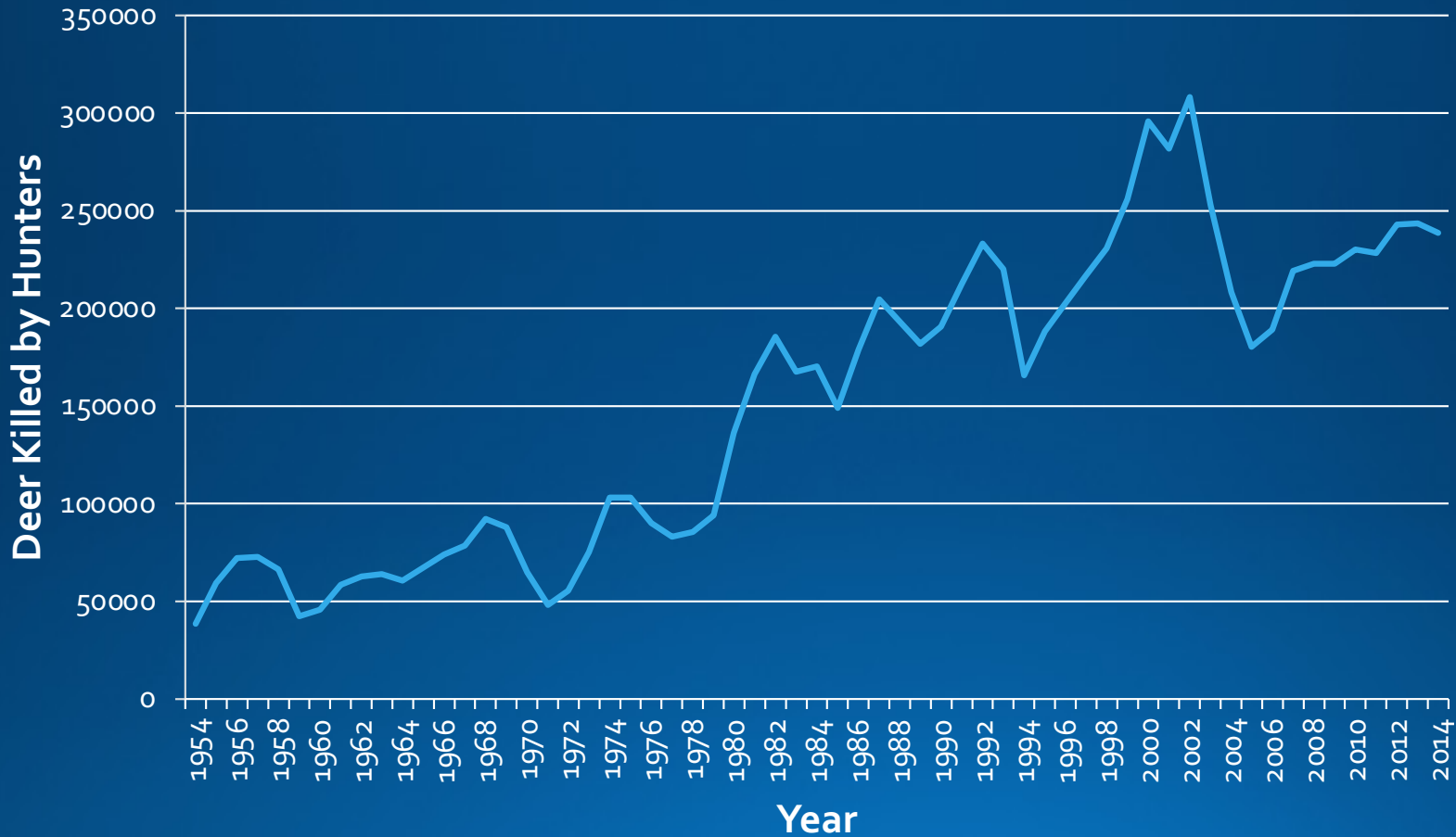


Photo: Adirondack Ecological Center



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New York Deer Population Trend



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Highly Adaptable

- Thrive in edge habitat
- Grazer/browsers: eat both woody and herbaceous vegetation



Photo: Dick Thomas



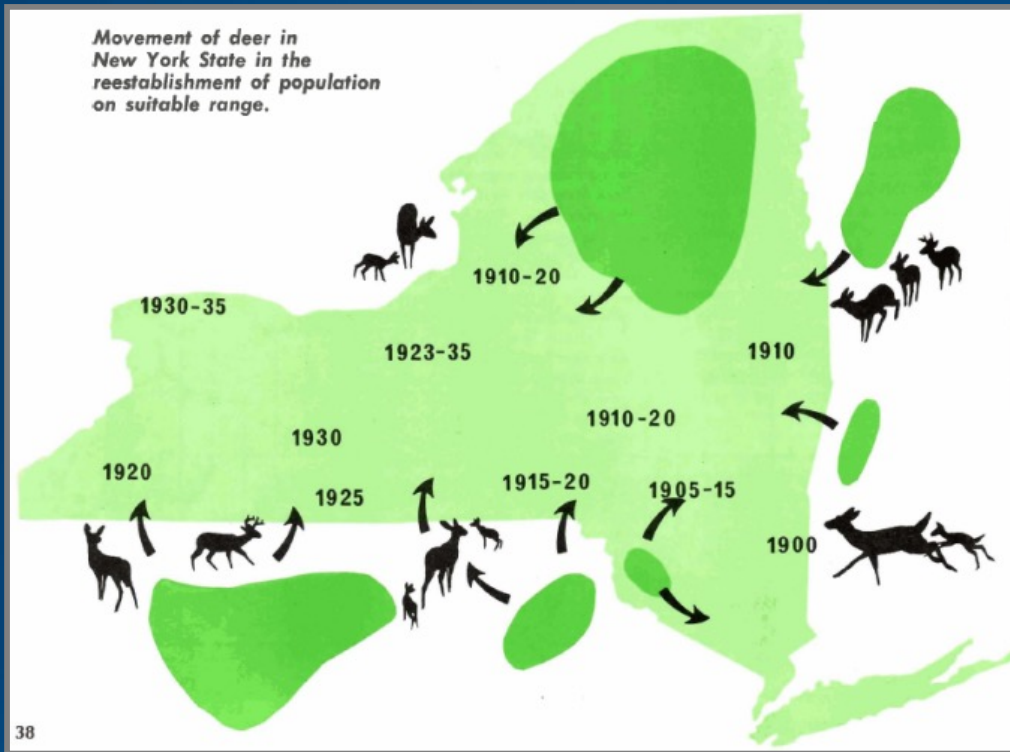
Photo: Dick Thomas



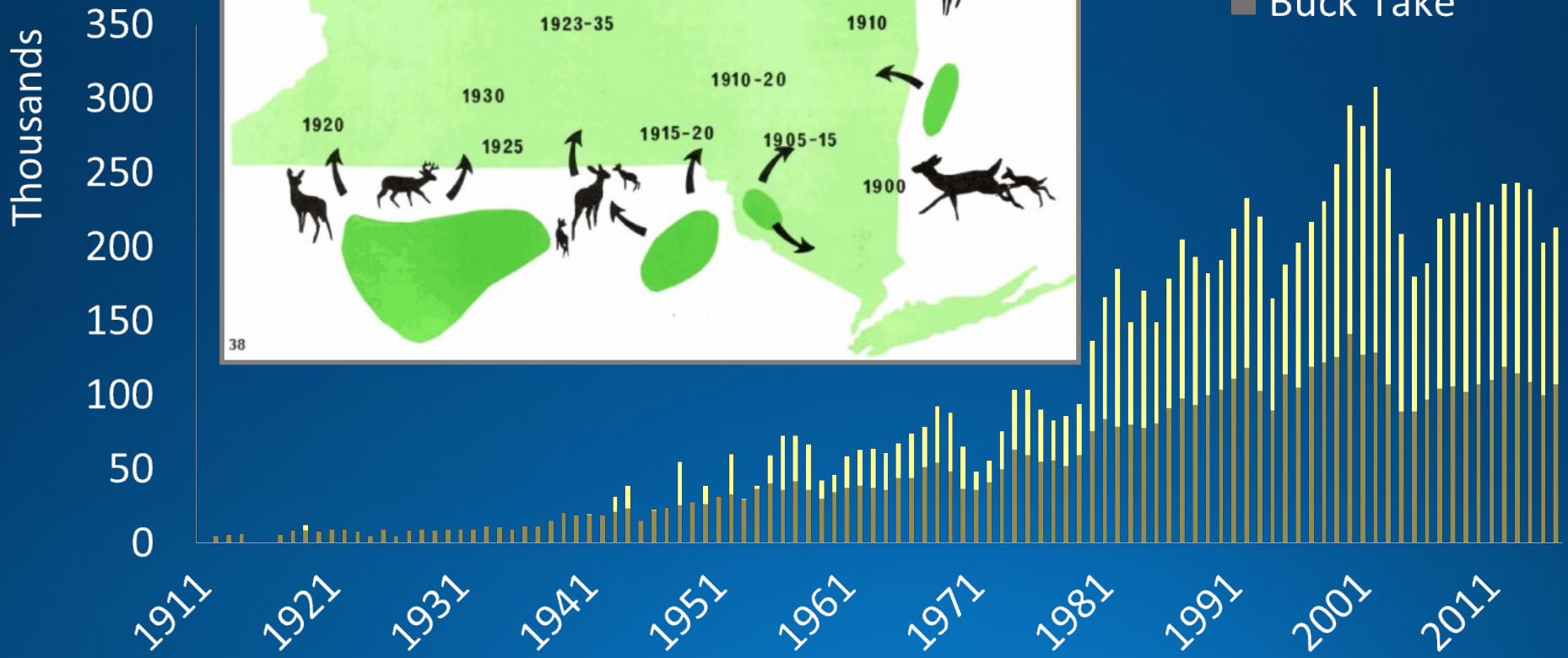
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Resilient

Movement of deer in New York State in the reestablishment of population on suitable range.



- Antlerless Take
- Buck Take

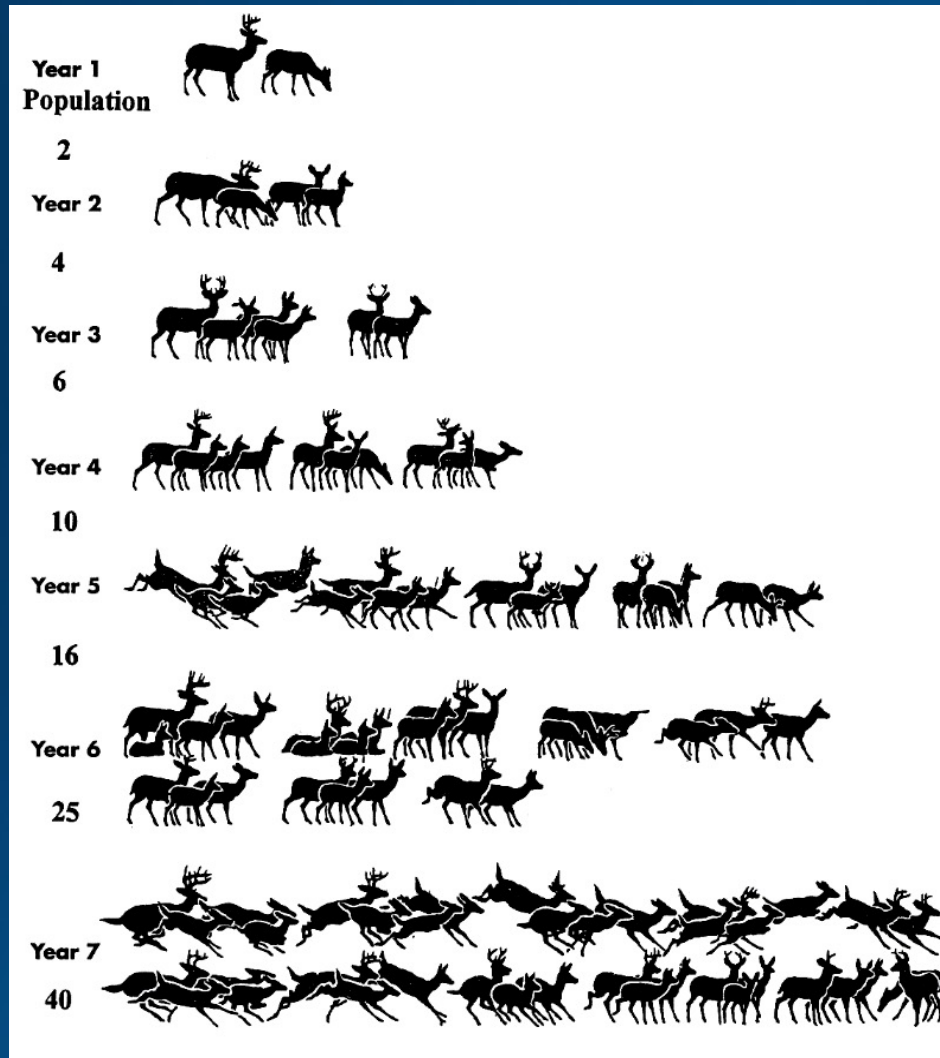


Population Dynamics

- Does breed at 1 year old
- Fawns born in May and June
- Average 2 fawns per year
- Populations can double every 2-3 years



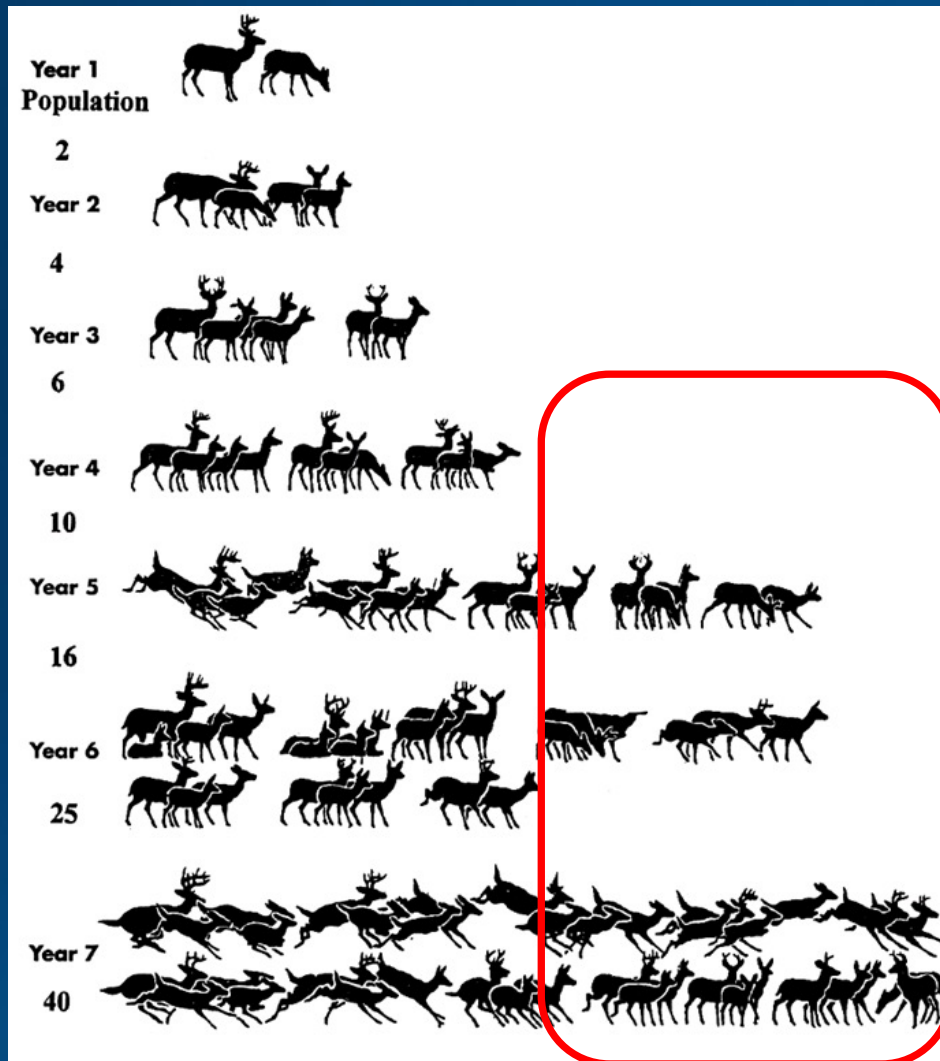
Population Dynamics



Under conditions of NO immigration, emigration, mortality, or population growth limitation:

2 deer to 40 deer = 1900% increase in 7 yrs.

Population Dynamics



30 – 40% of animals must die every year to maintain population stability

Mortality

- Principal sources of mortality in *wild/rural* areas: **predation**
- Principal historical predators: **mountain lions, wolves, humans**

Mortality

- Principal sources of mortality in *wild/rural* areas: **predation**
- Principal current predators: **bears, bobcats, coyotes, humans**



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Mortality

- Principal source of mortality in developed areas:
vehicle collisions

Societal Impacts

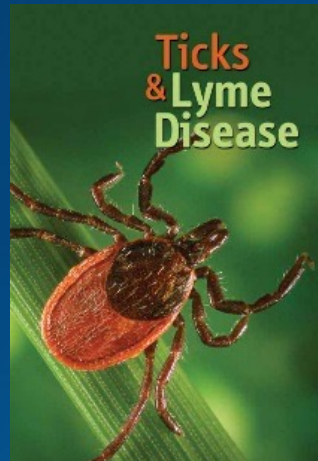
- Deer-vehicle collisions
- Potential for increased risk of tick-borne disease



How to Safely Remove a Tick

1. Use a pair of pointed tweezers.
2. Grasp the tick by the head or mouth right where it enters the skin.
3. Pull firmly and steadily upward.
4. Place the tick in a small container of rubbing alcohol to kill it.
5. Clean the bite wound with rubbing alcohol or hydrogen peroxide.
6. Monitor the site of the bite for the next 30 days for the appearance of a rash.
7. If you develop a rash or flu-like symptoms, contact your health care provider immediately.

www.health.ny.gov
New York State Department of Health



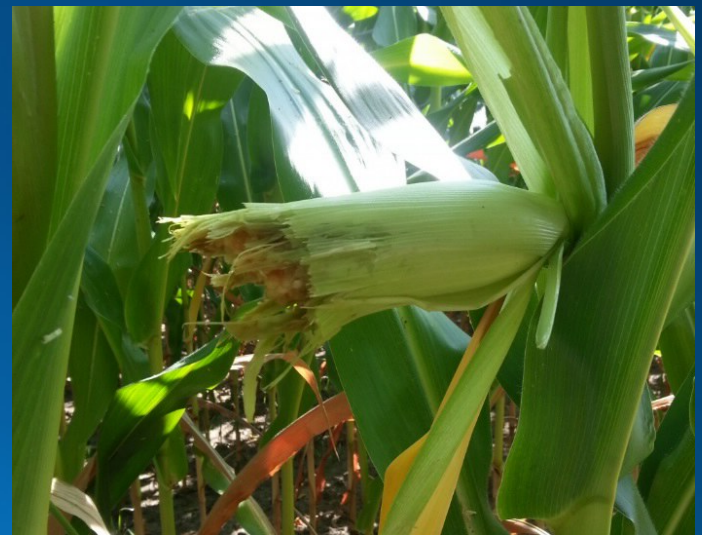
Centers for Disease Control and Prevention, <http://phil.cdc.gov/phil/>



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Societal Impacts

- Damage to agricultural crops
- Damage to landscaping plants



Ecological Impacts

- Reduced understory diversity
- Increased dominance of invasive plants (monocultures)



Ecological Impacts

- Reduced fauna abundance and diversity

Ecological Impacts

- Reduced survival of tree seedlings
- Reduced canopy diversity
- Altered species composition
- Fewer canopy trees

Failure of Forest Regeneration



Don't Feed Deer!



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Management Options

- Vulnerability Reduction

- ✓ Tick bite avoidance
- ✓ Lower speed limits
- ✓ Warning signs
- ✓ Fencing / Barriers*
- ✓ Chemical repellents
- ✓ Scare devices
- ✓ Dogs
- ✓ “Deer-resistant” plantings



Cornell University Search Cornell

Gardening resources > Best factsheets > Deer defenses

Department of Horticulture
GARDENING HOME

Cornell gardening resources

Deer defenses

Strategies, plants and products to reduce damage in your gardens and landscape.

Search Gardening: Go

[Get local help](#)
At your county's Cornell Cooperative Extension office.

Dr. Bridgen's List of Plants that Deer Do Not Like to Eat - Compiled by Mark Bridgen, director of Cornell's Long Island Horticultural Research and Extension Center, Riverhead, N.Y.

Cornell University Integrated Deer Research and Management - See especially [White-Tailed Deer Factsheet](#) (includes repellent and fencing information) and [Managing White-Tailed Deer in Suburban Environments](#).

Mohawk Mountain House Plant Recommendations for Deer-Infested Gardens [30 K .pdf file] - Hundreds of annual flowers, herbaceous perennials, bulbs and woody plants that have resisted heavy deer pressure in the gardens at this famous Hudson Valley resort.

White-tailed Deer - Factsheet from Cornell Department of Natural Resources on deer biology, damage prevention, fencing, etc. Includes analysis of repellents.

Managing White-tailed Deer in Suburban Environments - 57-page manual [20 MB .pdf file] for professional biologists and managers, community leaders, and others involved or concerned with suburban deer management.

UConn Plant Database - These search results of the University of Connecticut woody plant database combine several research-based lists.

New York Time Deer News - Round up of news stories and other resources.

Extension factsheets from other states:

- [Landscape Plants Rated by Deer Resistance](#) - Rutgers Cooperative Extension (New Jersey)
- [Resistance of Ornamentals to Deer Damage](#) - Maryland Cooperative Extension
- [Resistance of Ornamentals to Deer Damage](#) - West Virginia Extension Service

Nurseries and landscaping featuring deer-resistant plants:

NEW YORK STATE OF OPPORTUNITY

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Management Options

- Population Reduction
 - ✓ ~~Recreational Hunting~~ ECL § 11-0907
 - ✓ Controlled or managed hunt
 - Landowners can dictate:
 - Days and times of day hunted
 - Implements used
 - Specific locations
 - Hunter numbers
 - Hunter characteristics (proficiency, ethics, etc.)
 - Municipality or organization can set up system for vetting hunters and communicating with landowners



Management Options

- Population reduction

- ✓ Culling permit (Deer Damage Permit)

- Issued when hunting is not possible or sufficient
 - Outside of hunting season, using non-hunting techniques
 - Shooting can be done by volunteers or professionals
 - Various implements depending on locations
 - Permit specifies methods, locations, quotas
 - Capture and kill option possible
 - Typically, must make use of venison



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Management Options

- Reproductive reduction
 - ✓ Surgical sterilization (*permanent*)
 - Only practical on females (one buck can breed many does)
 - Tubal ligation
 - Prevents fertilization, not ovulation
 - Ovariectomy
 - Prevents ovulation
 - May be incorporated into a management plan to supplement lethal removal.
 - ✓ Immunocontraception (*temporary*)
 - Porcine zona pellucida (PZP)
 - Prevents fertilization, not ovulation
 - GonaCon™
 - Prevents ovulation
 - Not registered for use in NYS
 - Requires a scientific research license



Considerations

- Animals culled by rifle die instantly (98% in kangaroo study)
- Most deer shot properly with bows die within seconds (traveled on average 50-60 yards in Tompkins County programs)
- 8% wounding/non-recovery rate in Tompkins County programs
- Natural deaths almost always involve suffering
- Deer killed by vehicles almost always involves suffering (majority make it off the road and are never seen)
- Deer are shot to protect many societal interests
- Deer killed by vehicles are typically wasted
- Deer killed by culling are typically used for food
- Deer that die after sterilization should not be consumed

Community Deer Management

- Broad public involvement is crucial
 - Provides valuable feedback to community leaders
 - Increases mutual understanding among stakeholders
 - Reduces likelihood of negative backlash
 - Establishes strong foundation for defending decisions
- Communication and transparency

Assessing communities' experiences

- depression.org
- Openness
- Cooperation with neighbors for reaching decisions
 - Belief that an acceptable solution is worth seeking

Community Deer Management



- High awareness of the issue within the community
- Lower speed limits
- Community notification
- Deer-resistant agriculture and safety practices available to the community?
- Is this a community problem? existing or something should be done?
- Deer-resistant planting
- Were costs on target?
- Tick-bite avoidance?
- Clear communication by industry?
- Is education about deer population actually measured?
- Are there any other negative consequences?
- How many deer live in the community is not necessary or helpful?
- Reporting of results better or more efficient?

Initial Education Phase



- The process
- Local impacts
 - Survey of residents
 - Ecological assessment
- Deer biology
 - Reproductive rates
 - Mortality
 - Population regulation
- Management options
 - Reduction of vulnerability
 - Deer population reduction
 - Deer population control



Community Deer Management

No matter what management options (if any) are chosen, there will need to be a coordinated and **continuous** effort.

Additional Information

Cornell University community deer management resource:

- deeradvisor.org

DEC pages on deer overabundance and community deer management:

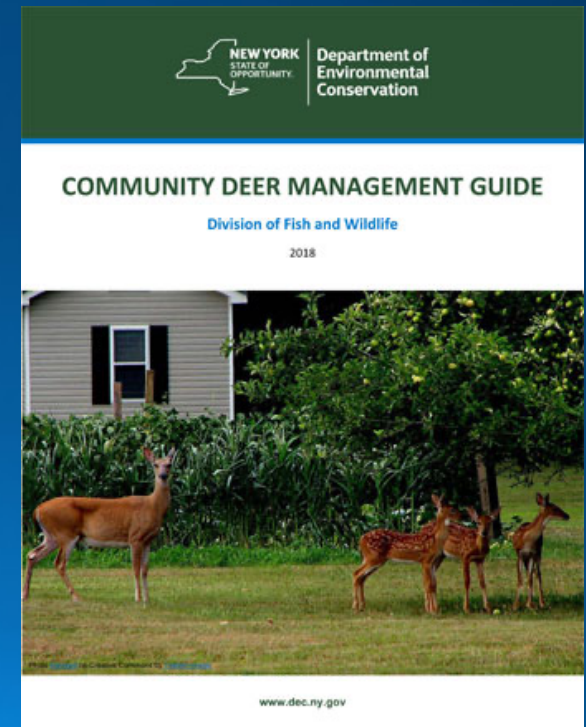
- <http://www.dec.ny.gov/animals/104911.html>
- <http://www.dec.ny.gov/animals/104961.html>

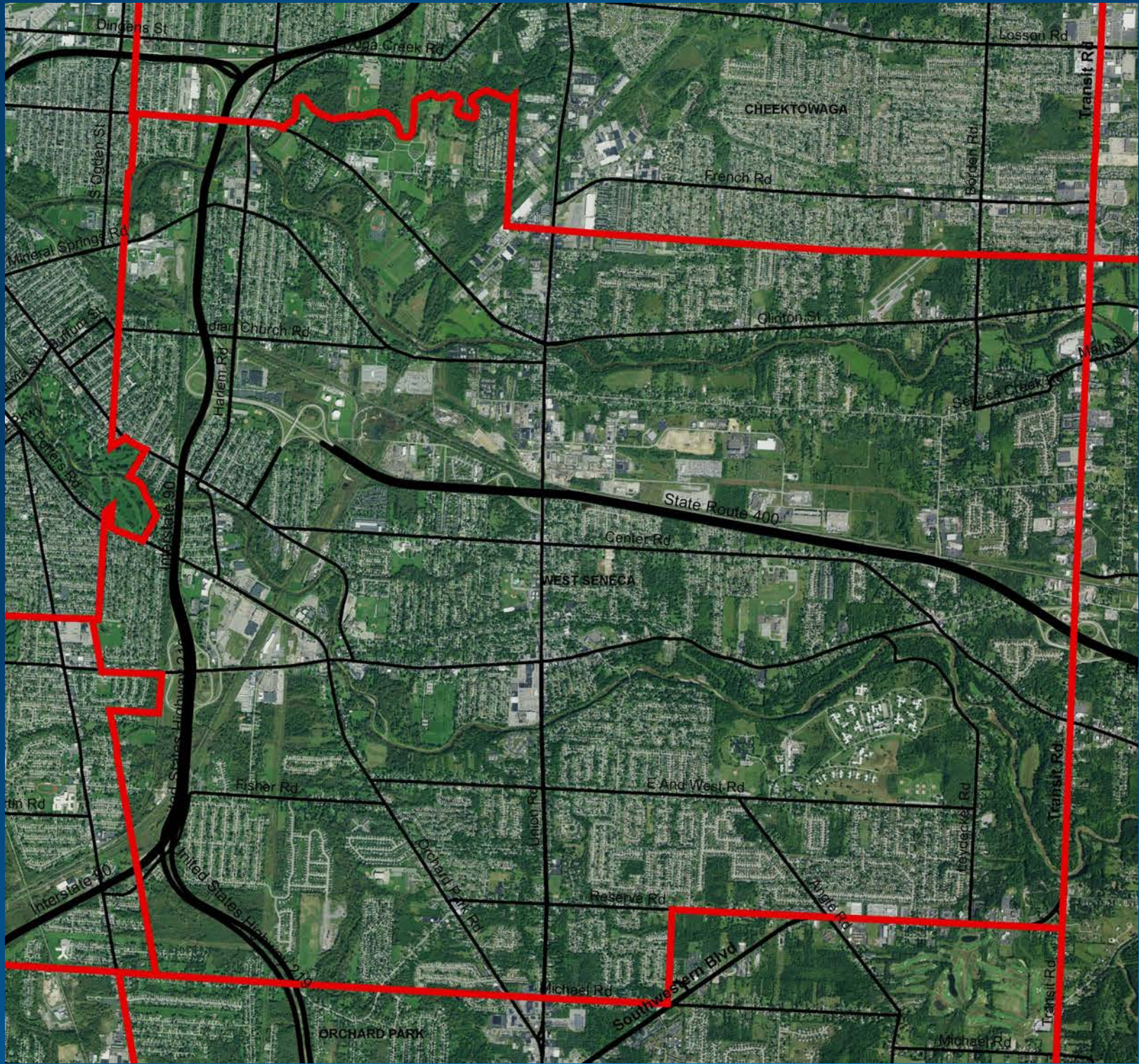
Impacts of deer on forests and wildlife:

- deerandforests.org

How to monitor deer impacts on your land:

- aviddeer.com





Dingers St

Wagon Creek Rd

Losson Rd

CHEEKTOWAGA

French Rd

Mineral Springs Rd

S Ogden St

Borden Rd

Transit Rd

Gran Church Rd

Clinton St

Wurtem St

Harlem Rd

Seneca Creek Rd

Porter's Rd

State Route 400

Center Rd

WEST SENECA

Interstate 90

United States Highway 219

Fisher Rd

E And West Rd

14th Rd

Union Rd

Reynolds Rd

Transit Rd

Interstate 90

United States Highway 219

ORCHARD PARK

Orchard Park Rd

Reserve Rd

Angler Rd

Southwestern Blvd

Michael Rd

Michael Rd

Transit Rd

Safety Considerations

- The statewide annual average for hunting-related shooting accidents is 3.2 per 100,000 hunters; the vast majority of those shot themselves or their companion.
- There have only ever been two two-party bowhunting accidents recorded in the state; in both cases the hunter shot his companion.
- There have been no non-target animals shot in community deer management programs in New York.

