



HISTORY OF
HUNTING IN
SUDBURY

Timeline

**Hunting Permitted at
Lincoln Meadows and
Raymond Reservation**



Prior to 1983



1983

**Hunting Banned at
Raymond Conservation
Land.**

**36 Hunting Permits
issued for Lincoln
Meadows**

**36 Permits Issued for
Lincoln Meadows**

**Illegal Hunting Occurred
at Davis Farm**



1984



1985

**Hunting Banned on All
Conservation Land**

Timeline

**Fish and Wildlife
Approached the
Commission to allow
limited hunting on
Conservation Land to
reduce deer population**

1996

**Residents of Willis Road
approached Commission
about limited deer hunting
on Conservation Land**

1997

**Bow Hunting Pilot Program
Established for King Philip,
Davis Farm, Lincoln
Meadows and Raymond
Reservation**

**14 Illegal Hunting Stands
Found and Removed**

1999

**23 Bow Hunting Permits
Issued**

2000

Timeline

Tippling Rock and Piper Farm Added to Program

2001

**Poor Farm, Nobscot, Frost Farm, and Wake Robin Added to Program
5 Illegal Stands Found**

2003

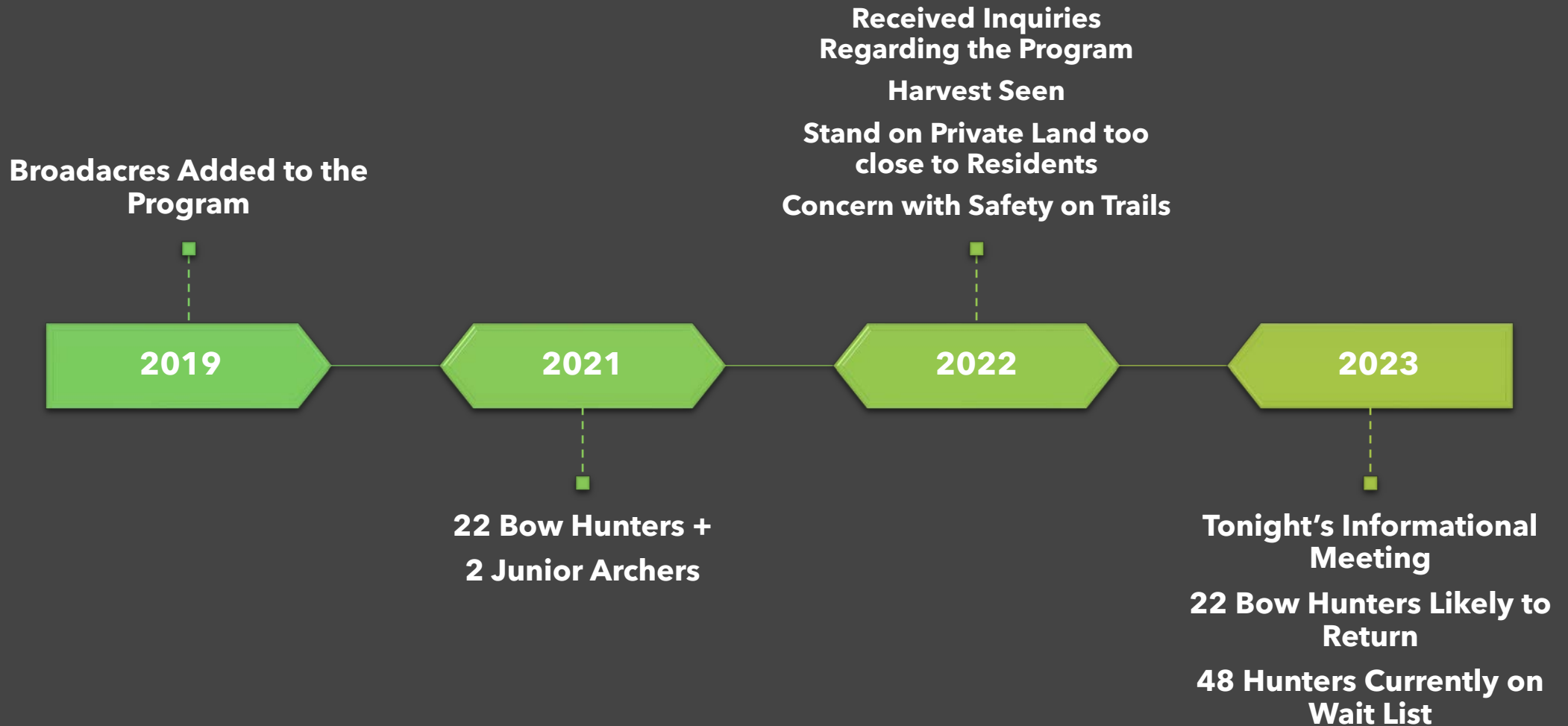
Hop Brook, Parkinson's, and Barton Farm Added to Program

2002

Mahoney Farms added to Program Prompted by Illegal Hunting Occurring

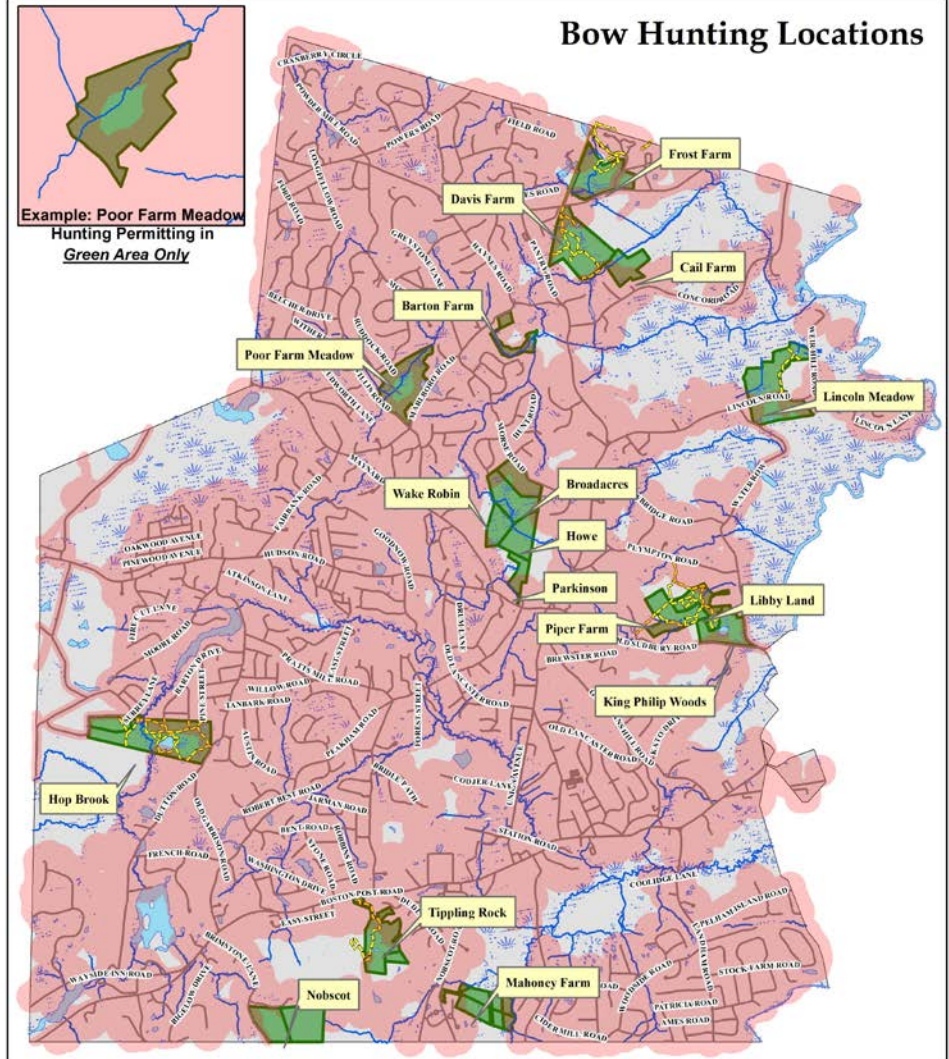
2013

Timeline



Bow Hunting Locations

Example: Poor Farm Meadow
Hunting Permitting in
Green Area Only

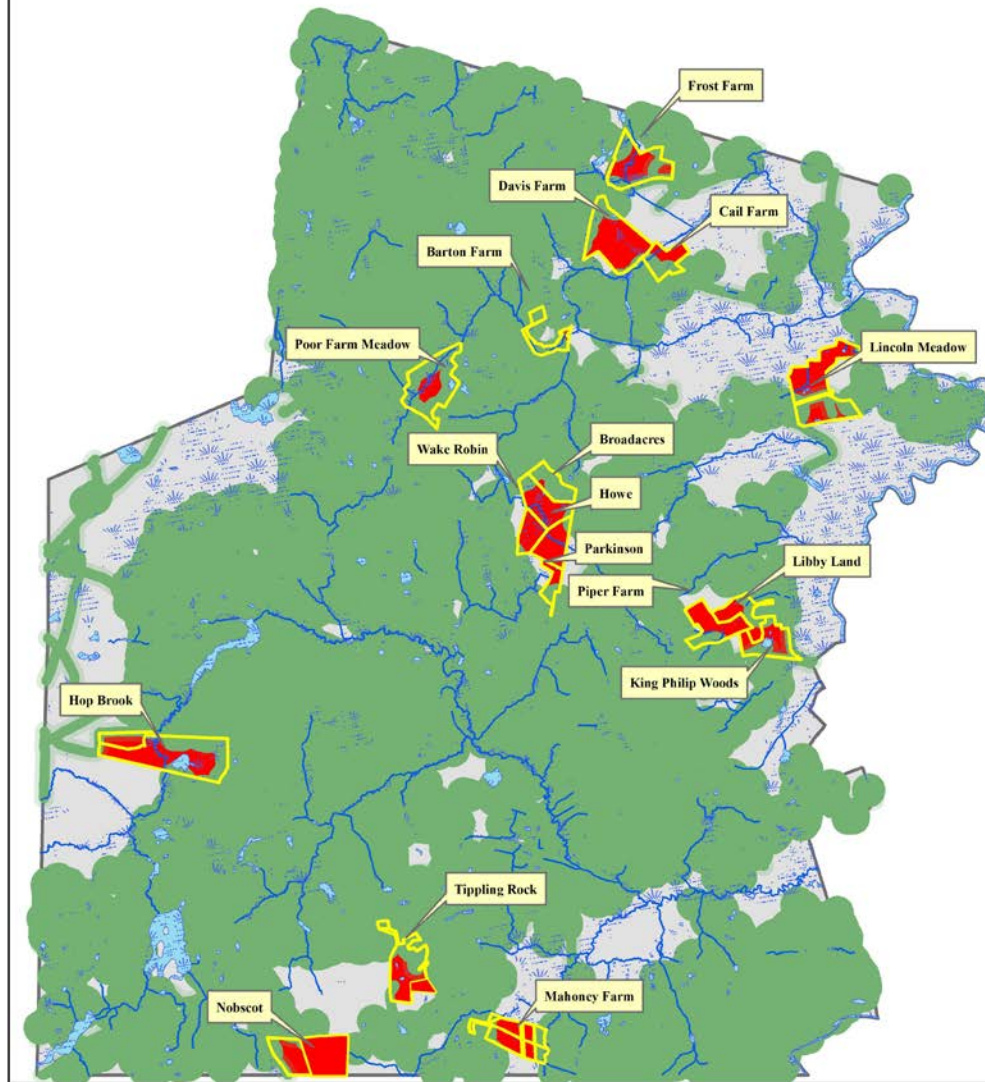


Legend

- Conservation Parcels
- Trails
- Ponds
- Streets
- Hunting Prohibited
- Streams
- Wetlands
- Sudbury



Town Bow Hunting Locations



Legend

- | | | | |
|----------------------|--|---------|---------|
| Hunting Prohibited | Bow Hunting Permitted on Conservation Land | Streams | Streets |
| Conservation Parcels | Wetlands | Ponds | Sudbury |

Conservation Commission Act

- Establishes a Conservation Commission for the promotion and development of the natural resources and for the protection of watershed resources.
- Provides the Commission the responsibility of land management, environmental education, and policy formulation for the community.
- Regulations for Use of Sudbury Conservation Land permits Bowhunters carrying a valid Town of Sudbury bowhunting license and in accordance with all federal, state and local regulations.

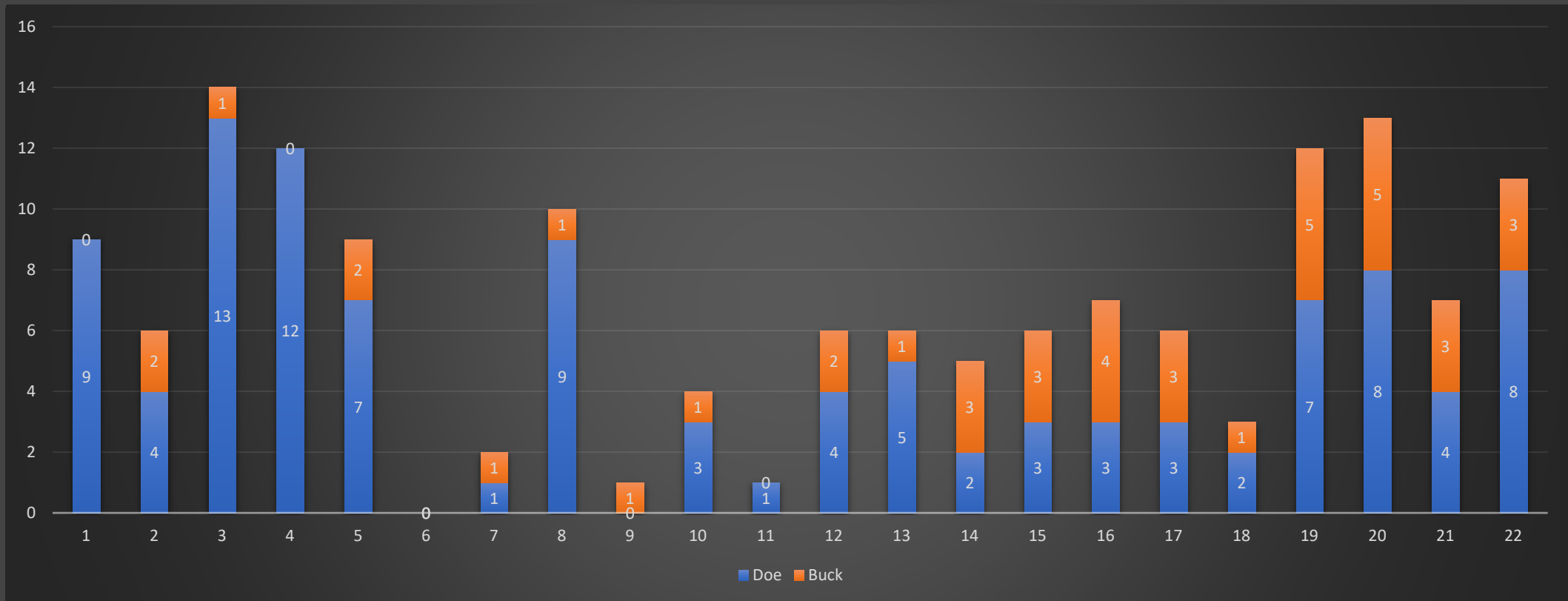
Bow Hunting Regulations

1. Hunting is permitted at your designated location only. Make sure you are familiar with all area boundaries and setback requirements prior to beginning the season.
2. Hunting is permitted from tree stands only which shall not be visible from a conservation trail. Stands are encouraged to be removed at the end of season. Stands that are not removed seasonally may be left in place with permission from the Conservation Commission, provided the GPS location of the stand is provided and stands are secured and posted private property.
3. Strap-on ladders or ladder steps are permitted. No injury to the tree shall be permitted.
4. No night vision or low light devices are permitted.
5. Harvested animals must be removed without damage to the area. All traces must be removed.
6. All deer taken must be reported to the Conservation Commission within 24 hours of harvest.
7. All Licenses, Permits and maps of approved location and boundaries must be carried at all times.
8. No other wildlife shall be taken.
9. All hunters shall be required to donate a minimum of two hours of volunteer time for land maintenance duties on Sudbury Conservation lands.
10. Your Permit Number must be visibly displayed on your tree stand at all times.
11. Junior archers may accompany a licensed hunter, with permission from the Conservation Commission. Junior archers are required to pass the Commission's proficiency test and must donate the required two hours of volunteer time.

Reasons Deer Management Was Considered:

- Damage to forest ecosystems.
- Vehicle collisions. On average, 17 deer/car collisions are reported annually in Sudbury.
- Lyme disease and other tick-borne diseases.
- Malnourishment of deer populations.
- Damage to landscaping and agricultural crops.

Harvests By Year

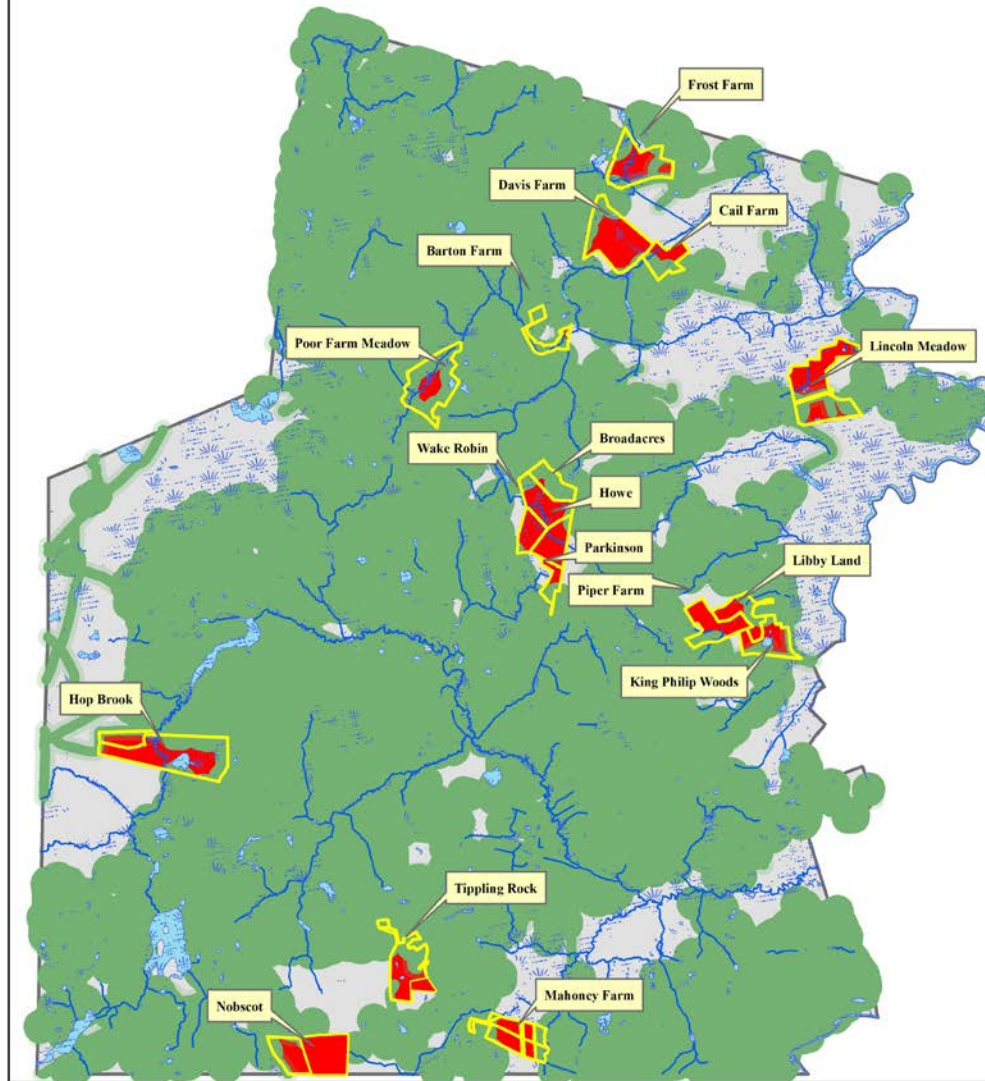


Examples of Service Projects

Management of our Conservation Lands

- Maintenance of Trails
- Tree Removals
- Construction of Kiosks
- Construction of Boardwalks
- Painting of signs, kiosks and gates
- Mowing of the Community Garden
- Monitoring of Illegal Hunting
- Helped Establish Pollinator Meadow at Davis Farm
- Fixed roof and floor of shed for Community Garden
- Mowing of Meadows at Landham Brook
- Remove Invasive Species
- Removed Trees and Repaired Fence at Ford's Folley

Town Bow Hunting Locations

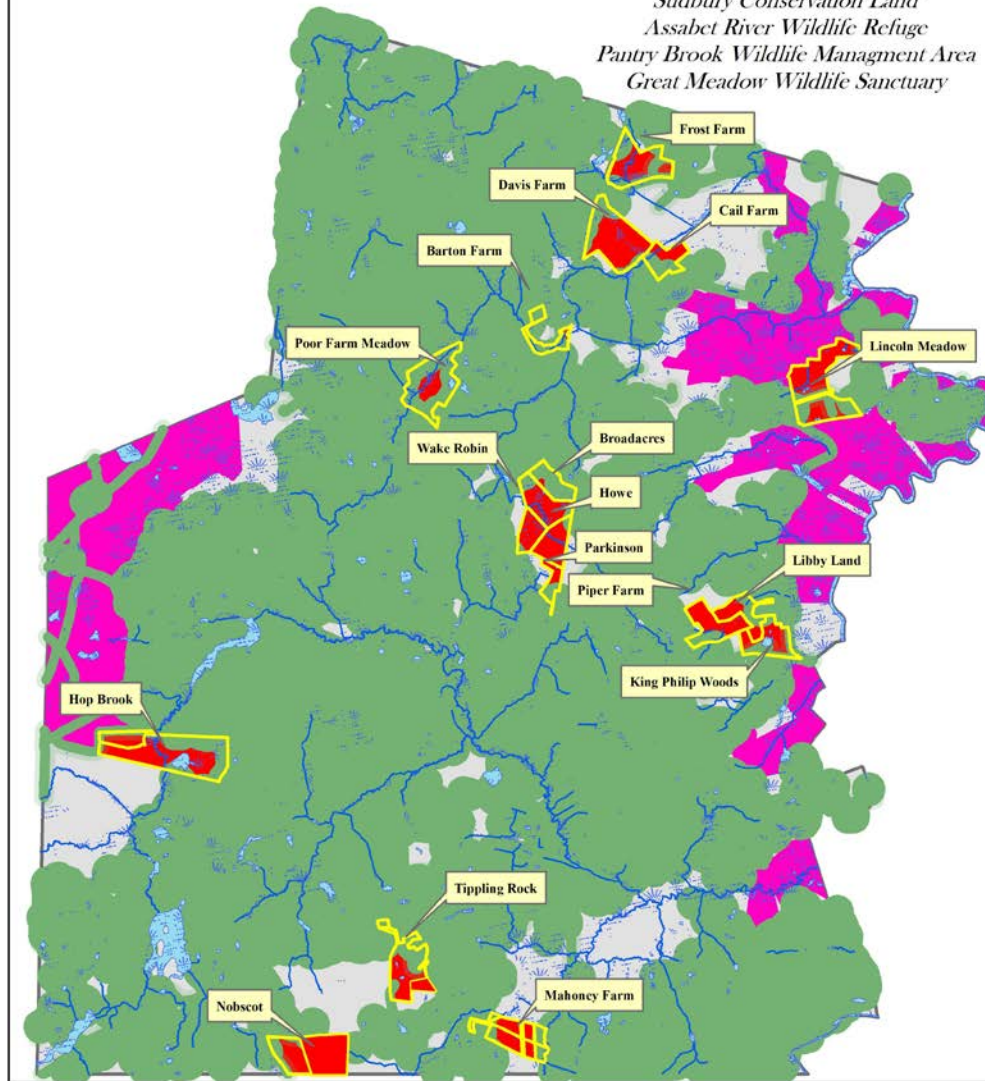


Legend

- | | | | |
|----------------------|--|---------|---------|
| Hunting Prohibited | Bow Hunting Permitted on Conservation Land | Streams | Streets |
| Conservation Parcels | Wetlands | Ponds | Sudbury |

Hunting Locations

*Sudbury Conservation Land
Assabet River Wildlife Refuge
Pantry Brook Wildlife Management Area
Great Meadow Wildlife Sanctuary*



Legend

- | | | | |
|----------------------|---|----------|---------|
| Hunting Prohibited | Bow Hunting Permitted on Conservation Land | Wetlands | Ponds |
| Conservation Parcels | State/Federal Lands - All Hunting Permitted | Streams | Sudbury |

Sudbury's Deer Management Program

Frequently Asked Questions

What is the Sudbury Bow Hunting Program?

Since 1999, the Sudbury Conservation Commission has allowed bow hunting for deer on 11 conservation land areas from the start of the season in early October through December 31st (the state bow hunting season). Hunters are assigned to one of the following Conservation Properties: Frost Farm, Davis Farm, Barton Farm, Poor Farm Meadow, Lincoln Meadows, Wake Robin/Parkinson/ Howe/Broadacres, Piper/Libby/King Philip, Hop Brook, Tippling Rock, Mahoney Farm, and Nobscot. Separate from the Conservation Commission's program, hunting is also permitted by state and federal entities at the Assabet River Wildlife Refuge, Pantry Brook Wildlife Management Area and Great Meadows.

Well-seasoned and proficient bow hunters have been selected by the Conservation Commission to manage deer on these properties. Hunter selection preference is given to Sudbury residents, employees, and hunters with demonstrated experience hunting on properties frequented by people and dogs. Hunters must pass a proficiency test as well as the MA Division of Fisheries and Wildlife (DFW) certified bow hunting safety course. Hunting is done only from portable tree stands within specifically designated areas (500 feet from all homes and 150-feet from all roads – per state hunting laws). The bow range averages 20 yards from the tree stand down to the ground, and the deer must be broad-side and stationary before the shot can be taken.

Will hunting disrupt walking and other recreational uses of conservation land?

Walking and recreational uses of conservation land will not be disrupted. The deer hunting stands are located high up in trees and away from main trails. The hunters are aware that Sudbury's Conservation Lands are heavily used by people and dogs.

Several MetroWest Communities including as Framingham, Weston, and, Dover have launched successful hunting programs on conservation lands where people frequently walk dogs, jog, bike and ride horses. Since the Massachusetts DFW began keeping records there have been no reports of non-hunter injuries during bow hunting season.

Unfortunately, illegal hunting does take place on conservation land. The Conservation Commission occasionally finds illegal deer stands and blinds. Despite the Commission's best efforts to police the properties, it does not have the resources to be ever-present on all properties. Legally permitted hunters who have a stake in the program to help the Commission deter illegal hunting, and improve safety for everyone in the woods.

Is hunting inconsistent with the purpose of conservation land? Why can't we just let nature take its course?

To protect native plants and animals, we must actively manage these human-influenced parcels. Humans are already a key element in the ecological equation that governs these properties. Furthermore, humans have been predators of deer for thousands of years. An unrestricted deer population is a powerful disruptive force in Sudbury's forests, wetlands, and fields. In this case, proper management of conservation land requires human intervention to protect and preserve diversity of both flora and fauna. A hands-off approach would allow deer to continue to threaten many native species.

There's no way to know the exact deer population of Sudbury; however the Massachusetts Department of Fish and Wildlife estimates for our region of about 28-40 deer/square mile. MA DFW's and the Commission's goal is a population of 12-18 deer per square mile.

While most residents enjoy having some deer in Sudbury, the negative impacts caused by deer include:

- *Damage to landscaping and crops.* Many residents report damage to their landscaping from browsing, and farmers have to fence crops against deer to prevent significant crop losses.
- *Damage to forest ecosystems.* Sudbury's forests have revealed excessive deer browse in many areas, resulting in declines in several species of wildflowers and shrubs, and declining regeneration of some trees, particularly maple and oak.
- *Vehicle collisions.* On average, 17 deer/car collisions are reported annually to the Sudbury police department. Such collisions cause damage to vehicles and are usually fatal to deer, and can also cause injuries and (rarely) fatalities for drivers and passengers.
- *Lyme disease.* The number of cases of Lyme disease (along with other tick-borne illnesses) has been increasing in Sudbury, as well as in surrounding towns, among both people and pets. Lyme disease is part of a complex relationship involving the life cycle of deer ticks and several different animal hosts. Deer do not carry the disease (the major reservoir of the disease is field mice); however, deer play a critical role in supporting large populations of adult deer ticks and spreading them throughout the landscape. While there is scientific debate about how low the deer population must be driven to have a beneficial effect on the deer tick population, several studies have indicated that if it can be reduced below 10 deer/square mile, tick population and Lyme disease rates decline.

Is Conservation Lands open to other forms of hunting?

No. The purpose of this deer hunting program is to stabilize the deer population in a safe manner as part of our land stewardship obligations. We do not permit hunting with firearms. We do not allow hunting of other forms of wildlife on Conservation Land.

Questions about Sudbury's Deer Management Program? Contact the Conservation Commission at 978-440-5471 or concom@sudbury.ma.us



MASSWILDLIFE

Deer Management in Mass/Sudbury

Martin Feehan

Deer & Moose Biologist

Wildlife Health Specialist

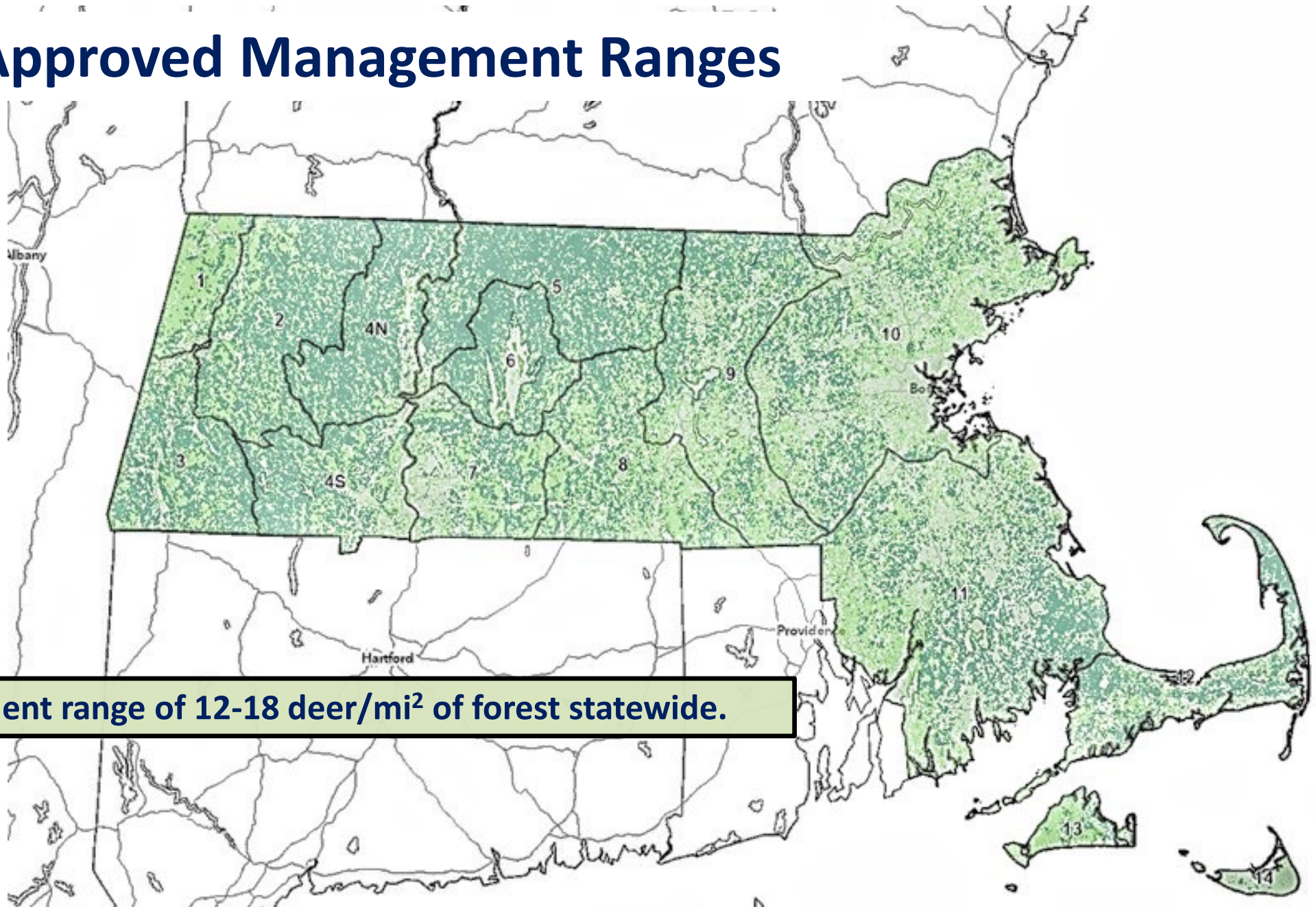
Deer in Massachusetts

- Deer are common and abundant across Mass. (160,000 – 200,000 deer)
- In areas where hunting is limited, deer populations exceed management goals set by biologists.
- Many towns in eastern Mass. have more deer than the habitat can sustainably support.
- Without population management, deer become overabundant, increasing habitat damage and risks to public safety from vehicle collisions.

High deer abundance leads to a loss of forest regeneration and species diversity as deer browse everything they can reach, from low-hanging branches to the forest floor.



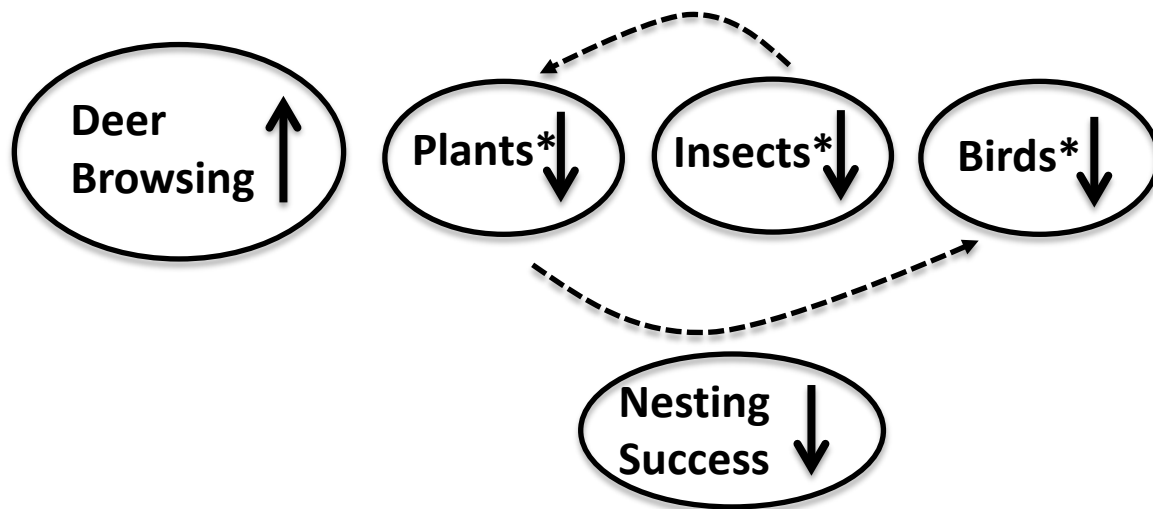
Board Approved Management Ranges



Goal management range of 12-18 deer/mi² of forest statewide.

Impacts of High Deer Abundance

- **Negatively impact the forest and ecosystem as deer numbers rise above ~ 18 deer per square mile of forest.**
 - Other wildlife, plants, and insects depend on a diverse and balanced forest and healthy understory
 - Increase in invasive plants
 - Cascading effects



Evaluating the long-term effectiveness of terrestrial protected areas: a 40-year look at forest bird diversity

Jeffrey A. Brown¹ · Julie L. Lockwood¹ · Julian D. Avery² · J. Curtis Burkhalter³ · Kevin Aagaard⁴ · Katherine H. Fenn⁵

Received: 8 February 2018 / Revised: 11 December 2018 / Accepted: 23 December 2018



Ovenbird, blue-winged-warbler, and black-and-white warbler that nest on the ground or in the understory have been extirpated from this site

Deer Numbers Increased

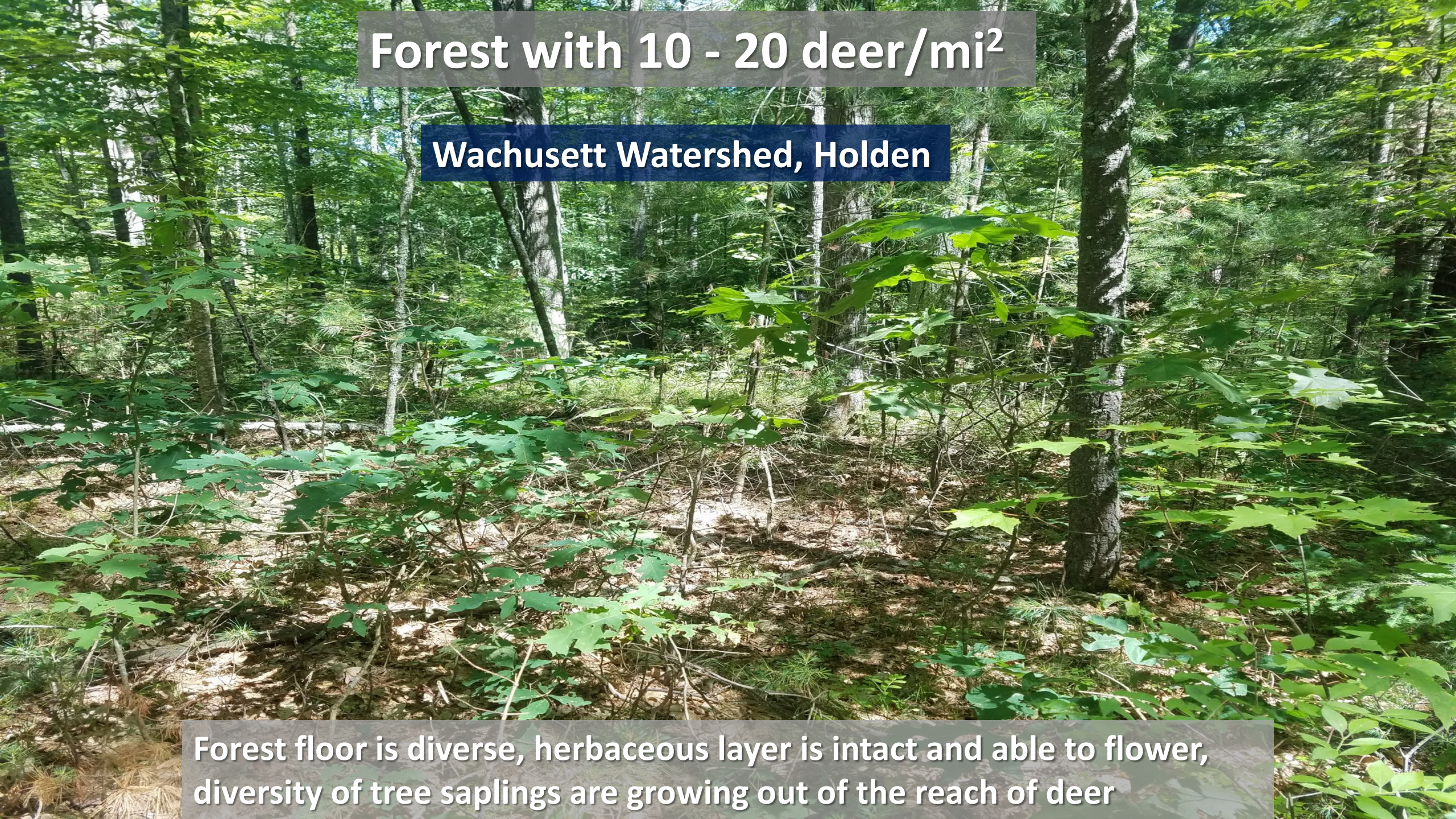
Forest fragmentation

Invasive plants

Nest predation and parasitism

Predation from pets

Fig. 4 Photos of Hutcheson Memorial Forest (New Jersey, US) in 1973 (left) and 2005 (right) illustrating the loss of understory vegetation over time due to species invasions and deer over-browsing. Photo credits: Jim Quinn (left) and Myla Aronson (right)

A photograph of a forest with a diverse herbaceous layer and tree saplings. The forest floor is covered with various green plants, including large-leafed species and smaller saplings. The background shows a dense stand of trees with varying trunk colors and heights. The lighting is bright, suggesting a sunny day.

Forest with 10 - 20 deer/mi²

Wachusett Watershed, Holden

Forest floor is diverse, herbaceous layer is intact and able to flower, diversity of tree saplings are growing out of the reach of deer

Forest with 20 - 50 deer/mi²

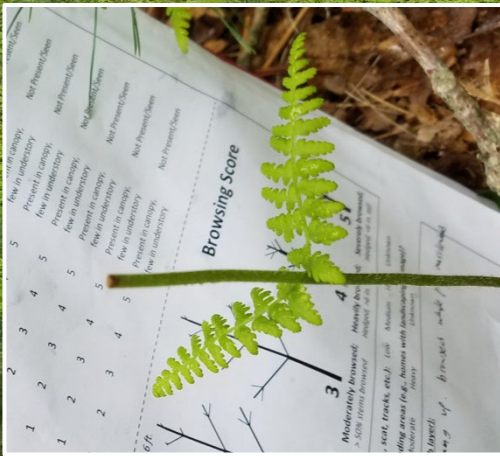
Wachusett Watershed, West Boylston



Herbaceous layer of forest floor is becoming sparse and few deer-preferred saplings are able to grow out of the reach of deer. Deer will start to browse on less palatable plants.

Forest with over 50 deer/mi²

Laughing Brook Wildlife Sanctuary, Hampden



Herbaceous layer of forest floor is absent or taken over by plants that deer won't eat. The future forest will be less diverse. Deer will start to browse on "desperation" foods.





MASSWILDLIFE

Monitoring the Herd

Deer Data Collected

- **Harvest data**
 - Sex ratios
 - Age structure
 - Health
- **Hunter Survey**
 - Effort
 - Success rates
 - Sighting rates
- **Non-harvest mortality**



In-Person Biological Deer Check

- We collect information used for modeling abundance
- We use a Downing Reconstruction Model for harvest-based abundance estimates
- Does not sample areas closed to hunting
- Areas with significant closure have likely much higher deer abundance than harvest-based estimates would predict





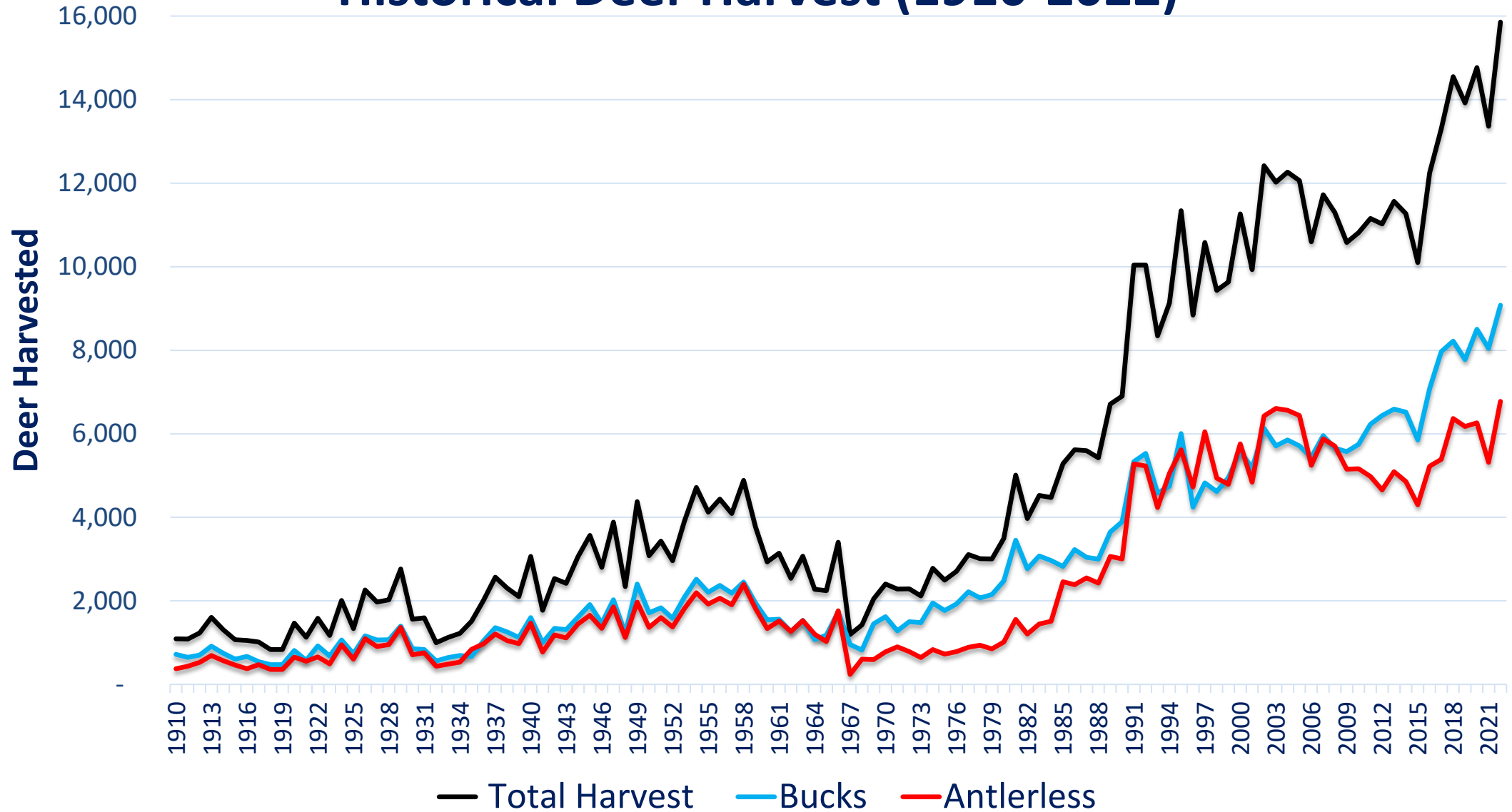
MASSWILDLIFE

Deer Harvest-based Management

Deer Harvest-based Management

- Hunting is a highly regulated, safe activity and all hunters must be properly licensed.
- All hunters are required to complete a Hunter Education course that teaches safety and laws.
- Hunting laws/regulations are strictly enforced by the Massachusetts Environmental Police.
- Every state in the country relies on legal, regulated hunting to manage deer populations.

Historical Deer Harvest (1910-2022)



Impeccable Safety Record

0

Non-hunters have been injured in Mass. from archery deer hunting.

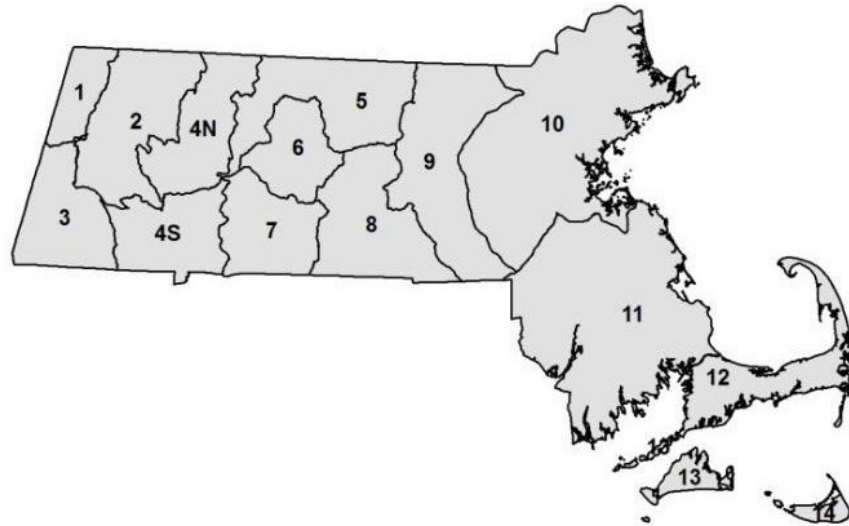
0

Non-hunters in Mass. have been killed due to deer hunting.

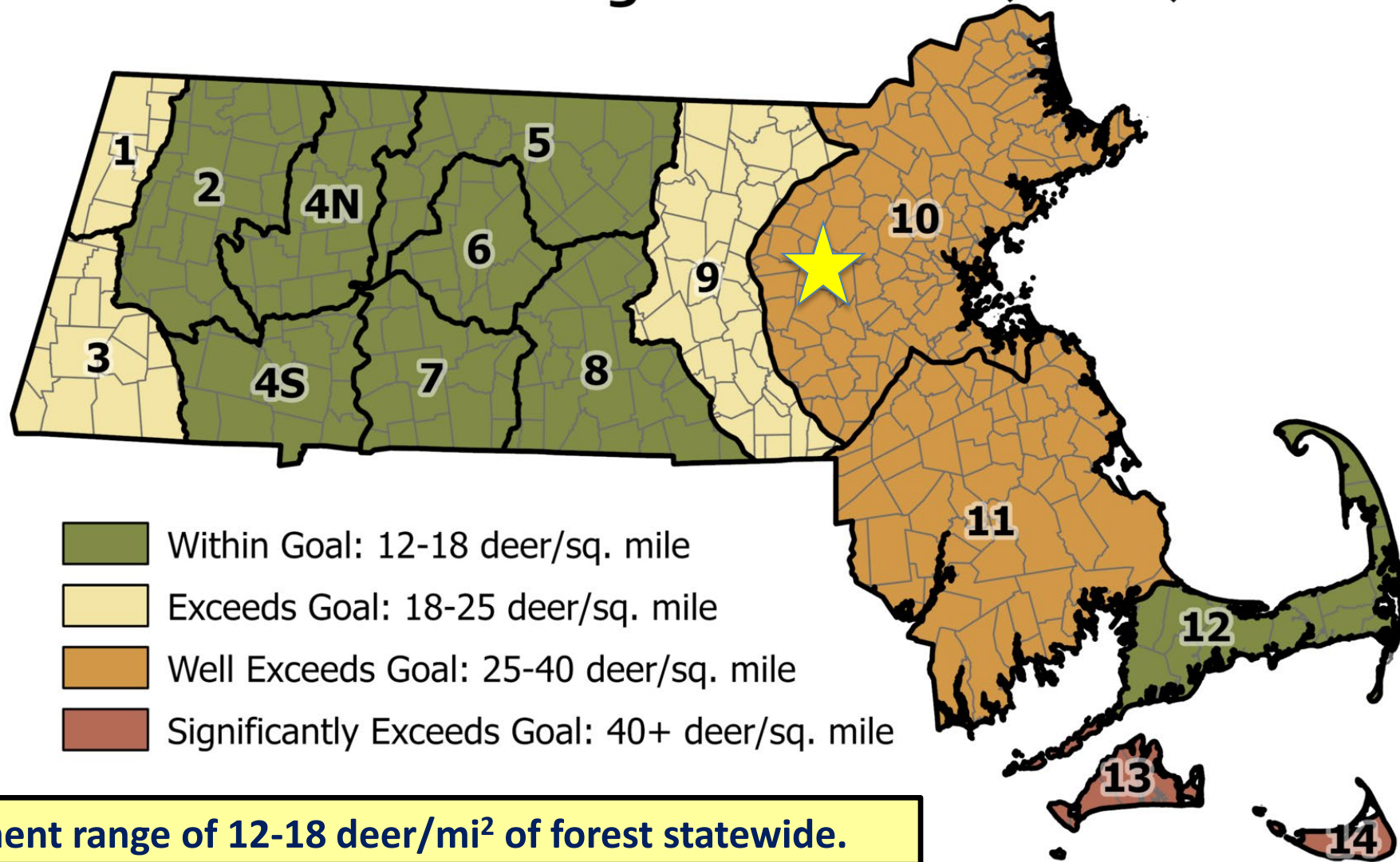


How Deer Abundance is Managed

- **MassWildlife Allocates Antlerless Deer Permits by Zone**
 - Regulate **Female** Harvest by Zone
 - Target Direction: Increase, Stabilize, or Decrease
 - Harvest Data and Antlerless Permit Success Rates

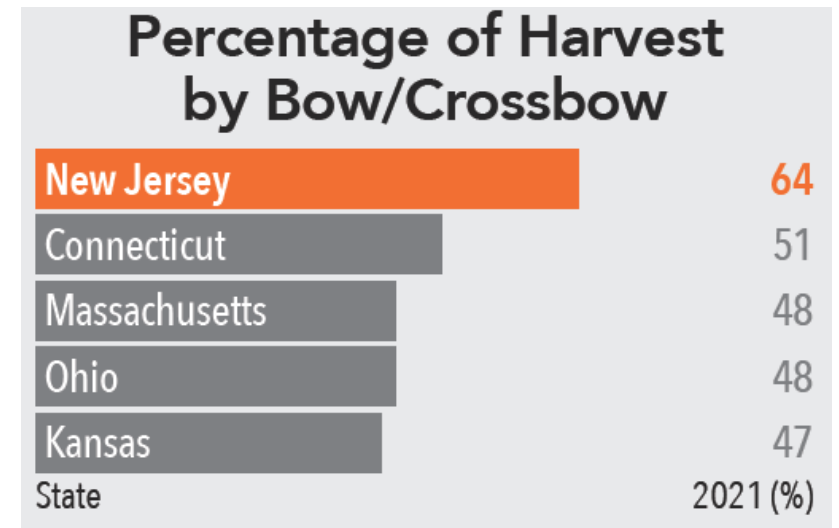
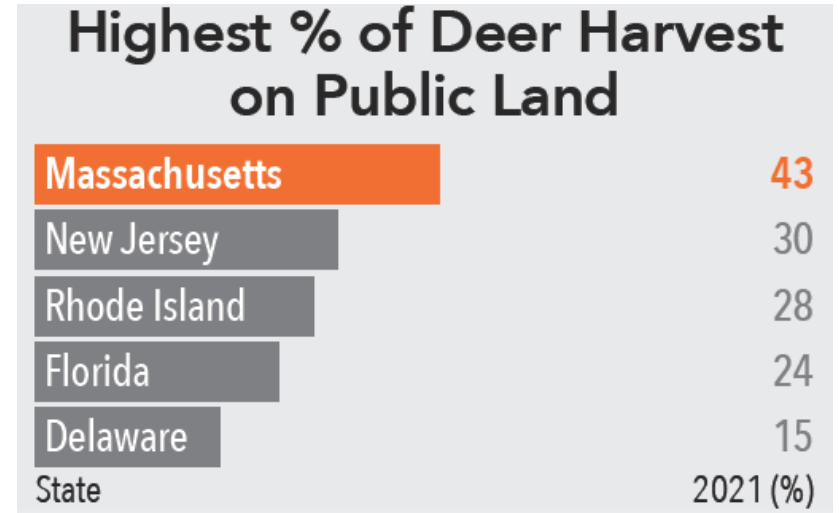


Deer Abundance by Wildlife Management Zone (WMZ)

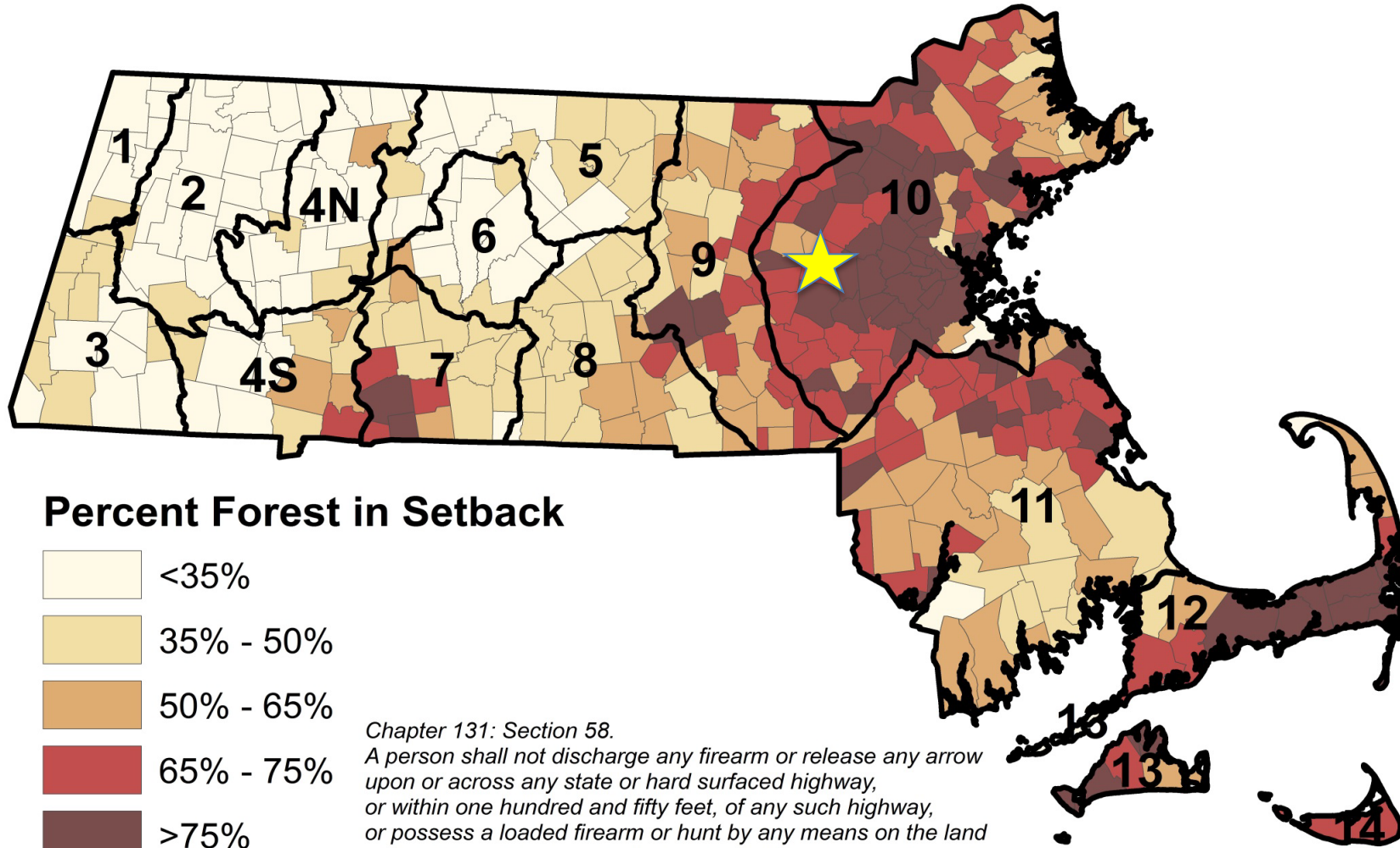


Statutory Limitations to Deer Management

- Moratorium on Sunday Hunting
- Crossbow Restrictions
- 500 ft Setbacks
- Municipal Hunting Laws



Percent of Total Forest within a Discharge Setback for all Towns in Massachusetts

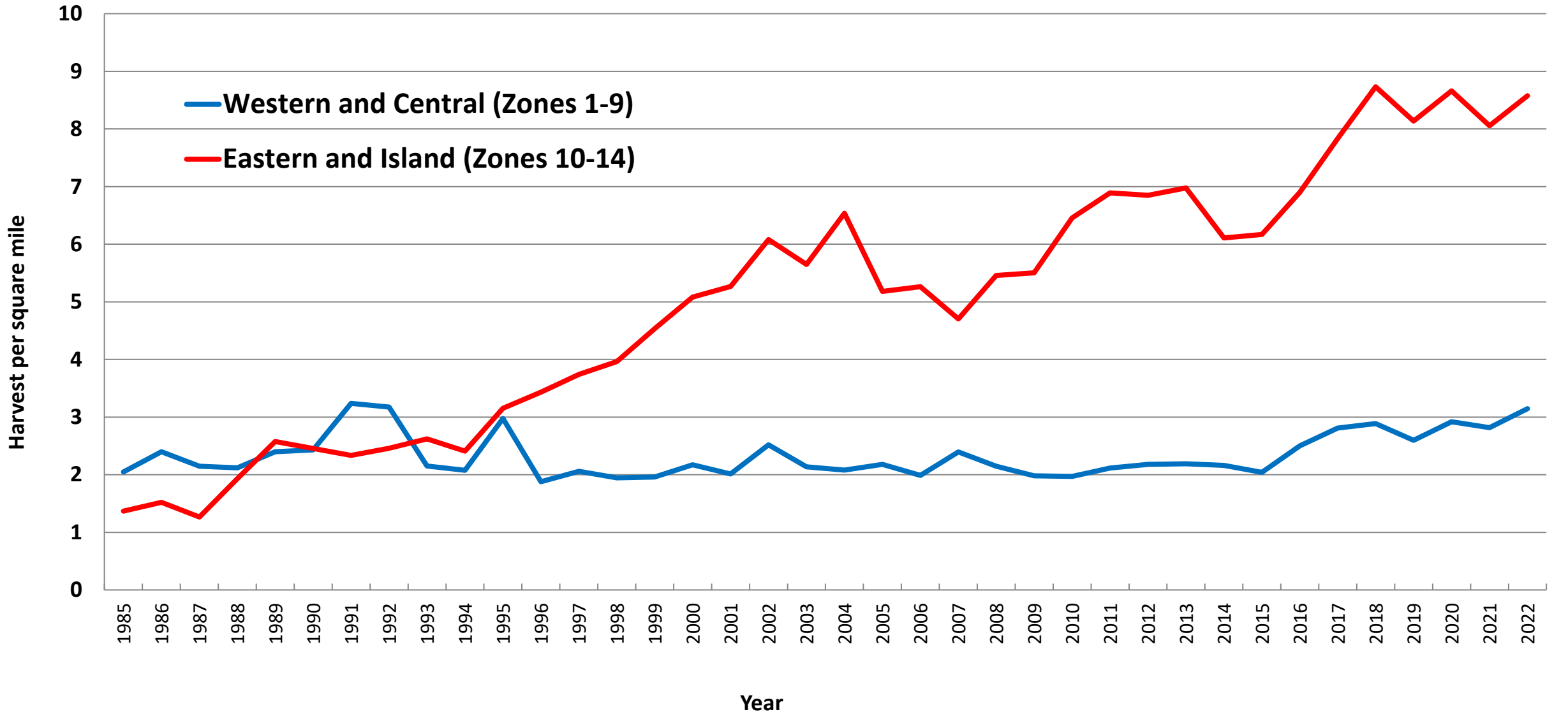


Percent Forest in Setback

- <35%
- 35% - 50%
- 50% - 65%
- 65% - 75%
- >75%

*Chapter 131: Section 58.
A person shall not discharge any firearm or release any arrow upon or across any state or hard surfaced highway, or within one hundred and fifty feet, of any such highway, or possess a loaded firearm or hunt by any means on the land of another within five hundred feet of any dwelling in use, except as authorized by the owner or occupant thereof.*

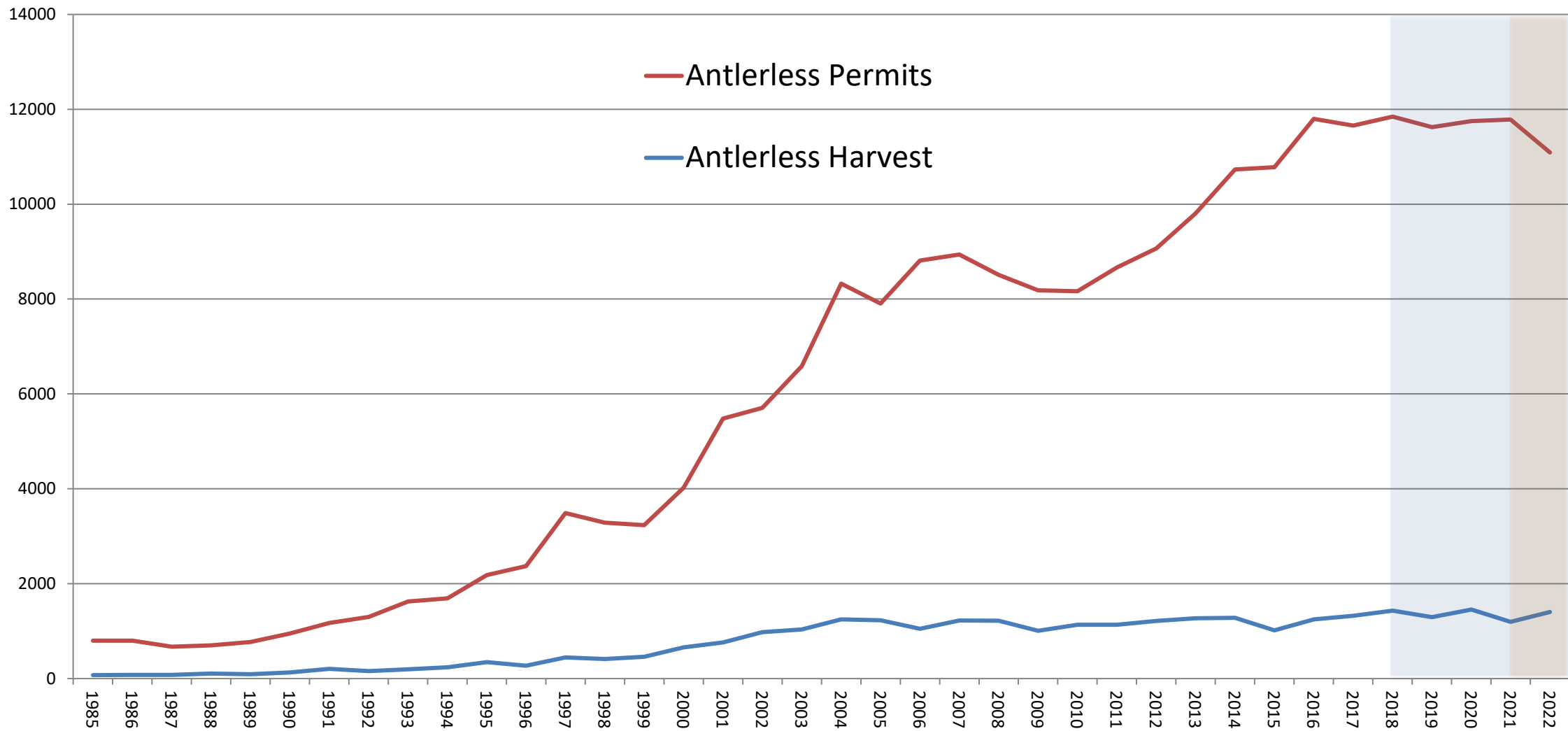
Adult Male Harvest per Square Mile (1985-2022)



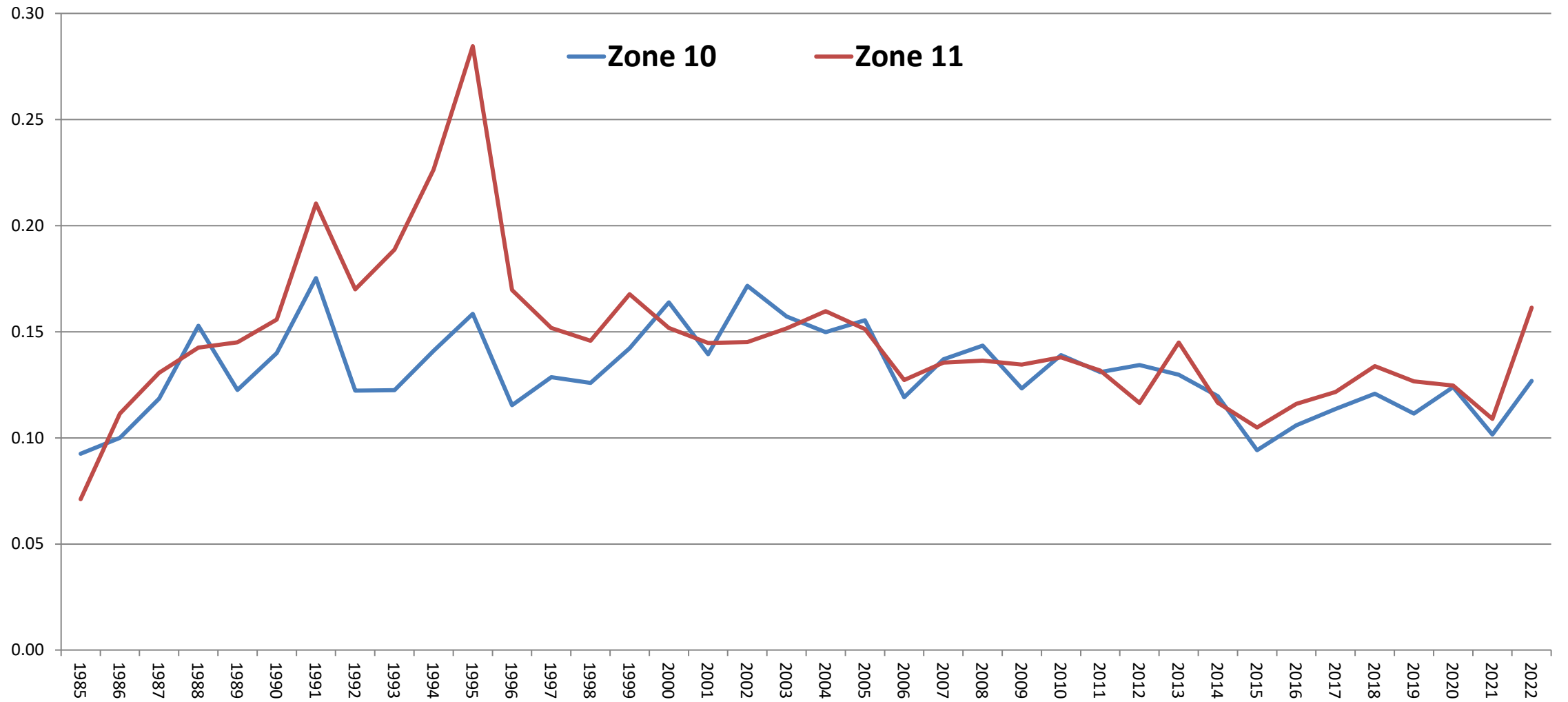
Zone 10 - Antlerless Permits Sold vs. Antlerless Harvest

Extended Season

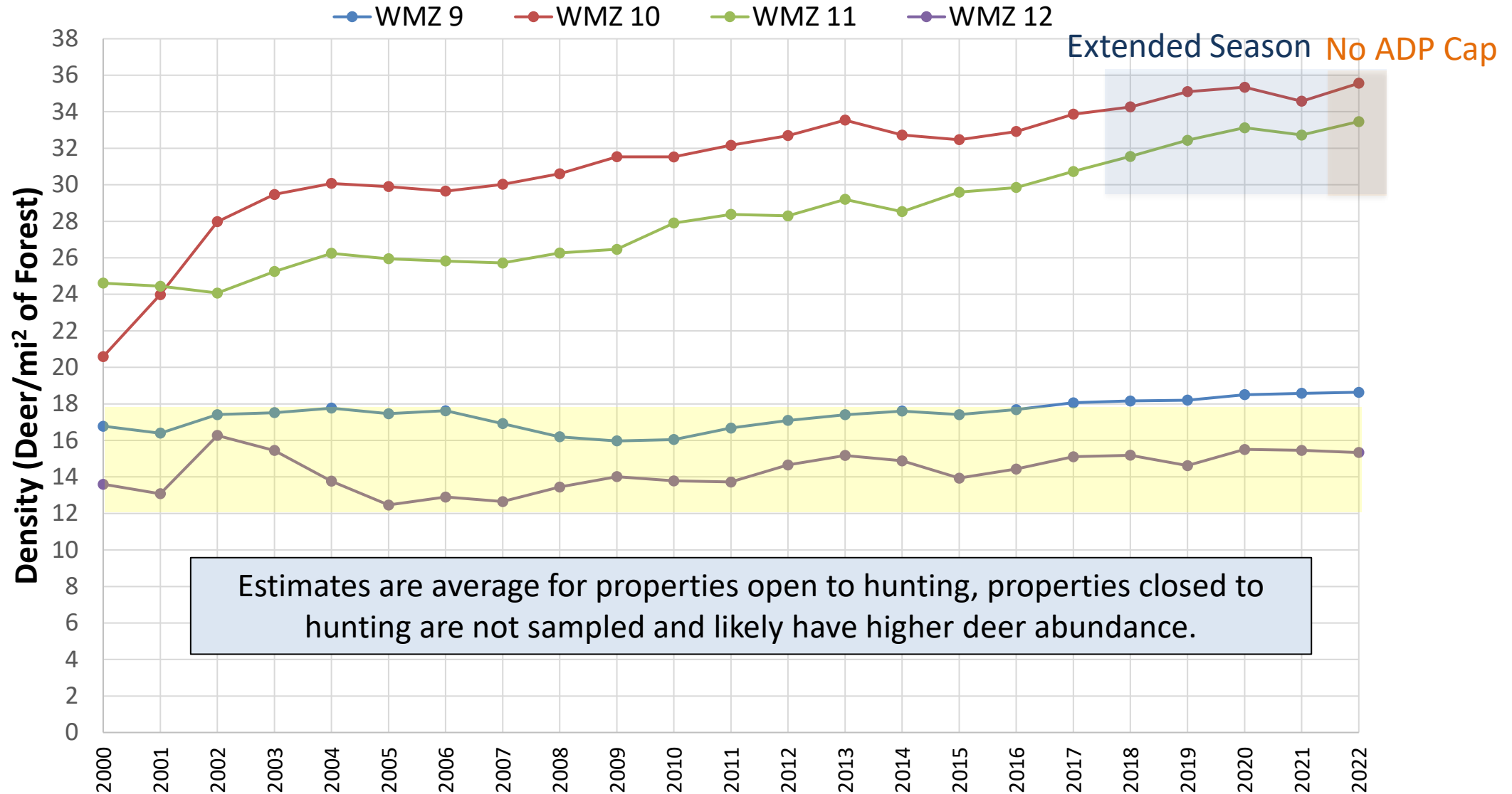
No ADP Cap



Antlerless Success Rate



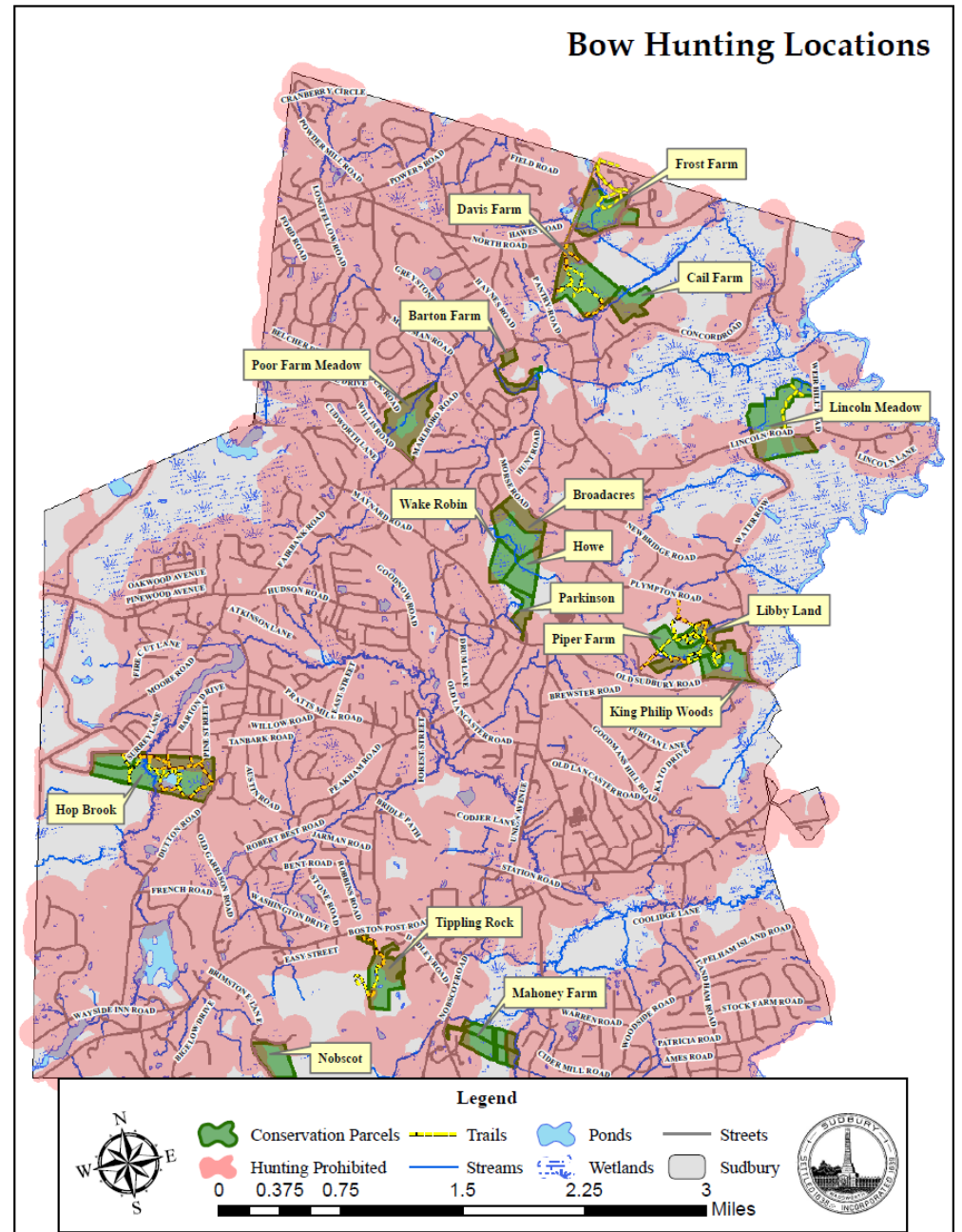
Eastern Mainland WMZ Deer Density Estimates



Limits on Harvest

- Season Lengths
 - Extended in 2018
- Limits on Permits
 - Removed ADP Cap in 2022
- Property Access
 - Requires Cooperation

- Hunting access is severely limited in Sudbury due to 500 ft setbacks
- Conservation properties are essential for preserving fragmented ecosystems and deer hunting is essential for the conservation properties to persist long term.



Sudbury Hunting Program

- Has been going strong since 1999
- All hunting is restricted to archery from tree stands
- Every hunter must pass a proficiency test
- There have been no safety issues
- One of the longest-run and most consistent programs statewide
- Averages ~12 deer/year
- Accounts for ~17% of deer taken in Sudbury

Other Nearby Programs

- Framingham
- Weston
- Dover
- Assabet River NWR
- Pantry Brook WMA
- Great Meadows NWR

Creating More Opportunity: Venison Donation

- In partnership with MassDPH, MassWildlife's Hunters Share the Harvest launched in Nov. 2022
- Financially supported by the Massachusetts Outdoor Heritage Foundation
- >1800 meals of venison donated through Mass Wildlife's Hunters Share the Harvest
- >700 meals of venison donated through Martha's Vineyard Island Grown Initiative



Summary

- Deer hunting is essential for promoting forest conservation.
- Deer hunting, particularly archery hunting, is exceptionally safe.
- The Sudbury Conservation Commission's deer management program has been very successful and MassWildlife Strongly supports the program for its efforts to improve ecosystem health.



MASS**WILDLIFE**

Questions?

Martin Feehan

Deer & Moose Biologist

martin.feehan@mass.gov