

# Overview of Deer Management in Michigan

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Wildlife Division  
April 14, 2022



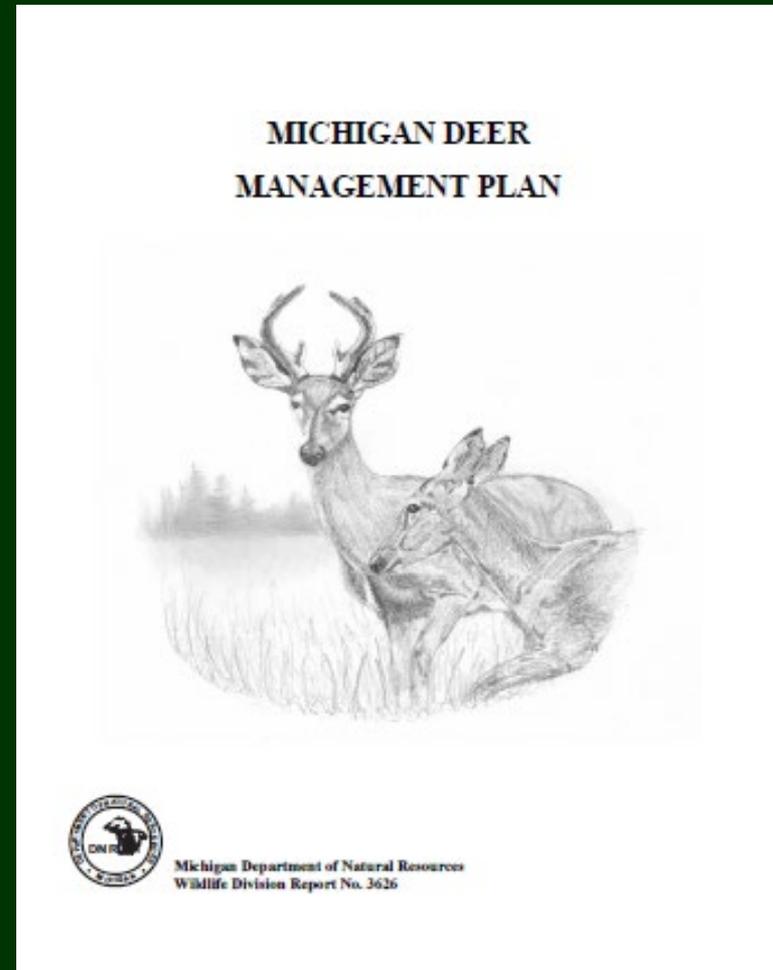
# Overview

- Summary of deer biology and management in Michigan
- Management topics and their corresponding impacts
- Chronic Wasting Disease and baiting
- Deer research topics

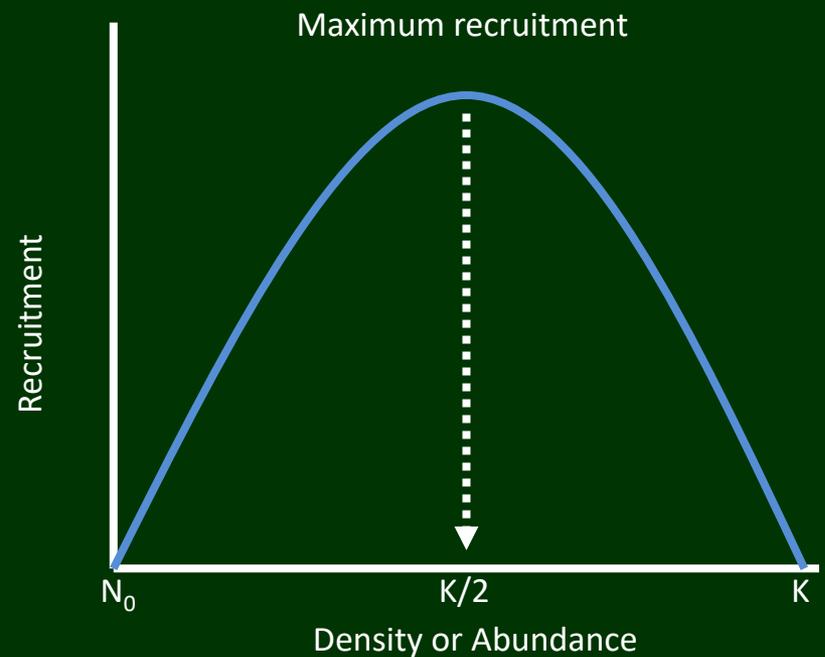
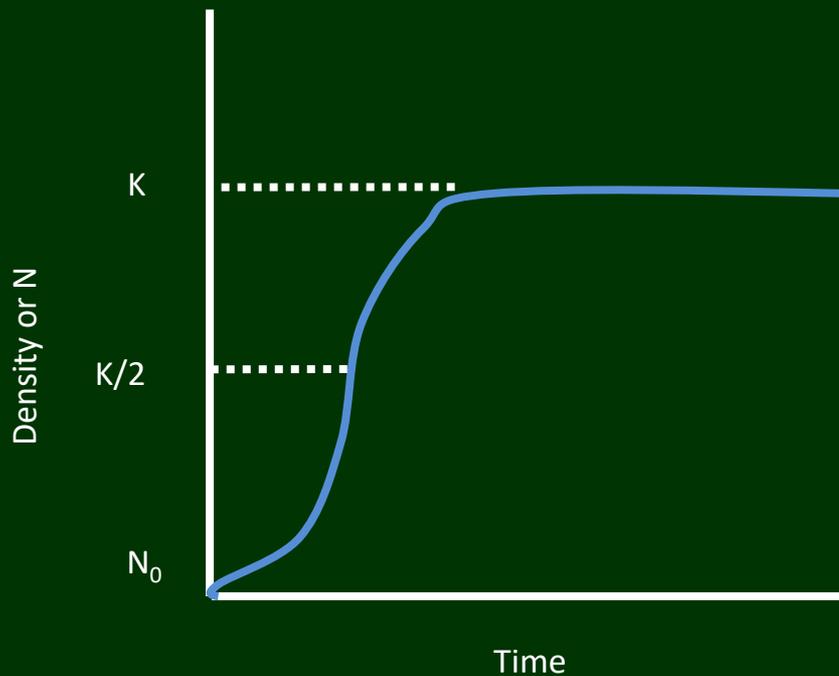


# Deer Program Mission

- To maintain a **healthy** white-tailed deer population, using **sound scientific management**, maximizing **recreational opportunities** while **minimizing negative impacts** on ecosystems and other wildlife species and without creating undue hardship to private interests.



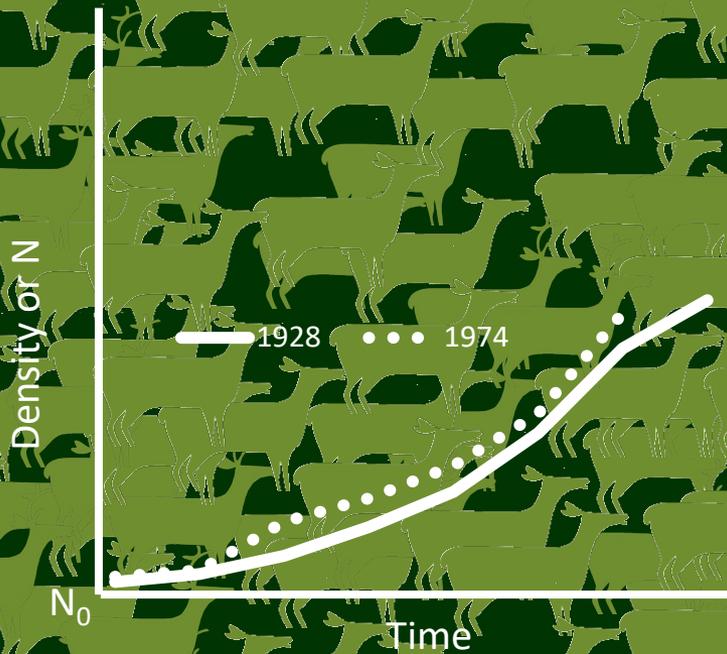
# Deer Biology and Management



# The George Reserve, Michigan: Year 1



# The George Reserve, Michigan: Year 7



# Deer Harvest (1963-2020)

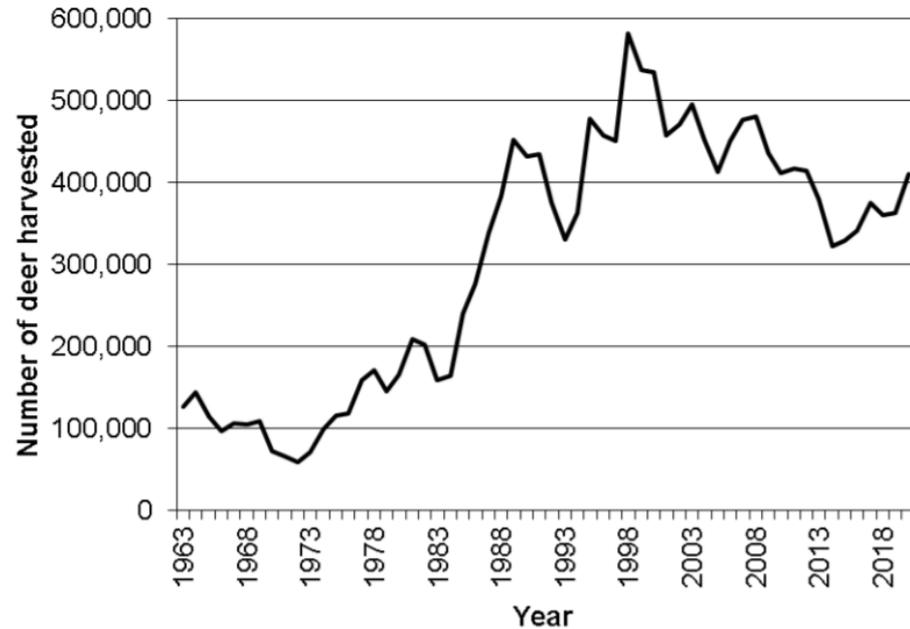


Figure 12. The number of deer harvested in Michigan's hunting seasons, 1963-2020. Harvest from all seasons and for all deer sexes was combined.

# Buck Harvest by Region (Avg. 2016-2020)



UP: 25,971



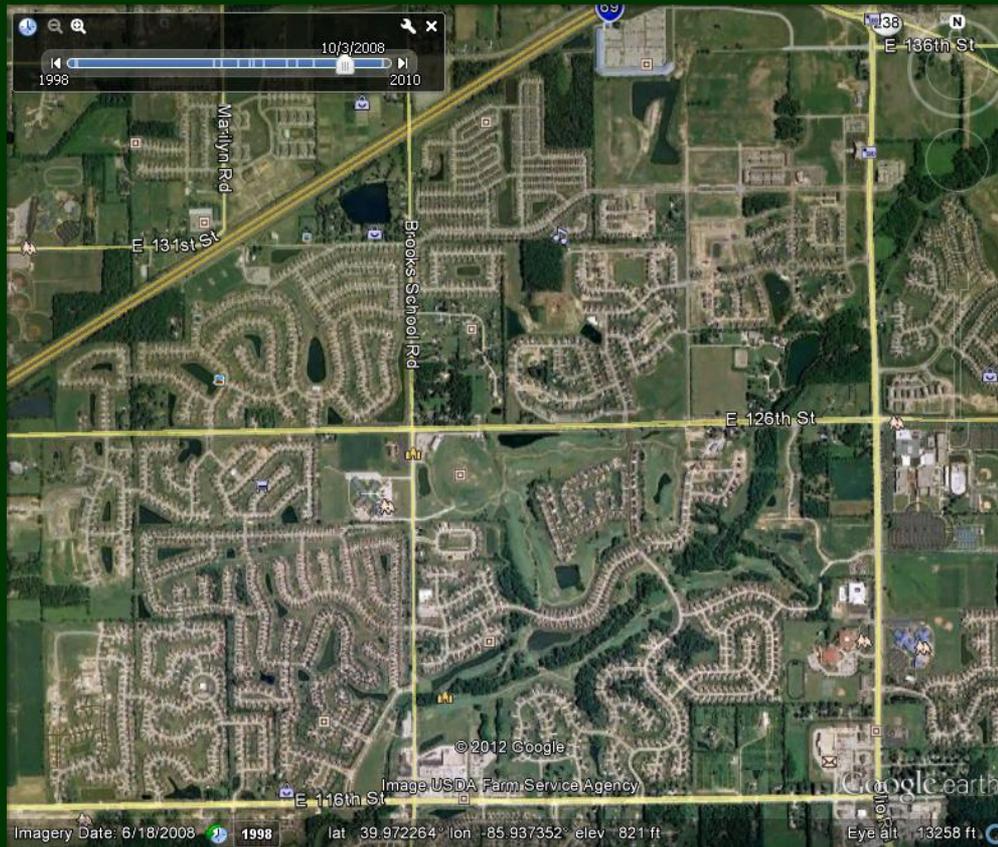
NLP: 72,465



SLP: 114,412



# Changes on the landscape

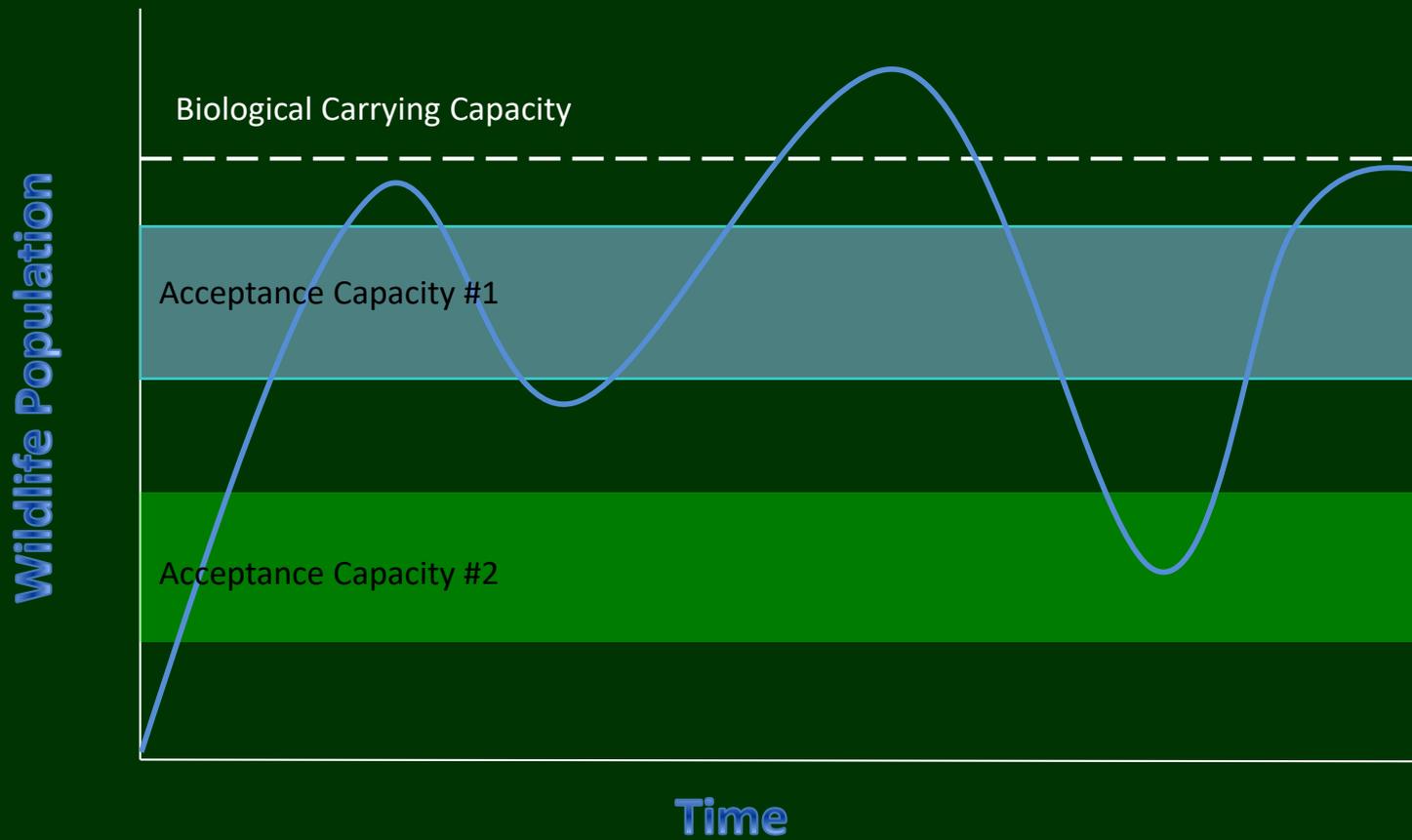


1999

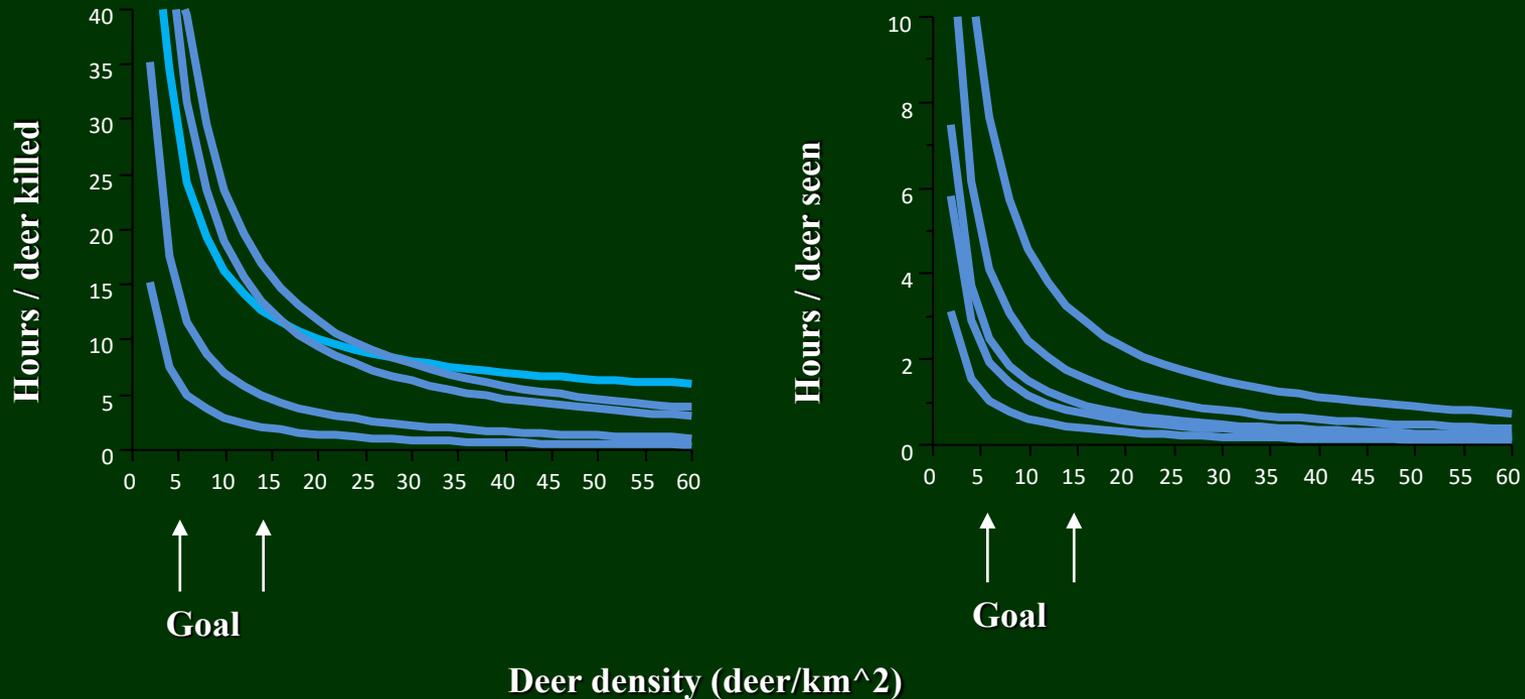
2008



# Measures of Capacity for Wildlife Populations



# Hunter Behavior with Deer Density



Van Deelen, T. R. and D. R. Etter, 2003. Effort and the functional response of deer hunters. *Human Dimensions of Wildlife*.



Hunter Numbers

Seasons/  
Season Dates

Type of Deer

Bag Limits

Weapons

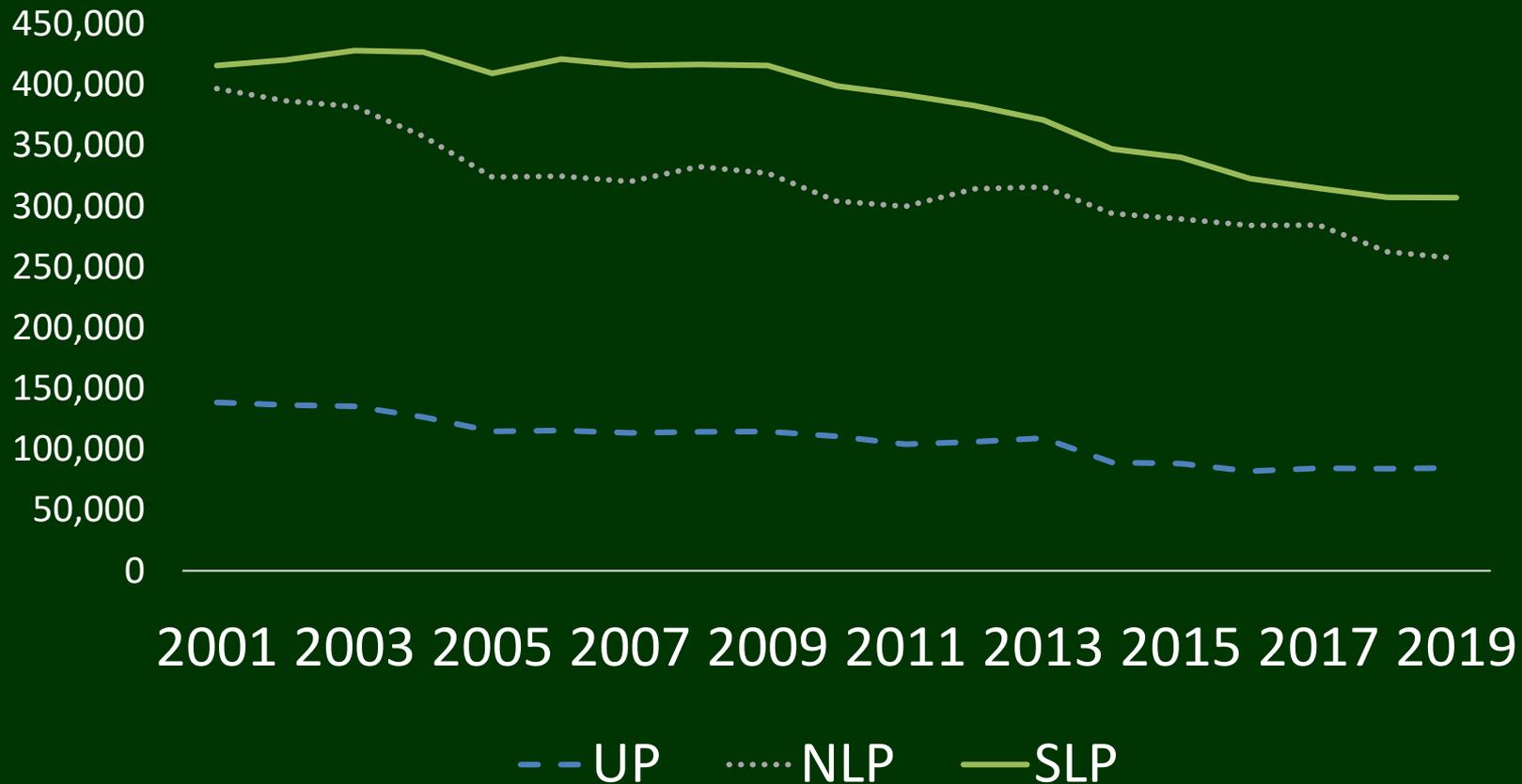




# Hunter Numbers



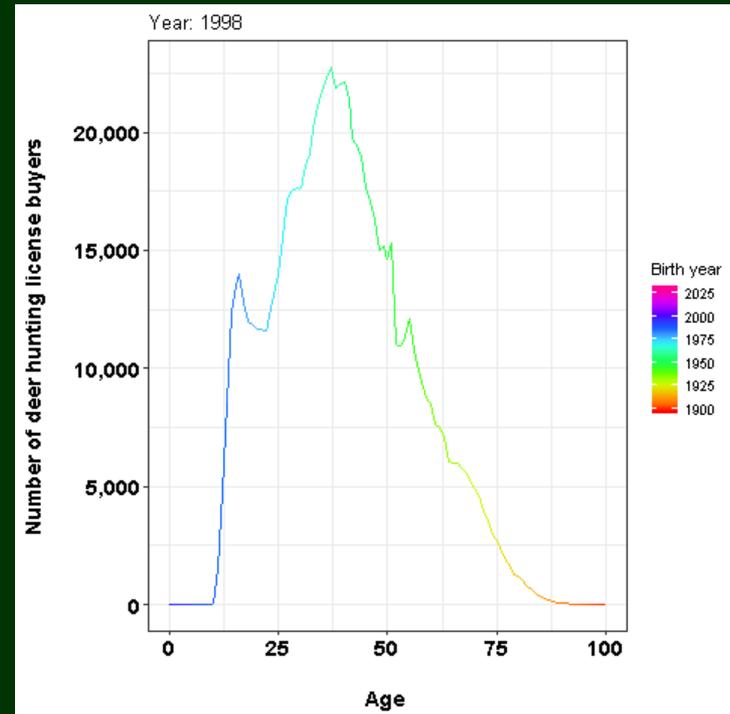
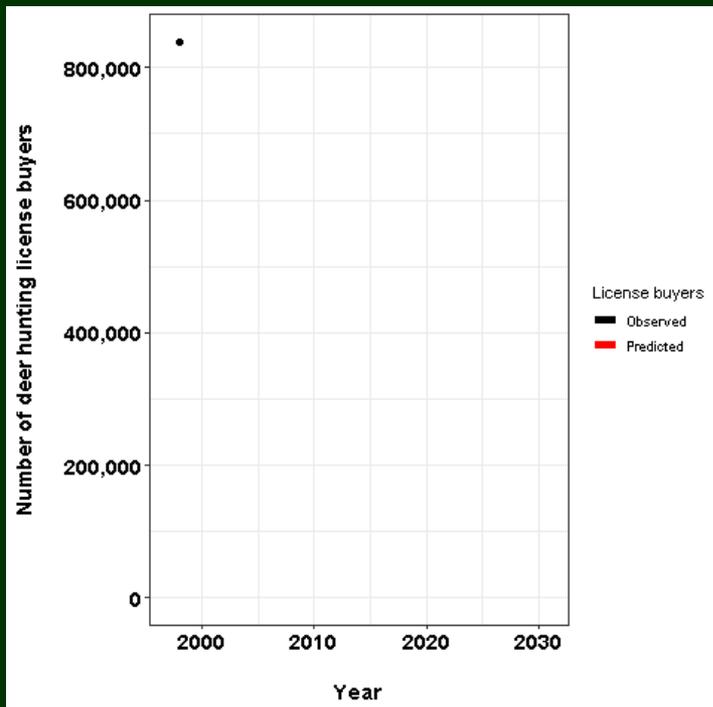
# Hunter Numbers by Region (2001-2019)



Since 2001: UP down 39%    NLP down 35%    SLP down 26%



# Future Hunter Numbers

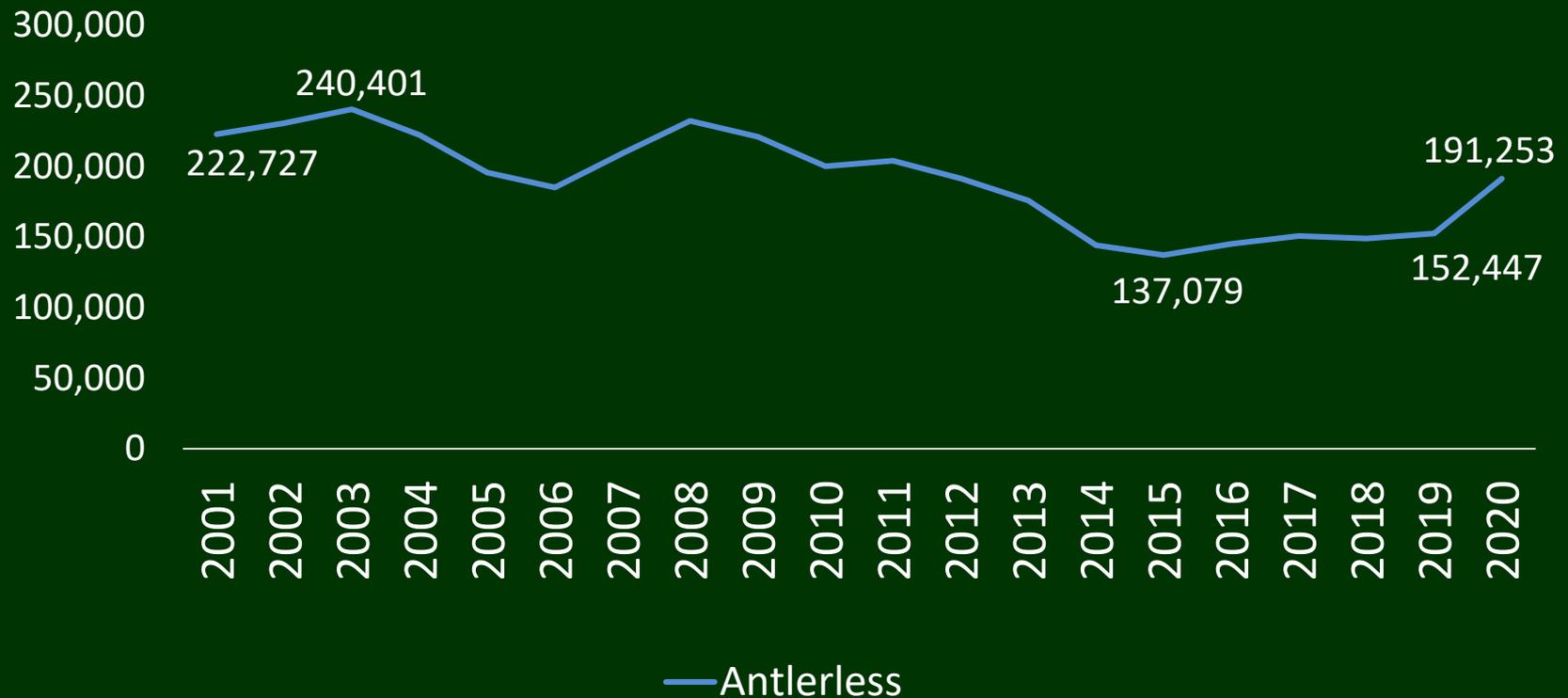




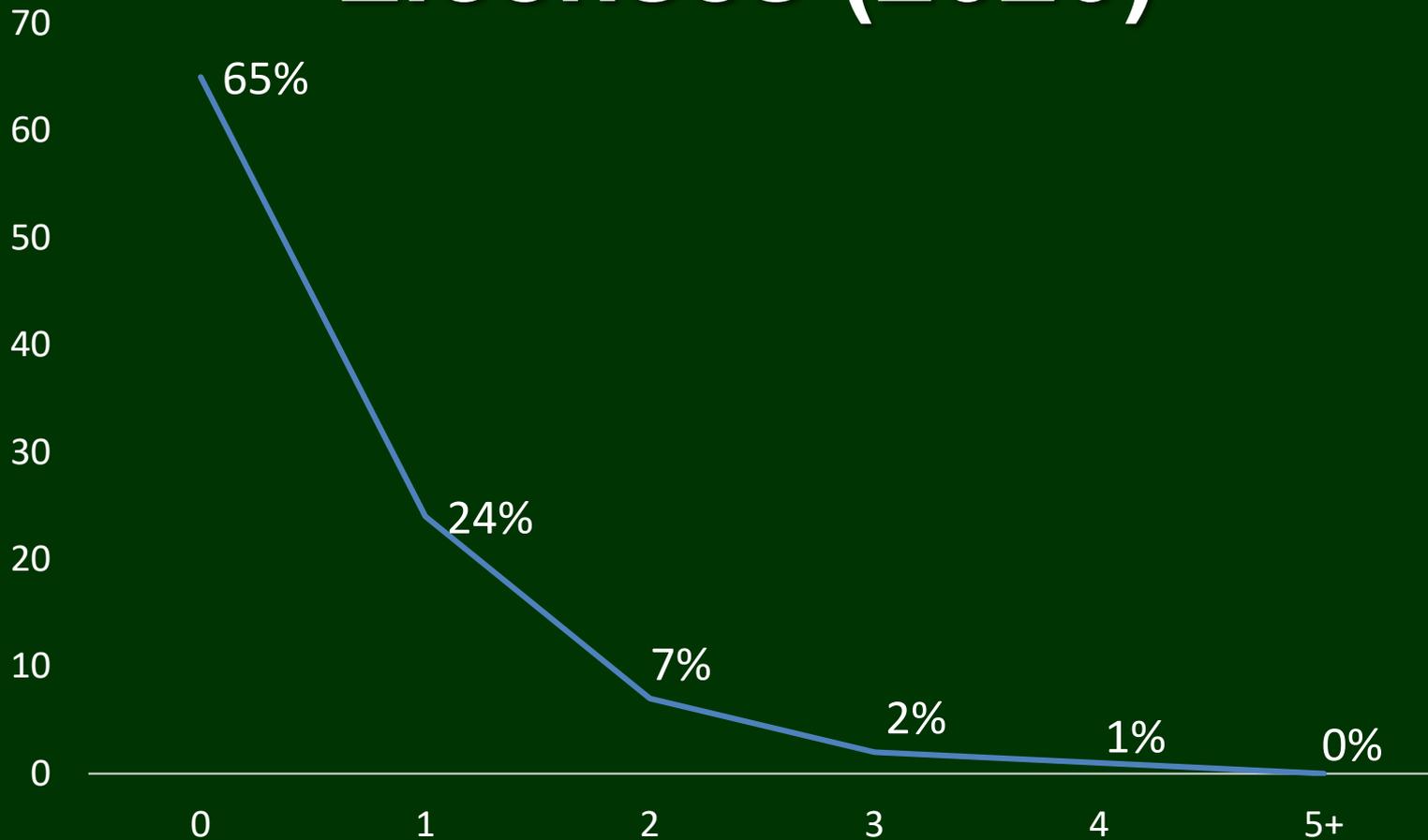
# Bag Limits



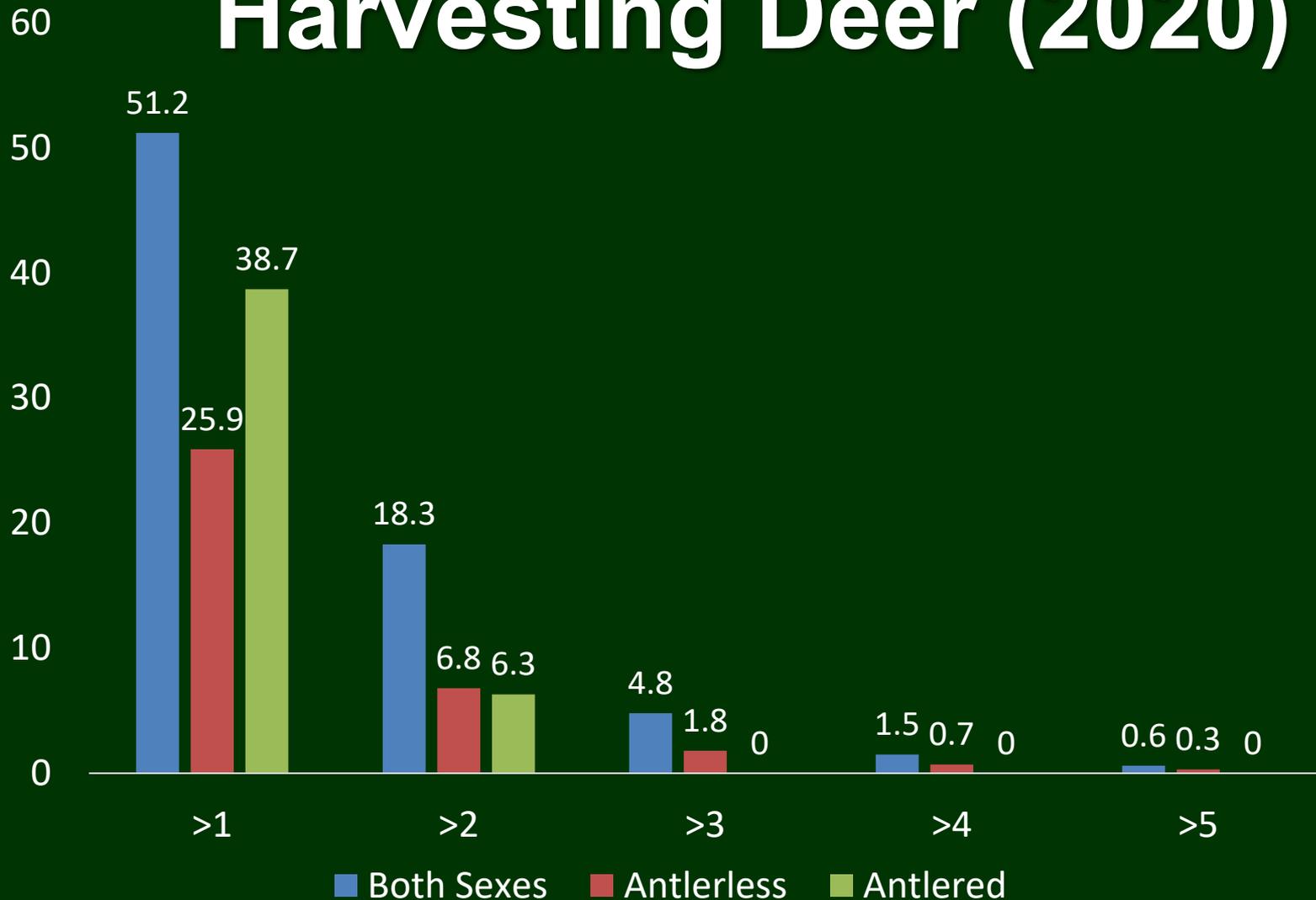
# Antlerless Harvest Trends 2001-2020



# Percentage of License Buyers Purchasing Antlerless Licenses (2020)



# Percentage of Hunters Harvesting Deer (2020)





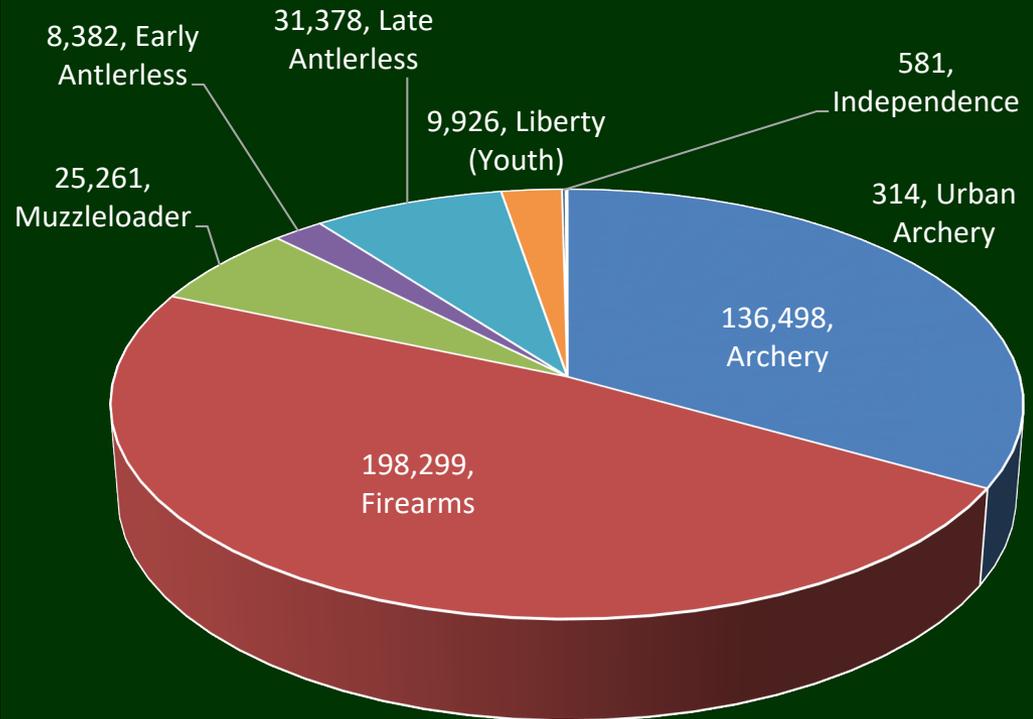
# Seasons/ Season Dates



## White-tailed Deer Hunting Season Dates

Deer Seasons	Bag Limit	Area	Season Dates (dates listed may be hunted)	Notes
Deer - Liberty Hunt	1 per hunter	See pages 37 and 43.	Sept. 11-12	See Youth (page 37) and Hunters with Disabilities, (page 43).
Deer - Early Antlerless Firearm	1 per kill tag	See page 52 for open DMUs	Sept. 18-19	Open on private lands only.
Deer - Independence Hunt	1 per hunter	See page 44	Oct. 14-17	See Hunters with Disabilities, page 44.
Deer - Archery	1 per kill tag	Statewide	Oct. 1 - Nov. 14 and Dec.1 - Jan. 1	See Lower Peninsula, pages 53-55, and Upper Peninsula, pages 58-59, for antler point restriction regulations. For counties with an extended archery season, see page 53.
Deer - Regular Firearm	1 per kill tag	Statewide	Nov. 15-30	See Lower Peninsula, page 53-55, and Upper Peninsula, page 58-59, for antler point restriction regulations.
Deer - Muzzleloader	1 per kill tag	Statewide	Dec. 3-12	See Lower Peninsula, page 53-55, and Upper Peninsula, page 58-59, for antler point restriction regulations.
Deer - Late Antlerless Firearm	1 per kill tag	See page 52 for open DMUs	Dec. 13 - Jan. 1	Open on private lands only.

## 2020 Harvest by Season (410,639)

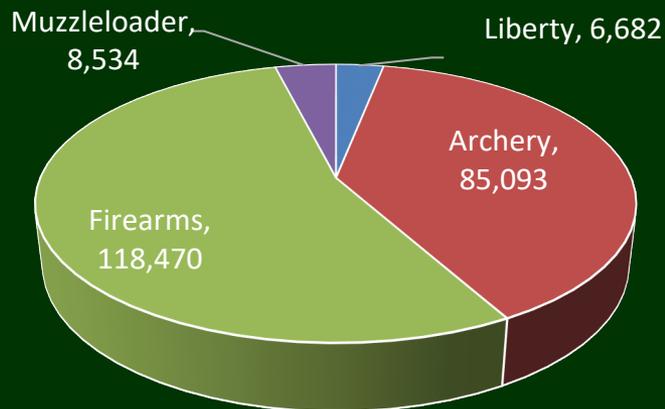


# Liberty/Youth Hunt

Yearling buck harvest percentage by season (2017-2019)

Season	2017	2018	2019
Liberty	56.7%	57.3%	43.2%
Archery	42.5%	38.6%	33.4%
Firearms	41.1%	31.9%	28.6%
Muzzleloader	42.8%	39.5%	42.2%

## 2020 Buck Harvest



Liberty Hunt: 1 antlered deer for every ~14 square miles in Michigan

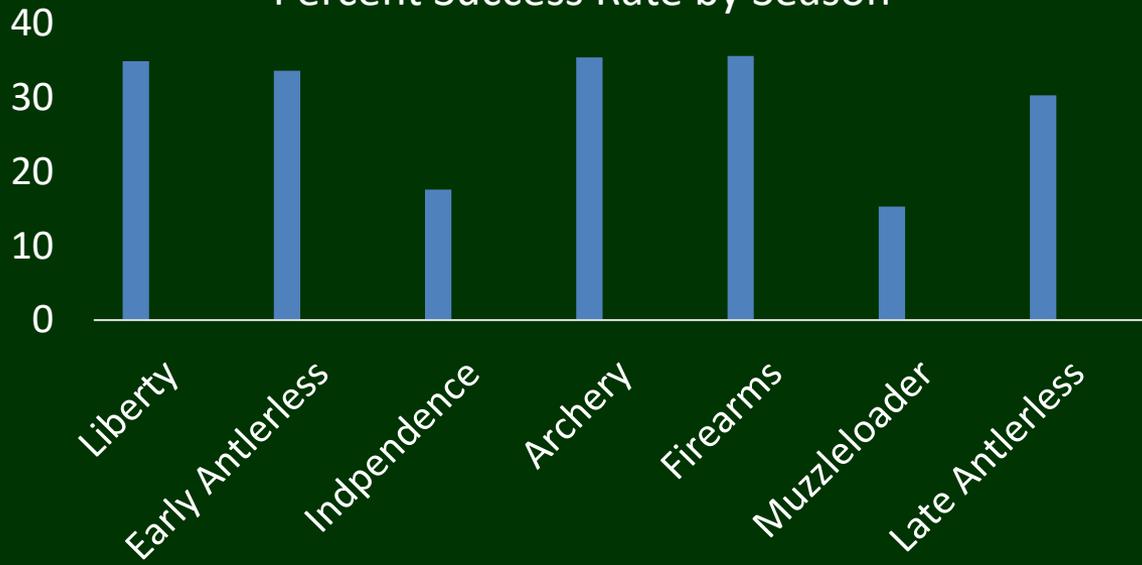




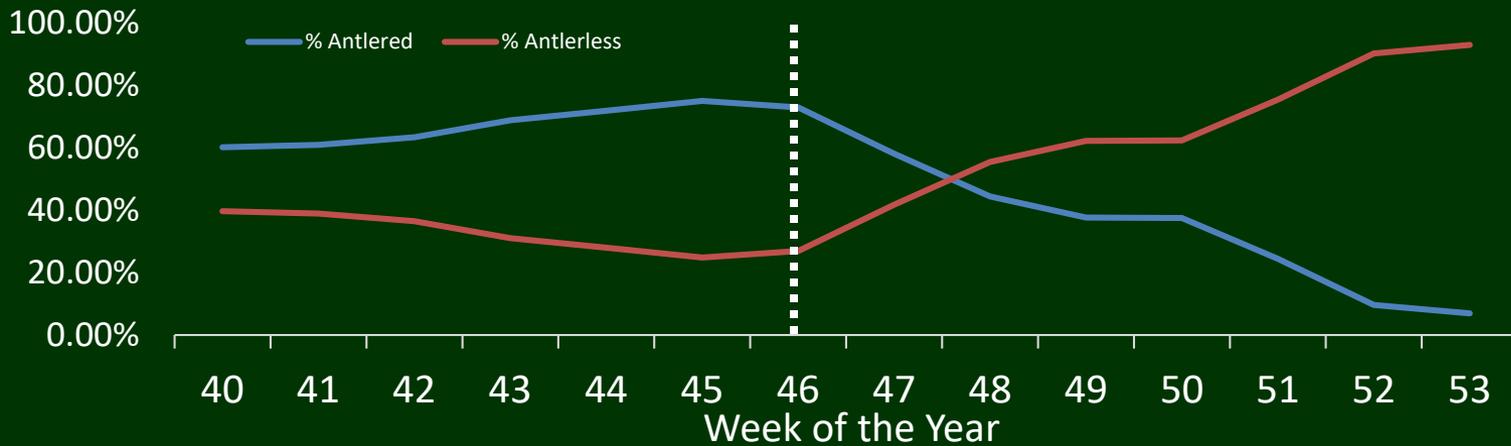
# Weapons



### Percent Success Rate by Season



### Proportion antlered/antlerless harvest by week





# Type of Deer



# One Buck Rule

- Michigan-historically ~4-6% of hunters report harvesting a second buck

- Indiana

- Transition from 2 bucks to 1 buck (2002)
  - 2 bucks split by season
    - 1 archery
    - 1 firearms/muzzleloader
- Minimal impact on antlered harvest
- Unknown impact on antlerless harvest given other variables

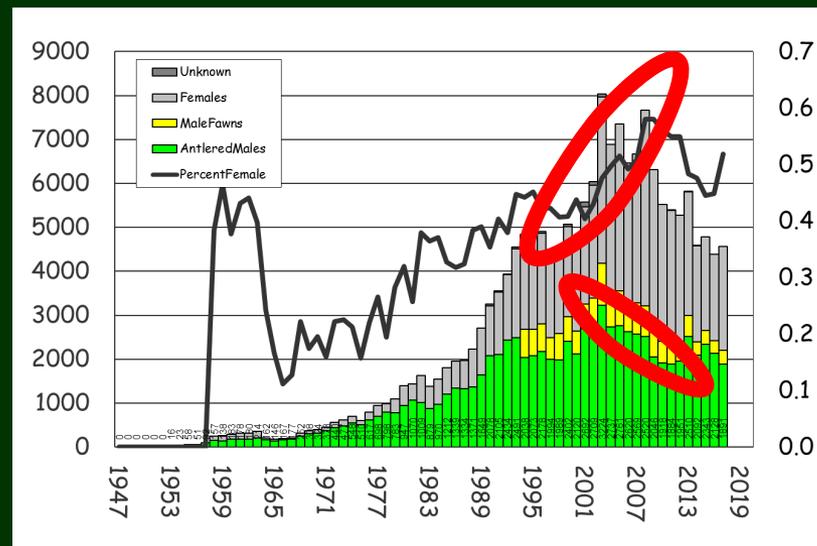
Table 5. Sex and age structure of the Indiana deer harvest between 1987-2013, as determined from check stations and online registration.

Year	Adults		Fawns		Total
	Males (%)	Females (%)	Males (%)	Females (%)	
1999	46,371 (46)	30,474 (31)	11,645 (12)	11,129 (11)*	99,618
2000	44,621 (45)	31,986 (32)	11,072 (11)	11,046 (11)*	98,725
2001	48,357 (47)	31,806 (31)	11,230 (11)	11,770 (11)*	103,163
2002	<b>47,177 (45)</b>	<b>35,357 (34)</b>	<b>11,291 (11)</b>	<b>10,603 (10)*</b>	<b>104,428</b>
2003	49,533 (46)	36,303 (34)	10,262 (10)	10,887 (10)*	106,986
2004	54,743 (44)	41,749 (34)	12,501 (10)	14,065 (11)*	123,058
2005	52,488 (42)	44,286 (35)	13,030 (10)	15,722 (13)*	125,526
2006	49,097 (39)	45,257 (36)	13,688 (11)	17,339 (14)*	125,381
2007	49,375 (40)	44,514 (36)	13,313 (11)	17,225 (14)*	124,427

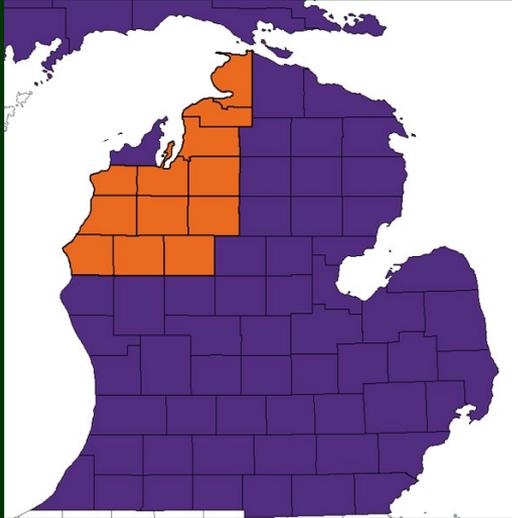


# Earn-A-Buck

- Wisconsin (Earn A Buck)
  - Adopted in 1996 for ag. damage; discontinued
  - Adopted in 2003 as part of CWD response
  - Wisconsin Act 50 (2011) prohibited Earn-A-Buck from future implementation
- Virginia (Earn A Second Buck)



# Antler Point Restrictions



## Hypothesis

## Supported by Data?

Decreased harvest of male yearlings

Yes

Increased antlerless harvest

No

Increased number of hunters

No



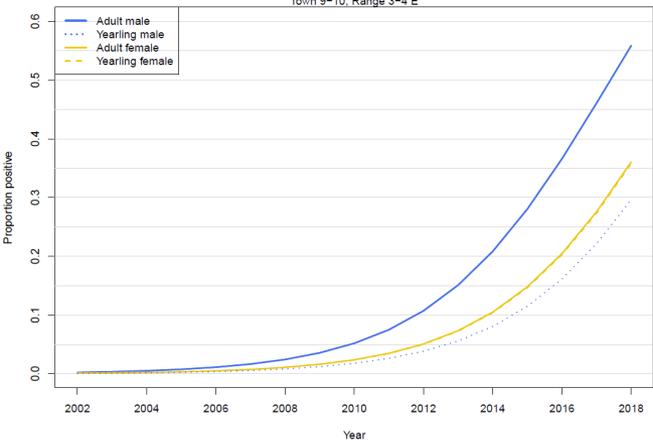


# CWD and Other Research



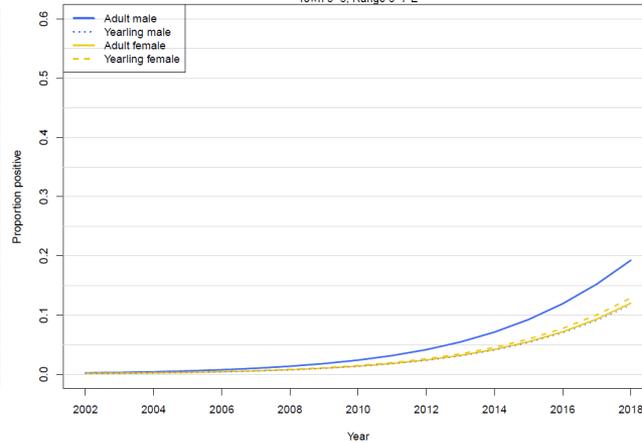
CWD Prevalence Trends – Southwest Sauk County

Town 9-10, Range 3-4 E



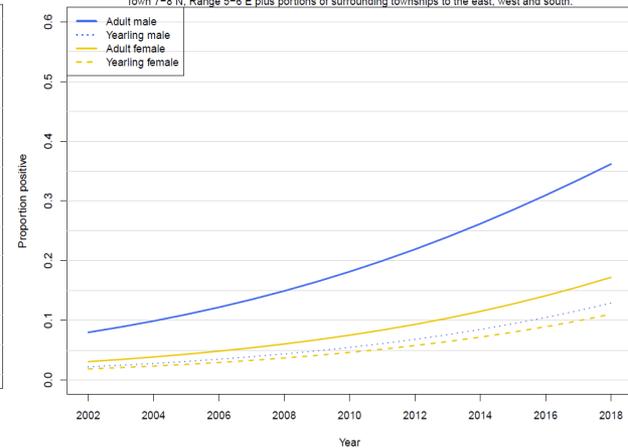
CWD Prevalence Trends – Southwest Dane County

Town 5-6, Range 6-7 E



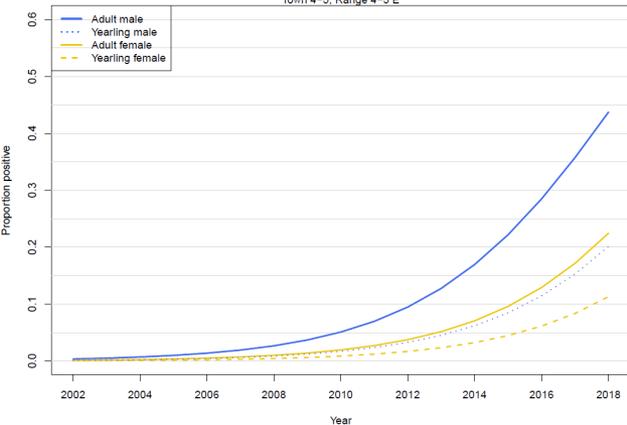
CWD Prevalence Trends – Southwest Core Area

Town 7-8 N, Range 5-6 E plus portions of surrounding townships to the east, west and south.



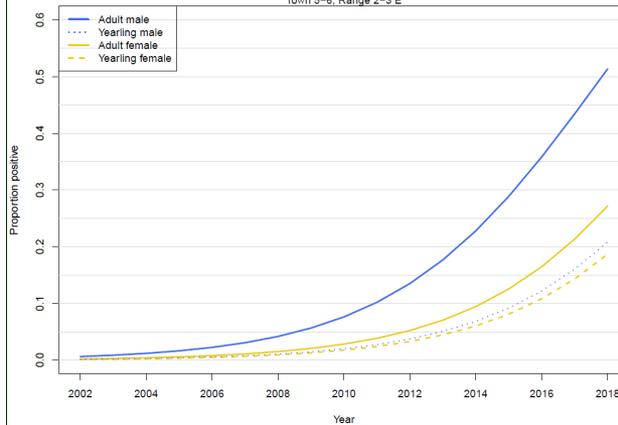
CWD Prevalence Trends – Southeast Iowa County

Town 4-5, Range 4-5 E



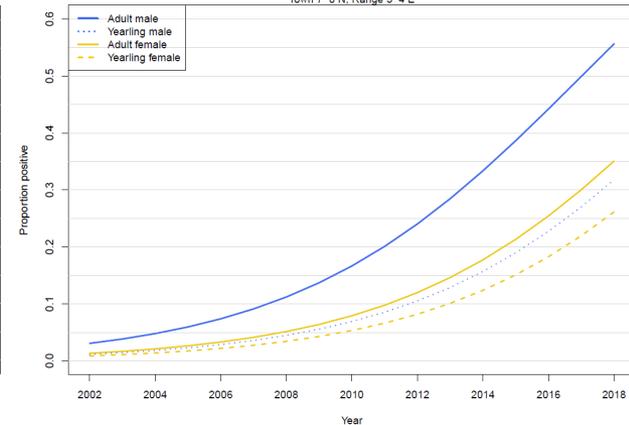
CWD Prevalence Trends – Southcentral Iowa County

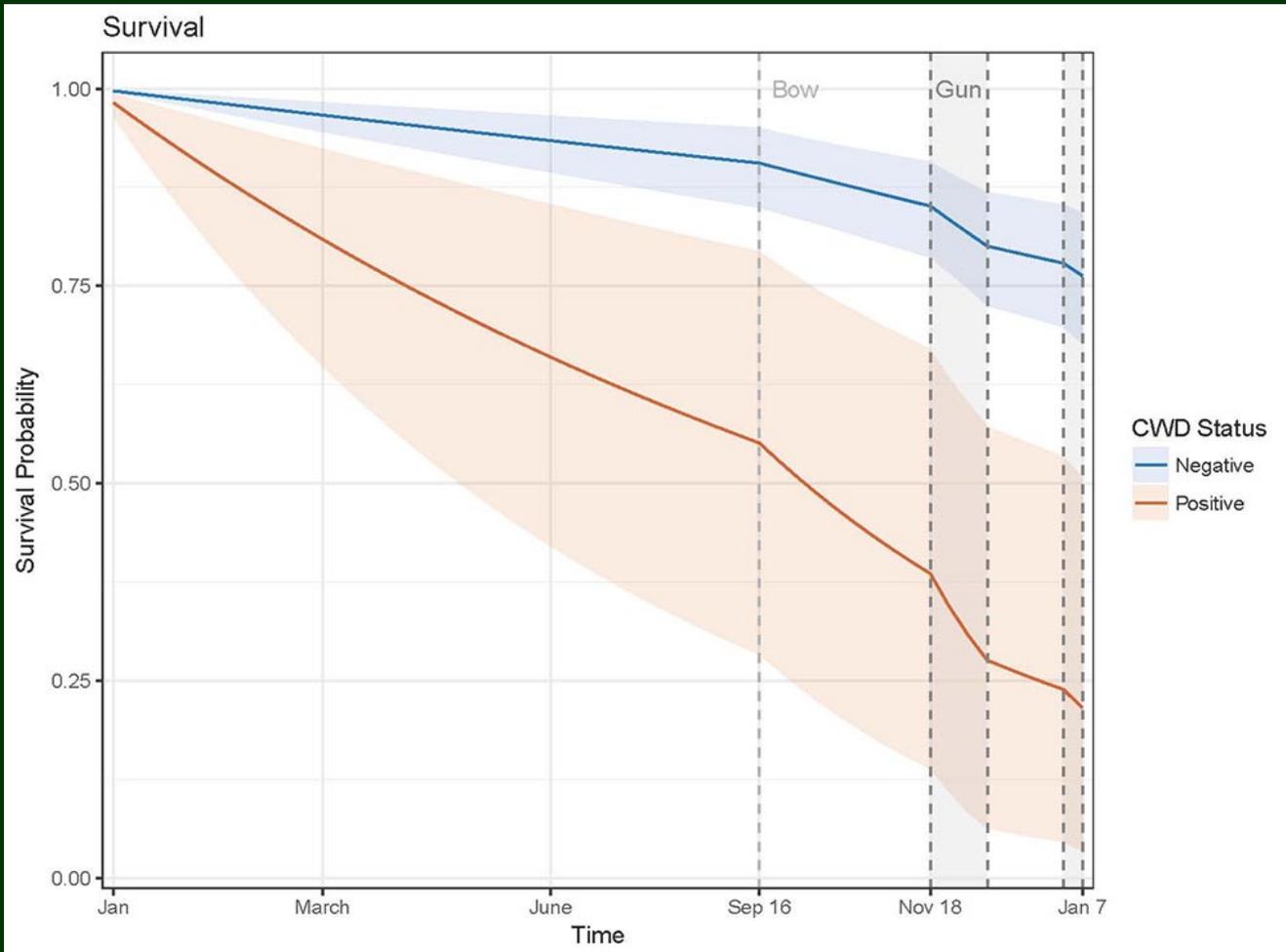
Town 5-6, Range 2-3 E



CWD Prevalence Trends – Northcentral Iowa County

Town 7-8 N, Range 3-4 E



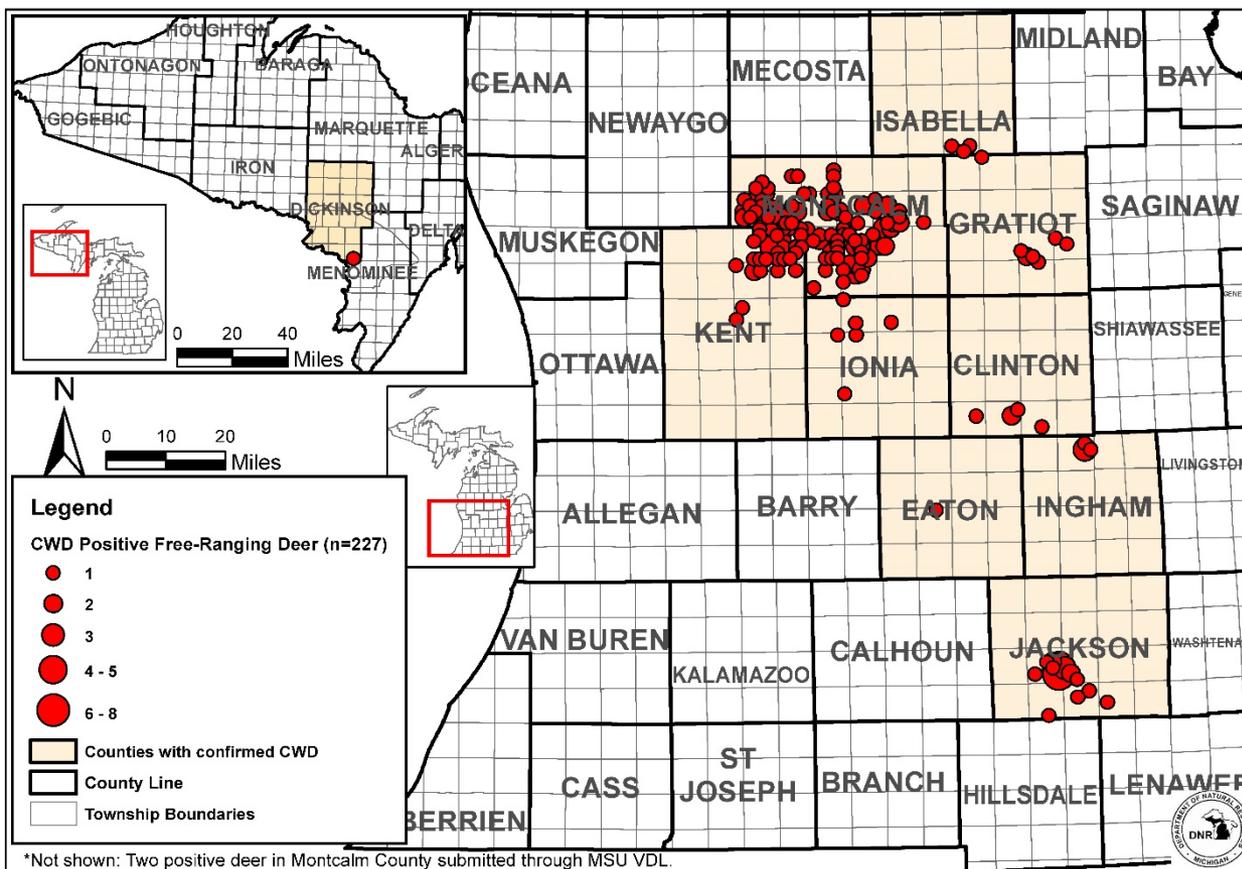


Southwest Wisconsin CWD, Deer, & Predator Study: February 2018 Newsletter



# Free-ranging White-tailed Deer Positive for Chronic Wasting Disease (CWD) Michigan

as of March 15, 2022



\*Not shown: Two positive deer in Montcalm County submitted through MSU VDL.

March 15, 2022 (MC)



# AFWA Best Management Practices for Prevention, Surveillance, and Management of Chronic Wasting Disease (CWD)

*A Technical Report of the Association of Fish and Wildlife Agencies*



## Literature Cited and References

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Miller, M. W., E. S. Williams, C. W. McCarty, T. R. Spraker, T. J. Kreeger, C. T. Larsen, and T. Thorne. 2000. Epizootiology of chronic wasting disease in free-ranging cervids in Colorado and Wyoming. *Journal of Wildlife Diseases*. 36(4): p. 676–690.

## Best Management Practice:

- **To reduce the risk of CWD transmission and establishment of CWD through unnatural concentrations of cervids, states and provinces should eliminate the baiting and feeding of all wild cervids using regulatory mechanisms such as jurisdictional bans.**

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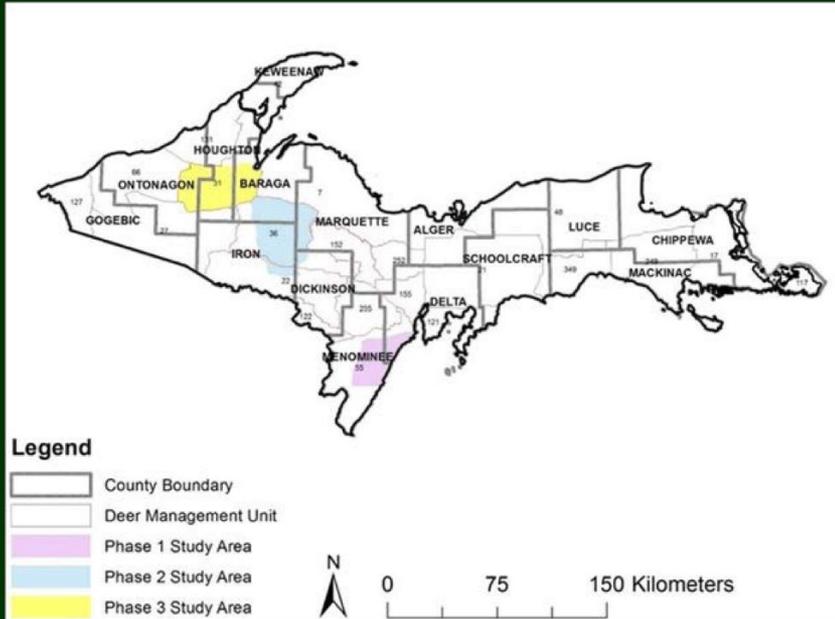
# CWD Research Supported

- Influence of deer harvest regulations on antlerless harvest, abundance, and sex and age composition
- Field animal side testing and improving laboratory diagnostic sensitivity
- A standardized, high throughput genetic resource to inform white-tailed deer population and disease management
- Composting deactivation of CWD prions
- Multistate CWD strategic planning initiative
- Employing collaboration and innovation to develop CWD education and outreach
- Assessing drivers of spread and transmission of chronic wasting disease in Michigan deer
- Mechanistic understanding on environmental behavior, bioavailability and persistence in chronic wasting disease prions
- An agent-based approach for surveillance and management assessment of CWD
- Optimizing CWD surveillance: Regional synthesis of demographic, spatial, and transmission risk factors
- Inactivation of CWD prions by peroxydisulfate and hypochlorous acid
- Quantifying factors affecting chronic wasting disease transmission among deer
- Evaluation of deer population parameter estimates and implications for CWD management



# Other Deer Research Supported

## Predator-Prey Study



## EHD Impacts and Recovery



Harvest Outcomes  
and Satisfaction in  
Deer Hunting  
Cooperatives



MICHIGAN WILDLIFE  
COOPERATIVES



# Summary

- Deer hunting has changed over recent years and will continue to change.
  - Our management has to continue to respond to these changes
- Multiple data sets are measured to detect trends that occur over time.
  - These data are used to support recommendations
- Deer research is widely supported and used to inform management decisions



# Thank You

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[www.michigan.gov/deer](http://www.michigan.gov/deer)

