

Chronic Wasting Disease (CWD)

Chad Stewart
Deer Management Specialist
Michigan Department of Natural Resources

House Appropriations Subcommittee
on Natural Resources

March 9, 2017



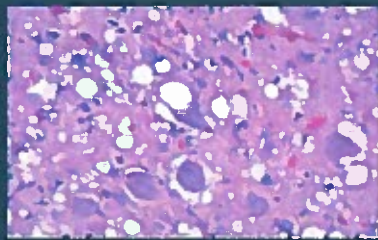
Economics of Deer in Michigan

- Over 600,000 deer hunters
 - About 10 million recreation days
- Hunting has a \$2.3 billion impact annually
 - Over 80% of hunters hunt deer
- Over 25 million pounds of venison



CWD: What is it?

- A disease affecting members of the deer family (deer, elk, moose, caribou)
- CWD is caused by a misfolded protein called a prion
- Attacks the brain and nervous system of infected animals causing a loss of body function
- CWD is a fatal disease



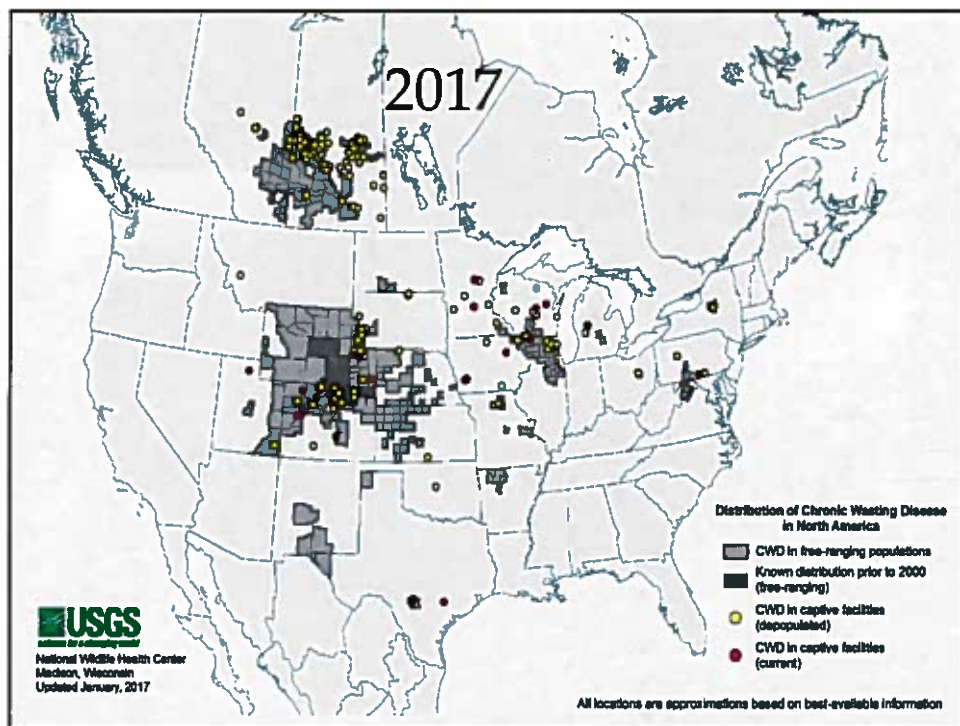
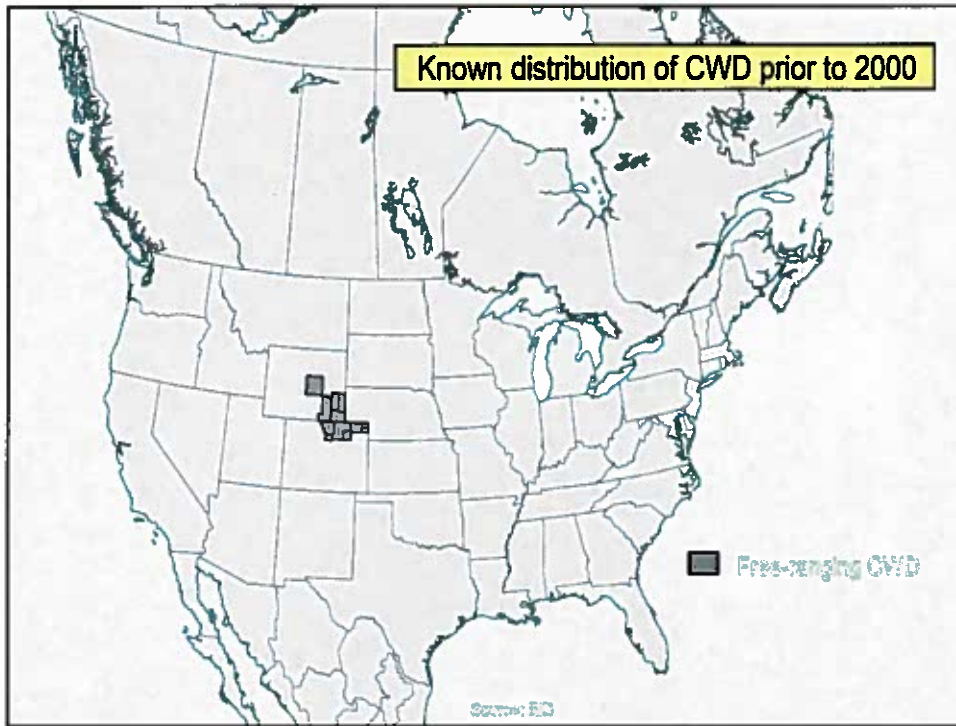
Clinical Signs of CWD

- Emaciation
- Lack of coordination
- Drooping head/ears
- Excessive drooling
- Excessive drinking
- Excessive urination
- Dull or ragged hair



Prolonged incubation period: average of 18 months





Transmission of CWD



Direct



Indirect



Transmission of CWD



Transportation of infected carcasses can spread the disease to new locations



Feeding and mineral sites concentrate deer



How Other States Are Affected

Wyoming: Mule deer

- South Converse Unit (>1,200 square miles)
 - Prevalence has gone from 15% to over 50% in past decade
 - The highest rate of CWD identified in the world
 - Population has declined from ~14,000 to ~7,000 deer in this unit
 - Scaled back hunting seasons
 - Buck only harvests
 - Fewer "trophy" animals



Study: Chronic Wasting Disease kills 19% of deer herd annually

By [Andrea H. Thompson Jr.](#) | DECEMBER 15, 2015

1.3K

Chronic Wasting Disease will cause a Wyoming deer herd to go virtually extinct in 41 years, a five-year study predicts.

How Other States Are Affected

Wyoming: White-tailed deer

- South Converse Unit (>1,200 square miles)
 - Prevalence at ~33%
 - No population data available
 - CWD+ animals: 4.5x more likely to die than CWD- animals
 - Hunting and high level CWD unsustainable for populations



Study: Chronic wasting disease causes 10 percent decline in deer

By [Paul A. Smith](#), [Milwaukee Journal Sentinel](#) (TN)

Wednesday September 14, 2016 05:17 AM

Chronic wasting disease caused an estimated 10 percent annual population decline in a study of white-tailed deer in Wyoming, according to research published recently.

2001 Samples



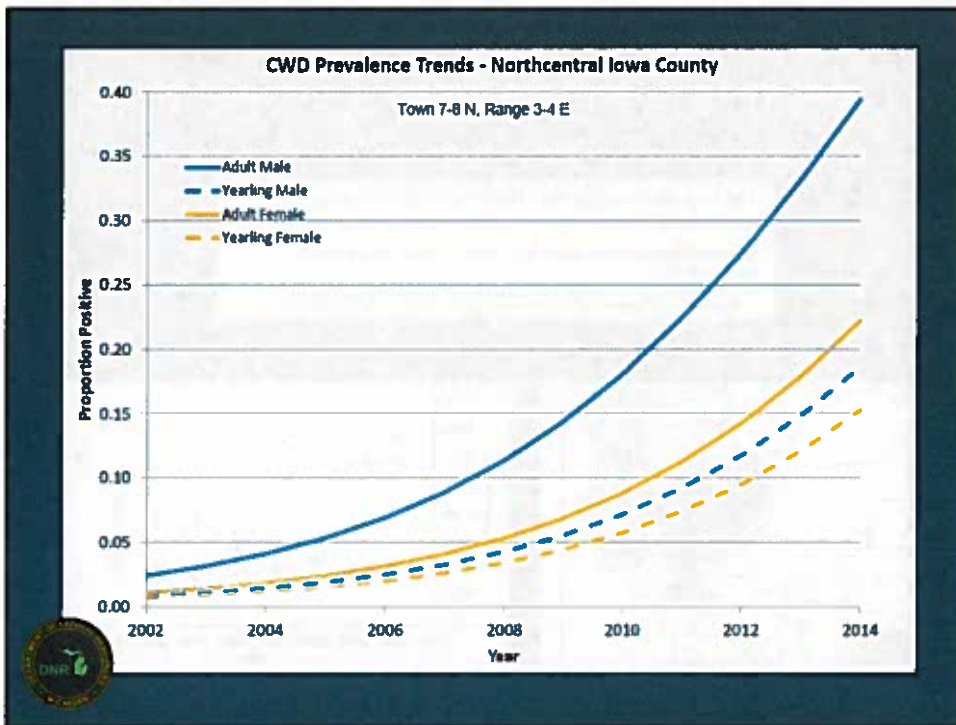
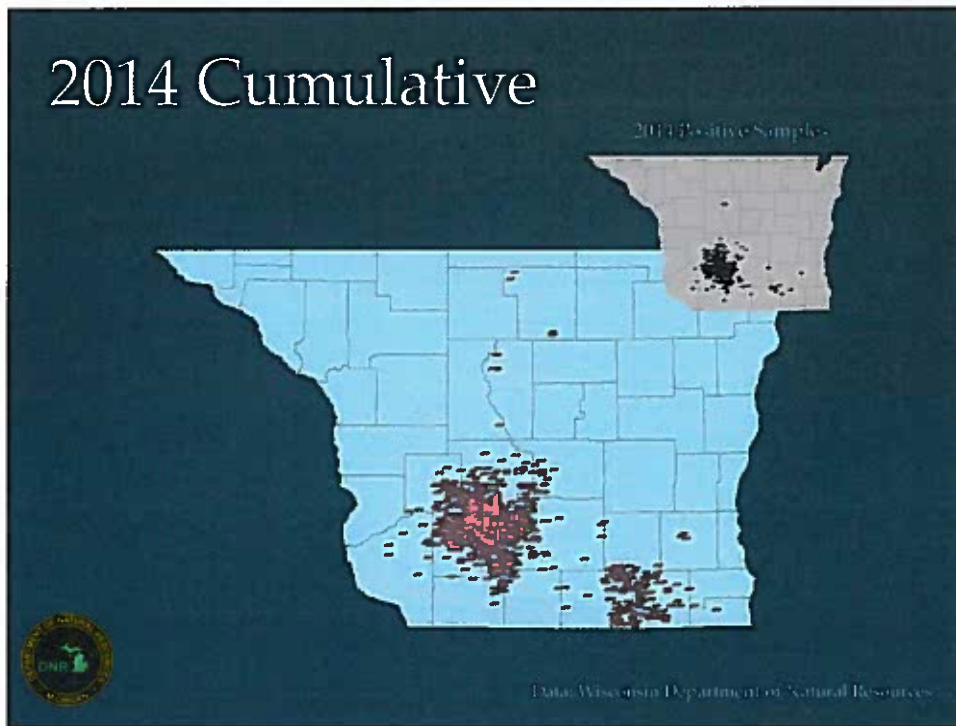
Data: Wisconsin Department of Natural Resources

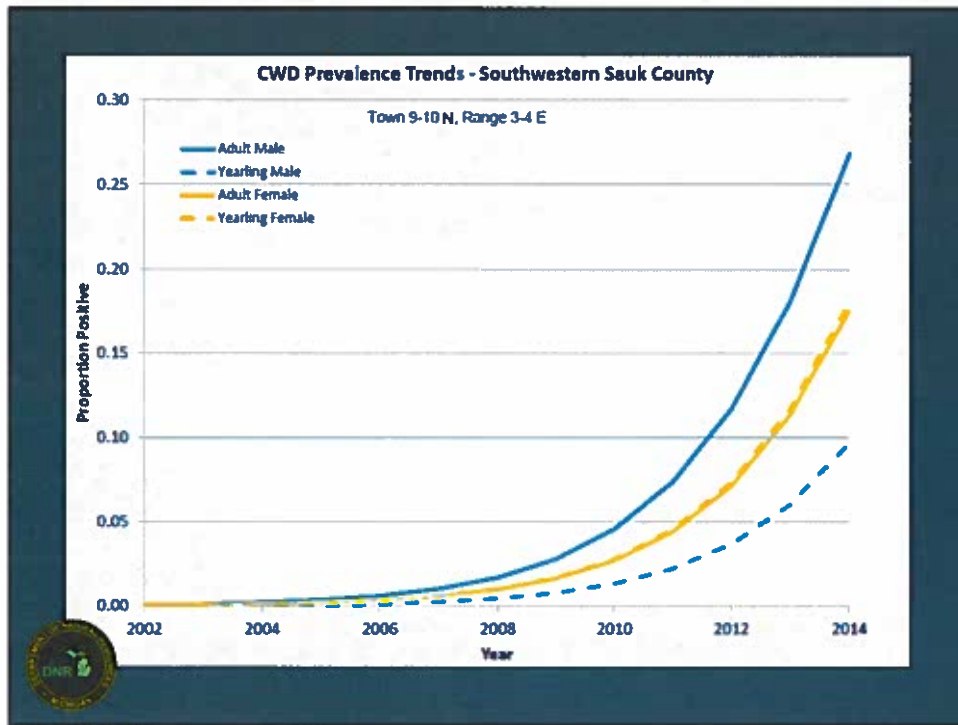
2002 Cumulative



Data: Wisconsin Department of Natural Resources

2014 Cumulative



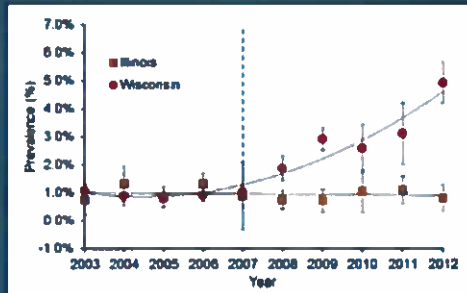
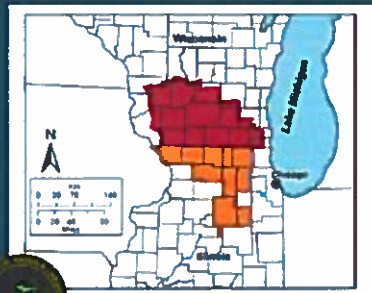


Comparison of Illinois vs. Wisconsin

The importance of localized culling in stabilizing chronic wasting disease prevalence in white-tailed deer populations^{1*}

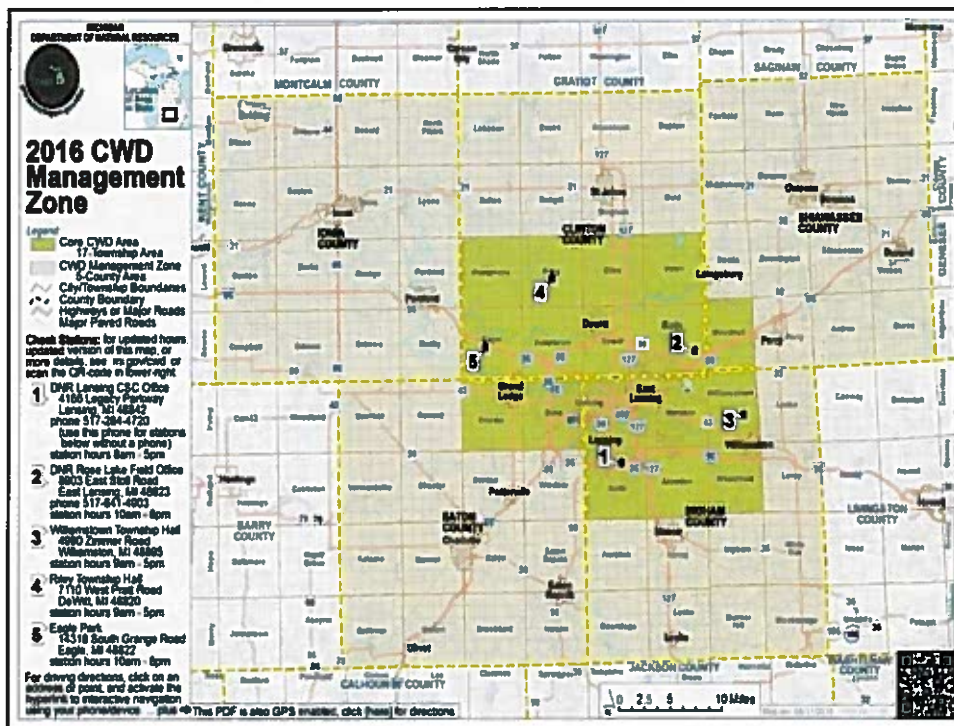
Mary Beth Manjerovic^{1,2}, Michelle L. Green^{1,2}, Nohra Mateus-Pinilla^{1,2}, Jan Novakofski²

¹ Illinois Board of Natural Resources, University of Illinois Urbana-Champaign, 1271 S. Clark Street, Champaign, IL 61824, USA
² Department of Animal Sciences, University of Illinois at Urbana-Champaign, 1501 S. Maryland Street, Urbana, IL 61801, USA



CWD in Michigan

- On May 20, 2015 confirmation of a CWD positive deer was received by the DNR Wildlife Disease Lab.
 - Symptomatic six year old, female deer
 - Put down by Meridian Township Police in Ingham County
- Additional Cases
 - 3 cases confirmed from hunter harvested deer
 - 3 cases confirmed via USDA Wildlife Services sharpshooters



Surveillance Methods



Early Response to Managing CWD





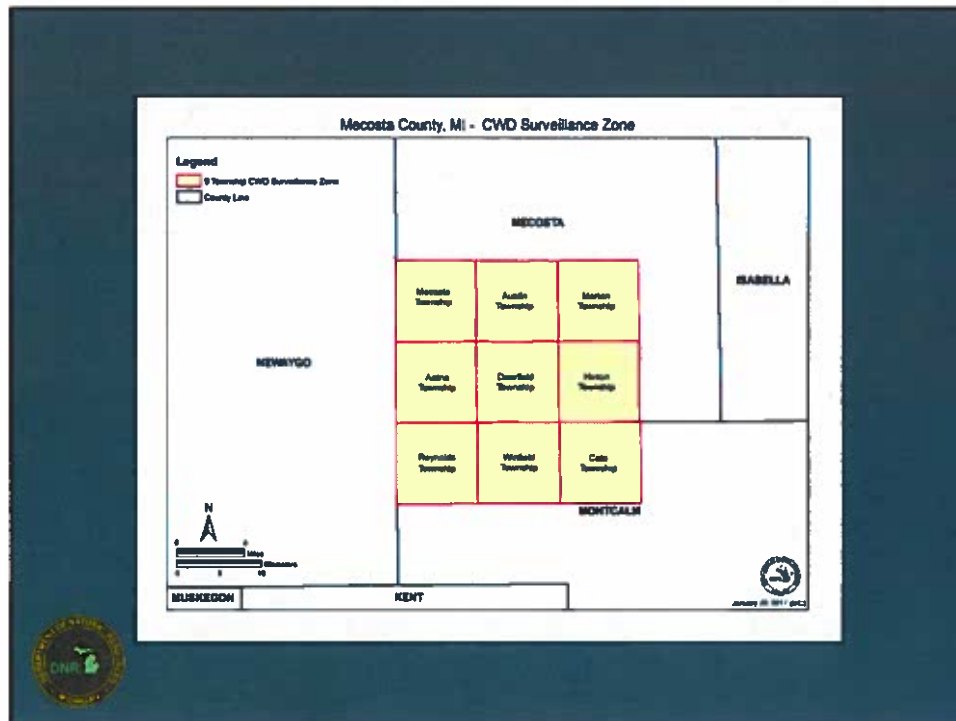
Michigan's Testing Results

Deer Tested for Chronic Wasting Disease Since Detection of Positive Deer

As of February 15, 2017

	Targeted Deer	Roadkill Deer / Found Dead	Disease Control Permits / Crop Damage	Culled by Wildlife Services	Hunter Harvested	CWD Positive Deer	Total
CWD Core Area (17 TWP)	51	1,798	861	1,043	4,049	9	7,802
CWD Management Zone (8 County)	64	246	143	2	2,146	0	2,601
Remainder of State	276	209	554	91	787	0	1,917
Total	391	2,253	1,558	1,136	6,982	9	12,320





FY 2017 Appropriations

- \$1 million allocated toward deer disease management in December 2016 (PA 340 of 2016)
 - \$524,500- Localized sampling
 - \$205,500- Creation of additional check stations
 - \$20,000- Increased public education, outreach, and engagement
 - \$250,000- Partnership with Michigan State University
- Funds allocated by mid-January
 - Anticipated to be spent by early Spring 2017



What Does the Future Hold?

- If left unchecked, CWD is believed to have long-term impacts to deer populations
- CWD surveillance and management limits other Departmental operations
- Multiple or expanding CWD fronts can limit effective control measures



www.Mi.gov/CWD

Chad Stewart
Deer Management Specialist
4106 Lansing Customer Service Center
Lansing, MI 48911
stewartc@michigan.gov
517-284-4745

A photograph of a herd of deer in a snowy field, with a dense forest of bare trees in the background. The scene is lit with a cool, blueish light, suggesting a winter or early morning setting.

