Chronic Wasting Disease in Southeast Minnesota

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Preston Public Meeting

December 18, 2018
• Opening Remarks
• Brief overview of Chronic Wasting Disease (CWD)
• 2016-18 surveillance results in SE MN
• MNDNR plans for this winter (Dec 2018-March 2019)
• Q&A
Before we get started …

• The 2017 and 2018 efforts have NOT eliminated CWD in the Preston-Lanesboro area

• Although there has been some recent disease spread, 75% of all cases were found between Preston and Lanesboro, referred to as the CWD Core Area

• The positive deer found outside the Core Area are all adult males, except 1 new adult female near Bucksnort

• Eliminating the disease in Preston may not be realistic, and our goal is to reduce disease prevalence and minimize spread to new areas

• Our ability to achieve our goal hinges on **reducing risk of disease transmission** among deer - This means limiting deer-to-deer contact through a feeding/attractant ban and reducing deer numbers

• **WE ARE NOT ATTEMPTING TO ERADICATE DEER.** It’s not practical, feasible, or necessary.
Chronic Wasting Disease: What is it?

- CWD is a slowly progressive, brain disease of deer, elk, moose, and reindeer
- CWD belongs to the family of diseases known as transmissible spongiform encephalopathies (TSE) or prion diseases
- Not caused by a virus, fungus, or bacteria – mis-shapen protein
- Spread animal-to-animal, mostly through saliva, feces, urine

Both Deer are CWD-Positive
Top Photo: Pre-clinical disease
Bottom Photo: Clinical disease
Characteristics of CWD

- Neurologic clinical signs: dementia, in-coordination, abnormal behavior, loss of body condition
- No treatment or vaccine, always fatal
- Prions persist in the environment and remain infectious for an undetermined length of time
- Incubation of disease is 1.5 to 3 years from exposure to development of clinical signs
- Infected animals begin to shed prions soon after exposure
- There is no genetic immunity
- CWD not shown to infect humans or cattle, but health agencies recommend NOT to eat an infected animal
Things are **NOT OK** in areas with CWD

What we know …

• Disease is 100% fatal

• Deer that are infected (but not symptomatic) have higher mortality rates than uninfected deer

• Bucks are 3x more likely to have the disease

• Yearling males are CWD delivery systems

• The percentage of infected deer increases annually, in addition to a larger geographic area

• The disease is having a negative effect on long-term deer densities in other states
Initially found 2 positives from voluntary fall sampling

- Added 3rd case from our taxidermist network
- All 3 cases were in Fillmore County
- All were adult males
Short-term, Initial Response (Dec 2016 through April 2017):

- Established a new CWD Management Zone in Fillmore Cty - Deer Permit Area 603
  - Mandatory CWD testing and carcass export restrictions out of Zone 603
- Recreational deer feeding ban – Fillmore, Mower, Olmsted, Houston, and Winona Counties
- Conducted aerial survey of Zone 603 & a northern buffer zone around 3rd positive – 11,600 deer (31 deer/mi²)
- Special Hunt: December 31 to January 15th
- Landowner Shooting Permits: Working with landowners individually for permission to obtain samples (Jan 16 to Feb 12th)
- USDA deer culling contract, focused in our core areas (Feb 20 to Mar 19th)
Test results from the Special Hunt, Landowner Shooting Permits, and USDA Wildlife Services Deer Removal Phases, Winter 2017

Cumulative test results from Dec. 31, 2016 to March 31, 2017

<table>
<thead>
<tr>
<th>Sample Type</th>
<th>Samples Collected</th>
<th>CWD-Negative</th>
<th>Confirmed CWD-Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landowner Shooting Permit Zone</td>
<td>269</td>
<td>267</td>
<td>2</td>
</tr>
<tr>
<td>Special Late Hunt, Zone 603</td>
<td>626</td>
<td>623</td>
<td>3</td>
</tr>
<tr>
<td>USDA Deer Removal</td>
<td>238</td>
<td>236</td>
<td>2</td>
</tr>
<tr>
<td>Road kill</td>
<td>30</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>Found dead</td>
<td>13</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Sick/injured/euthanized</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Totals</td>
<td>1179</td>
<td>1171</td>
<td>8 (plus 3 from fall 2016)</td>
</tr>
</tbody>
</table>

** Additionally 252 and 105 fawns were harvested during the special hunt and by landowners, respectively. Fawns were not tested. Grand Total: 1,536 deer.

**2016 apparent CWD prevalence estimate: 11/1,679 or 0.65%.
Results of Fall 2017 Sampling: 603

- SE sampling around 603: 1,124 samples, no CWD detected
- Zone 603: 1,183 deer tested, 6 new CWD detections
  - 4 adult males shot in main CWD core area
  - 2 adult males shot in Forestville State Park, westward expansion of disease or a sink?
- Late Hunt (Jan 6-14, 2018): 275 additional samples, no CWD detections
  - 2017 CWD prevalence estimate: 6/1,458 = 0.41%
- Taxidermist Network contributed 481 samples in all CWD surveillance zones combined

Locations of CWD-positive Deer in 603 (n=17)
Landowner permits were available to any private landowner within 2 miles of a known CWD+ deer. Permits lasted 4 weeks, 10-Feb to 9-March 2018. Unlimited take, testing all deer (including fawns). 68 permits issued; 19 deer sampled, no CWD detections. Did not utilize USDA-WS for a deer removal contract in 2018.
Objectives

1. Document dispersal patterns and estimate activity ranges of juvenile males and females (≈ 1-year-old), and adult males (>2-years-old).

2. Utilize information on juvenile dispersal (in particular) to map and inform corridors of possible CWD spread.

3. Determine cause-specific mortality for population modeling.
Preliminary Results

• Average dispersal distance for juvenile females was 18.9 miles and 9.1 miles for juvenile males.

• Juvenile females have higher probability of dispersing in spring and traveled twice that of males.

• Longest trek was from a juvenile female - 124km or 77mi

• This in only Year 1 of the study, several more years of monitoring movements of juveniles are planned.
• Goal was to collect 3,150 samples, opening weekend of 3A and 3B firearm season

• We collected 3,051 to date, collections are on-going

• We have 2 deer that tested CWD-Positive in DPA 347; 1 CWD-Positive in DPA 346
• All testing in mandatory for deer >1 year of age
• We collected 1,236 to date, collections are on-going
• We have 10 deer that tested CWD-Positive and 1 current CWD-Suspect in DPA 603
• We also tested 82 opportunistic deer; 2 of those were confirmed CWD-positive and both were found dead animals in 603
CWD Prevalence in DPA 603

- CWD prevalence is still low in DPA 603; however, increased from 2017 to 2018
- This infection appears to be persisting in the Preston-Lanesboro area and spreading outward
• All these new detections outside the primary core are adult males, and 1 adult female near Bucksnort.
• Males use riparian areas as travel corridors during the mating season.
• Adult females serve as disease “anchors”, males as dispersers.
• Focal area of disease remains between Preston and Lanesboro.
Upcoming Winter

• Two Special late season hunts open to the public taking place Friday, Dec. 21, through Sunday, Dec. 23 and Friday, Dec. 28, through Sunday, Dec. 30. These hunts are open to everyone on public and private lands with appropriate permission. Any unused license with the proper weapon selection or $2.50 either-sex disease management tags are available.

• Landowner deer shooting permits for landowners and their designated shooters. The landowner deer shooting permits will be valid from Tuesday, Jan. 1 through Sunday, Jan. 13.

• USDA Wildlife Services contract to conduct culling in our high risk core areas from approximately Jan. 14 through Mar. 15. Specifically, areas within 3 miles of a cluster of confirmed positives will be the focus – Hope is to control further spread.
Current landscape has 13 newly confirmed cases in fall 2018;
In total, we have 30 confirmed cases in and around DPA 603
Two late hunts are planned in December to help reduce deer densities in this area and remove additional CWD-positives
Landowner Shooting Permits, Winter 2019

• Permits will be mailed to all landowners in the late hunt boundary who own 20 or more acres. People with <20 acres can still receive a permit by emailing cwd.dnr@state.mn.us with your name, address, and phone #.

• Permits issued to landowners who can then designate shooters.

• Permits will be valid from January 1 to January 13, 2019.

• Rifles will be allowed at landowners discretion, blaze orange recommended.

• Mandatory testing of all deer (including fawns) by providing the head and 3 inches of neck attached at a drop box.

• Head drop boxes will be available at 8 locations throughout the zone.

• Carcass movement restrictions apply to all deer until test result is received (landowners check on DNR website by entering their big game possession tag # received with their permit).
- Working on contract with USDA-Wildlife Services for targeted culling
- Focus will be primary core area, Forestville State Park and Bucksnort areas
- Work to begin in January, and continue through early March
## Small Increase in Overall Harvest Rates

<table>
<thead>
<tr>
<th>Year</th>
<th>Harvest</th>
<th>Deer/mi²</th>
<th>DPAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>2,280</td>
<td>3.0</td>
<td>347, 348</td>
</tr>
<tr>
<td>2015</td>
<td>2,547</td>
<td>3.3</td>
<td>347, 348</td>
</tr>
<tr>
<td>2016</td>
<td>3,579</td>
<td>4.7</td>
<td>347, 348, 603*</td>
</tr>
<tr>
<td>2017</td>
<td>3,125</td>
<td>4.1</td>
<td>347, 348, 603</td>
</tr>
<tr>
<td>2018</td>
<td>2,772</td>
<td>3.6</td>
<td>347, 348, 603</td>
</tr>
<tr>
<td>Average</td>
<td>2,861</td>
<td>3.7</td>
<td></td>
</tr>
</tbody>
</table>

*Includes Special Hunt

![Deer Harvest / Square Mile](chart.png)

- 2014: 3.0
- 2015: 3.3
- 2016: 4.7
- 2017: 4.1
- 2018: 3.6
Share the Harvest

• The public can sign up to receive donated venison from the special hunt, landowner shooting permits, and deer removal efforts this winter

• This is a partnership with Bluffland Whitetails Association to utilize deer taken through efforts to manage CWD

• Only deer with “Not-Detected” test results will be released into donation program

• Interested people can sign-up through DNR website: https://www.dnr.state.mn.us/cwd/share-harvest.html

• Venison will available either as whole carcass or boxed quarters and backstraps
• The potential to eliminate CWD from SE MN requires aggressive and swift actions – may be too late

• This goal will NOT be attainable without the cooperation of hunters and landowners

• If CWD becomes established here, it will remain a significant health threat to the deer herd locally and statewide

• Only through working together can we hope to successfully fight CWD and maintain a healthy and productive deer herd for future generations
KEEP MINNESOTA’S DEER HERD HEALTHY
STOP THE SPREAD OF CWD