

Acknowledgments

We gratefully acknowledge the contributions of the many cooperating landowners and land-managing agencies that support Illinois' CWD Management Program. Without your assistance, the program could not exist. A special thanks also goes to the thousands of Illinois deer hunters who have provided tissue samples and location information for CWD testing, allowing us to monitor disease prevalence and distribution.

For more information about CWD in Illinois, including our complete annual reports, visit <http://dnr.state.il.us/cwd/>

Illinois Department of Natural Resources
Division of Wildlife Resources

Managing, protecting and sustaining
Illinois' natural resources

Chronic Wasting Disease Surveillance and Management Summary



Division of Wildlife Resources

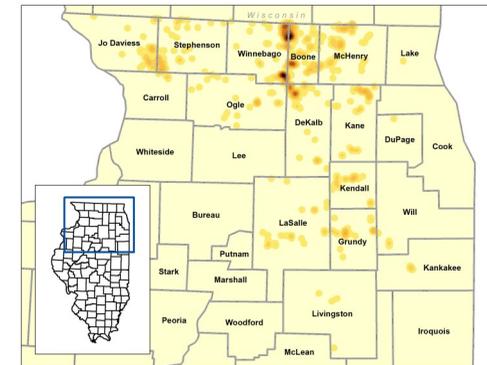


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Patterns Over Time and Space: Illinois Chronic Wasting Disease (CWD) During 2002-2018

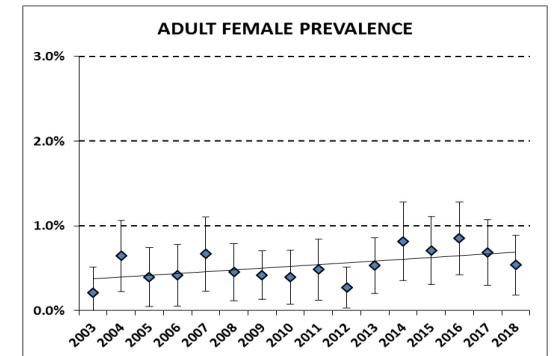
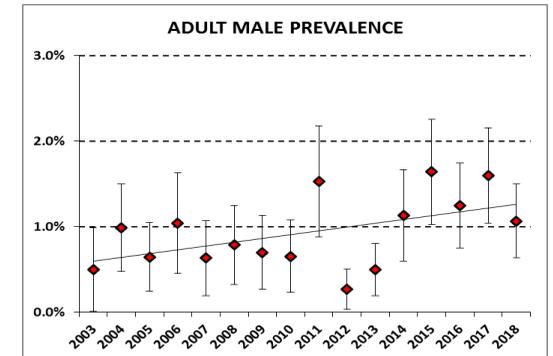
Since 2002, Illinois Department of Natural Resources (IDNR) personnel have sampled over 114,000 wild deer statewide and identified more than 700 individual deer infected with CWD. The distribution of the disease is very clumped on the landscape, with most cases occurring in a central core area along the Winnebago-Boone county line where CWD was first found. CWD has also become established in much of northeastern Illinois including the Fox and Illinois River Valleys and extending as far south as Livingston County, as well as the northwestern part of the state, specifically southwestern Stephenson, southeastern Jo Daviess and north central Carroll counties. Areas with significant disease typically contain good winter habitat for deer and high deer densities resulting from a lack of deer harvest during hunting seasons. Throughout the known Illinois CWD range, the observed rate of disease generally becomes progressively lower at greater distances from the core.



Distribution of CWD in northern Illinois, 2002-2018. Darker areas signify more positive deer.

As of July 2018, CWD positive deer had been identified from 17 northern Illinois counties, but 72% of cases (438) occurred in the original four CWD counties (Winnebago, Boone, McHenry, and DeKalb). Over half of all cases came from Boone or Winnebago counties, with most of those clustered near their shared county line.

Observed rates of disease have been approximately twice as high for adult male deer (1.6 % prevalence) as female deer (0.7 %).



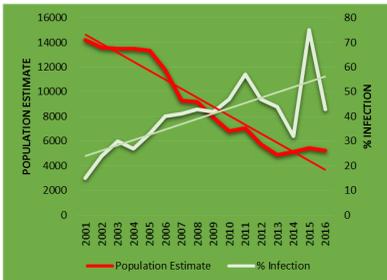
Illinois' CWD management approach has been effective, and minimal increases in prevalence rates have been observed in the CWD counties during the over 16 year history of the disease.

Why be concerned about CWD?

Chronic wasting disease was first observed in the 1960's in captive deer in Colorado, but not identified as a fatal "spongiform encephalopathy" (disease that causes formation of sponge-like holes in the brain tissue) until the late 1970's. CWD was first documented in wild animals in 1981 in a Colorado elk, and later found in free-roaming elk, moose, mule deer, and white-tailed deer in both Colorado and Wyoming. Since that time, CWD has spread into wild deer/elk/reindeer populations in 23 states, two Canadian provinces, South Korea and Norway.

CWD is always fatal, and there is no treatment or cure at this time. Although it seems to affect only members of the deer family (various deer, elk and moose), there is still much to be learned about CWD. While not known to be a human health threat, there is increasing concern and disease experts caution against eating deer known to be infected. CWD is a very real and serious threat to deer throughout North America, however.

CWD is not a "sensational" disease that spreads rapidly through deer populations and results in high numbers of dead deer in a short period of time. After infection, it may be a year or more before a deer shows outward signs of illness. At that point, death normally occurs within a few weeks or months. As a result, outbreaks may not attract a great deal of attention, and people may be lulled into the belief that CWD is not a significant threat. However, experience in other states demonstrates that over the course of several years, CWD continues to spread and increase unchecked until it may threaten the viability of deer populations. Researchers predict the local extinction of mule deer from portions of southeastern Wyoming within 50 years



CWD infection rates have increased markedly while populations have decreased dramatically since 2002 in the absence of disease management in Hunt Area 65, southeastern Wyoming.

Source: Wyoming Game and Fish Dept.—Big Game Reports

Illinois' approach to CWD management

Biologists believe that the dynamics of a CWD outbreak are controlled by a mix of two types of disease transmission: (1) direct transmission by contact between individuals, and (2) indirect transmission from a contaminated environment (such as from body waste, etc) to an individual. In the early stages of an outbreak, most transmission likely occurs between individuals, particularly between individuals that belong to the same family group. When disease becomes more firmly established, and when prevalence rates increase in an area, the level of environmental contamination will increase and indirect transmission will become a more significant contributor in the outbreak. This is why it is important to manage CWD at an early stage, and keep infection levels as low as possible. Control becomes more difficult with the passage of time and increasing rates of infection.



To manage deer densities at the county level, IDNR has liberalized hunting regulations in the northern Illinois CWD area, using virtually unlimited gun permit quotas, a special CWD management hunting season with reduced-price permits, and more days of hunting. These changes have not resulted in increased levels of deer harvest needed for disease control, however.

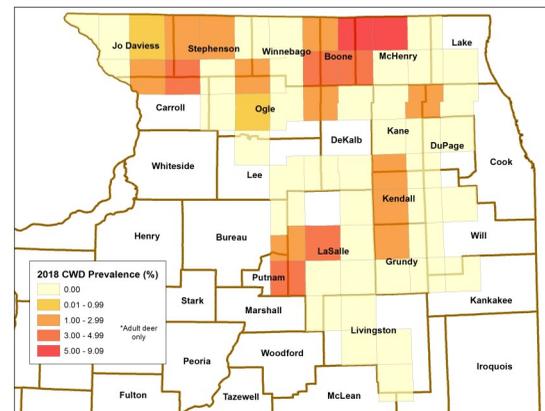
Reducing local deer populations is the foundation of the success of the Illinois CWD management program. Hunters are encouraged to harvest and have tested as many deer as possible from these areas. Where necessary Illinois DNR supplements hunter harvest with agency sharpshooting after the hunting seasons. Sharpshooting occurs on both private and public property through a network of cooperating landowners. Addressing disease control in this fashion at the local level allows the IDNR to more effectively fight CWD without drastically reducing deer populations throughout the entire county, which would be the case if forced to use hunting as the only tool for disease control.

Our goal is to suppress CWD prevalence rates so that they remain very low, and to slow the spread of the disease to the remainder of the state. We can do this by reducing deer densities in specific CWD areas and maintaining those herds at reduced levels. Our approach impacts CWD dynamics by increasing removal of CWD-positive deer from the population, reducing contact rates between sick and susceptible individuals, and reducing environmental contamination.

CWD Surveillance

IDNR collects approximately 8,000 tissue samples for CWD testing each year. Biologists track the distribution and intensity of CWD primarily through testing of hunter-harvested deer. During the firearm deer season, successful hunters are required to check deer at a manned check station in CWD counties. With the permission of the hunter, biologists document the location of harvest and extract samples for CWD testing. During other seasons (archery, muzzleloader, and late winter/CWD) hunters are encouraged to have deer tested at CWD sampling vendors, or by dropping off heads at CWD sampling stations. Testing in downstate counties is performed by CWD testing vendors (primarily meat processors). A complete list of these sampling locations is available on the IDNR CWD website (<https://www.dnr.illinois.gov/programs/CWD/Documents/CWDSamplingLocations.pdf>).

Illinois' management efforts have resulted in disease prevalence rates that are both low and relatively stable, in contrast to disease trends observed in other states (see "Patterns Over Time and Space", other page). Most of the known CWD area has little to no disease showing up in tested deer. However, disease distribution is very patchy, and there are "hot spots" with higher disease prevalence than the norm. Prevalence rates are higher along the Winnebago-Boone county line, northern McHenry, and NW DeKalb and NE Ogle County (see map below). Other areas of concern include SW Stephenson/SE Jo Daviess/NC Carroll counties, the Fox River corridor from Kane to Grundy and the Illinois River corridor from LaSalle to Will counties.



CWD Management/Sharpshooting

Reducing deer populations in specific areas where CWD is known to occur is the foundation for CWD management and control in Illinois. To guide this effort, deer counts are performed at CWD areas from a helicopter during winter over ground-covering snow. This provides a measure of the number and distribution of deer present. Repeated annually when possible, these counts allow biologists to track changes in populations over time. Results are then used to guide management for each CWD area. Sampling goals are established which, if achieved, provide an appropriate assessment of CWD in that zone and result in a reduction in the local deer densities. Sportsmen who hunt in these areas are encouraged to harvest and have tested as many deer as possible, as these deer contribute to disease management efforts.

After the close of deer hunting seasons in January, trained agency sharpshooters begin culling deer from CWD areas where needed. Culling is performed by specially trained agency staff, and only on land with permission of the owner. Sharpshooting is performed from late January until the end of March as safely and efficiently as possible, using high powered rifles and bait. Though controversial, these techniques have proven essential for the efficient and effective implementation of this strategy.

Deer are removed from the property in their entirety and taken to a field laboratory where tissues for testing and other research are extracted. Suitable carcasses are prepared for processing for human consumption. Cooperating property owners may elect to claim deer taken from their property. Venison from suitable deer is donated to the Northern Illinois Food Bank network which provides resources to food pantries in northern Illinois. Approximately 40,000 lbs is donated annually. Venison from CWD positive deer is destroyed.

IDNR's sharpshooting program has proven to be an essential component of the CWD control strategy. Because agency sharpshooters can be directed to specific locations, removal efforts are focused only where the disease is present and where deer culling is most needed. Deer removed by agency sharpshooters are more likely to be positive for CWD than hunter-harvested deer in those same counties, specifically because sharpshooting is targeted to areas where CWD is known to exist. This difference in removal efficiency makes sharpshooting for disease control a very effective tool.