

Illinois Chronic Wasting Disease (CWD): 2018-2019 Surveillance and Management Report

(Project Period: July 1, 2018 - June 30, 2019)

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November 8, 2019



Executive Summary

First CWD positive: A suspect adult female deer from northwest Boone County was diagnosed with CWD in November 2002.

Total samples through June 30, 2019: 123,411

Total positives through June 30, 2019: 826

Number of counties affected through 6/30/2019: 17
(Boone, Carroll, DeKalb, DuPage, Grundy, JoDaviess, Kane, Kankakee, Kendall, Lake, LaSalle, Livingston, McHenry, Ogle, Stephenson, Will, Winnebago).

General distribution through 6/30/2019: Total affected area (determined by a minimum convex polygon that includes all positives) is now 8877 mi². The number of CWD positive deer detected increased in FY2019 (Table 1), with a corresponding increase in prevalence (Figure 7). Greatest increases occurred in Ogle and Grundy counties (Figure 9). The northwest Illinois counties of JoDaviess and Stephenson were effectively unchanged with a decrease in Stephenson County balanced by a slight increase in JoDaviess; prevalence remains low in both counties (Table 4, Figure 9). Although an increase was noted in FY2019, overall prevalence rates remain low at 1.6% (Figure 7). Prevalence rates have increased an average of 0.08% per year since 2003 (Figure 7).

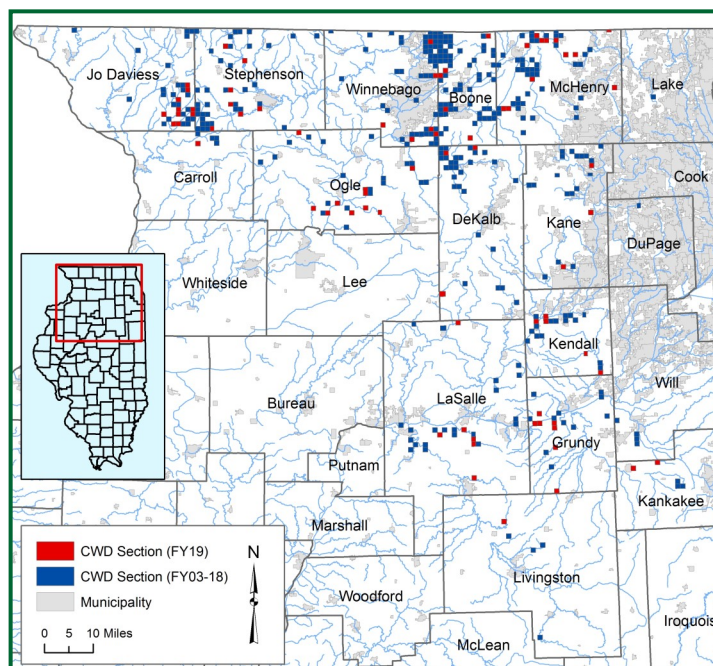


Figure 1. Distribution of all known CWD-infected deer identified in Illinois through June 30, 2019.

CWD Surveillance Protocols During FY2019 (July 1, 2018 - June 30, 2019)

Testing: All CWD testing was conducted using immunohistochemistry (IHC) at the University of Illinois' Veterinary Diagnostic Laboratory (UIUC-VDL) in Urbana, Illinois. Samples were initially screened using retropharyngeal lymph nodes (RPLN), followed by confirmatory testing of recut RPLN tissue and obex.

There were significant delays in obtaining CWD test results in FY2019 due to a shortage of approved diagnostic materials as the supplier Biocare worked to obtain federal approval for these supplies. UIUC-VDL, working with Biocare and the National Veterinary Services Laboratories (NVSL), was able to manage the situation through a cooperative effort with a CWD-approved laboratory in New Mexico. A federal government shutdown contributed to these delays. Issues associated with this situation have been resolved and no delays in obtaining test results are anticipated in FY2020.

Sampling of hunter-harvested deer: Three sources were used to provide tissue samples from adult deer harvested by hunters: (1) mandatory firearm deer check stations in high-risk counties in northern Illinois; (2) designated voluntary drop-off testing locations in northern Illinois and Randolph County; and (3) cooperating meat lockers/taxidermists statewide who collected heads/sample tissues for IDNR.

Surveillance by other agencies/individuals authorized by special permits: Recipients of special permits from IDNR authorizing lethal deer removals were required to collect CWD samples when working in high-risk CWD areas or in areas needing additional surveillance. These permits included (1) Deer Population Control Permits (used by some agencies to control urban deer populations); (2) nuisance Deer Removal Permits (for crop depredation, etc.); and (3) Scientific Permits (various research projects).

Suspect (“target”) deer surveillance: Upon receiving reports from the public about sick deer, IDNR staff collected samples for CWD testing from deer that exhibited signs/symptoms consistent with chronic wasting disease.

Surveillance from post-hunting season sharpshooting: Sharpshooting was conducted from mid-January through the end of March by trained IDNR staff. Sharpshooting was restricted to areas where CWD-infected deer had been identified (limited to lands within a 2-section buffer around known positive sections). In addition, in response to CWD infection identified in southeastern Missouri the Missouri Department of Conservation, in cooperation with IDNR and the U.S. Fish and Wildlife Service, culled deer from that portion of Randolph County which lies on the Missouri side of the Mississippi River navigation channel.

CWD Surveillance Results FY2019

Total number of CWD samples collected statewide: 8,877 white-tailed deer. Figure 2 depicts the geographic distribution of samples taken; Figure 3 compares annual sample numbers; Figure 4 presents a comparison of the number of deer sampled and the number of CWD-positive deer identified by source; and Appendix A summarizes the samples collected/positives identified by county.

Number of usable samples collected: 8,824

Number of CWD-positive deer identified: 90. Table 1 presents a comparison of the number of positive deer found each year by county.

Number of counties with positive deer: 14 — Boone (6), Carroll (1), DeKalb (3), Grundy (10), JoDaviess (12), Kane (3), Kankakee (2), Kendall (5), LaSalle (6), Livingston (1), McHenry (14), Ogle (10), Stephenson (8), Winnebago (9). For distribution of positive sections, see Figure 5.

Number of new CWD counties: 0

CWD prevalence information for the known CWD area (17 counties; adult deer from hunting sources only) —

Average CWD prevalence (all adult deer): 1.6% (65/4045)

Average CWD prevalence (adult males): 1.9% (45/2327)

Average CWD prevalence (adult females): 1.2% (20/1718)

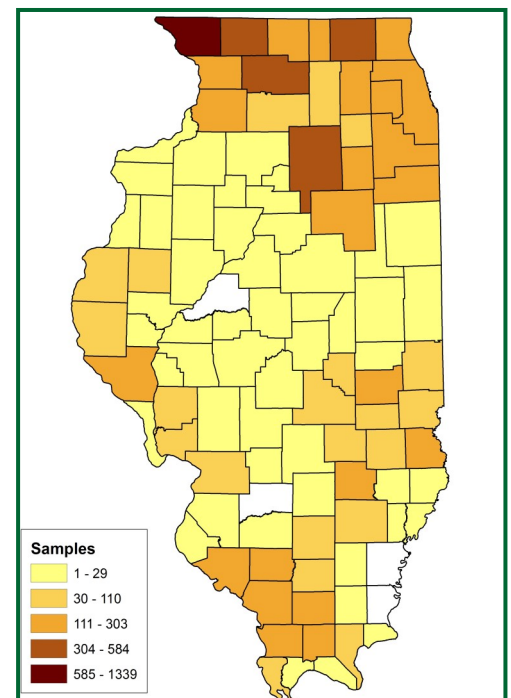


Figure 2. CWD sample distribution across Illinois during FY2019 (all sources).

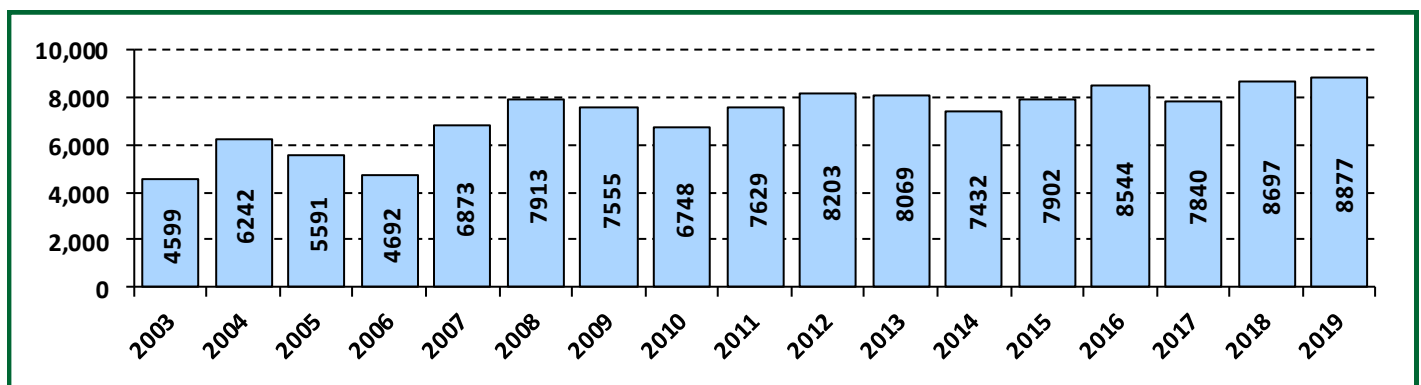


Figure 3. Number of CWD surveillance samples collected statewide each year during FY2003 through FY2019.

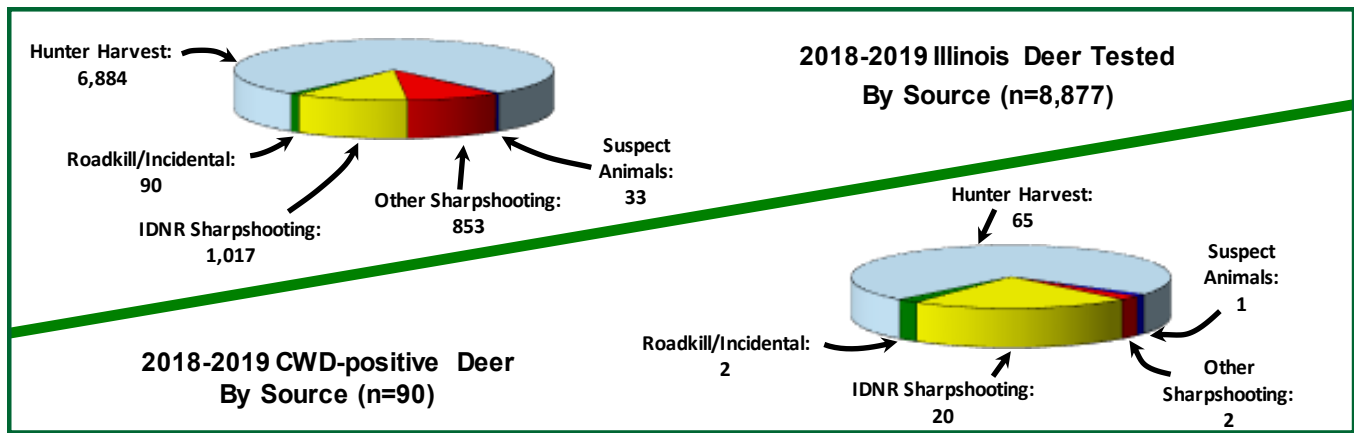


Figure 4. Number of CWD samples tested and number of positives identified by sampling source during FY2019.
Note: Number tested includes all samples submitted for wild deer, regardless of whether a valid test result was obtained.

Table 1. Number of CWD positive deer by sampling year. Example: Year 2003 = July 1, 2002 – June 30, 2003.

County	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Boone	9	25	13	15	13	11	9	14	7	5	4	5	6	11	7	3	6	163
Carroll	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	2	1	5
DeKalb	–	4	1	5	6	8	4	3	7	5	7	8	8	3	3	1	3	76
DuPage	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	1
Grundy	–	–	–	–	–	–	–	–	2	5	3	3	5	3	7	2	10	40
JoDaviess	–	–	–	–	–	–	–	–	1	–	1	4	7	9	10	8	12	52
Kane	–	–	–	–	–	–	–	–	4	7	4	5	7	8	5	2	3	45
Kankakee	–	–	–	–	–	–	–	–	–	–	–	–	1	1	2	–	2	6
Kendall	–	–	–	–	–	–	–	–	–	–	1	4	6	6	6	1	5	29
Lake	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	1
LaSalle	–	–	–	–	1	–	–	–	3	–	1	2	6	5	4	5	6	33
Livingston	–	–	–	–	–	–	–	–	–	–	–	–	2	–	2	–	1	5
McHenry	2	2	4	4	4	–	4	3	3	3	3	7	6	8	8	8	14	83
Ogle	–	–	–	2	–	–	1	–	4	2	3	1	2	6	2	3	10	36
Stephenson	–	–	–	–	–	1	–	1	1	2	3	4	6	10	11	12	8	59
Will	–	–	–	–	–	–	–	–	–	–	–	2	1	1	–	–	–	4
Winnebago	3	20	13	25	18	18	12	16	10	7	5	13	8	1	6	4	9	188
Total	14	51	31	51	42	38	30	37	42	36	36	59	71	72	75	51	90	826

CWD Management During FY2019

Hunting Seasons for Herd/Disease Control

Length: Archery deer season (Oct. 1-Jan. 20; closed during firearm season) consisted of 112 days in DuPage and Lake counties (no firearm hunting), and 105 days in all other CWD counties. Gun seasons totaled 20 days, consisting of the regular firearm season (7 days), youth season (3 days), muzzleloader season (3 days), and special CWD season (7 days). Gun deer seasons were not open in DuPage and Lake counties, except for Chain O’ Lakes State Park (firearm season only) in Lake County.

Bag limits: Only two antlered deer could be taken per hunter during all seasons, except that during the special CWD season no antlered limit was in effect. There was no bag limit for antlerless deer.

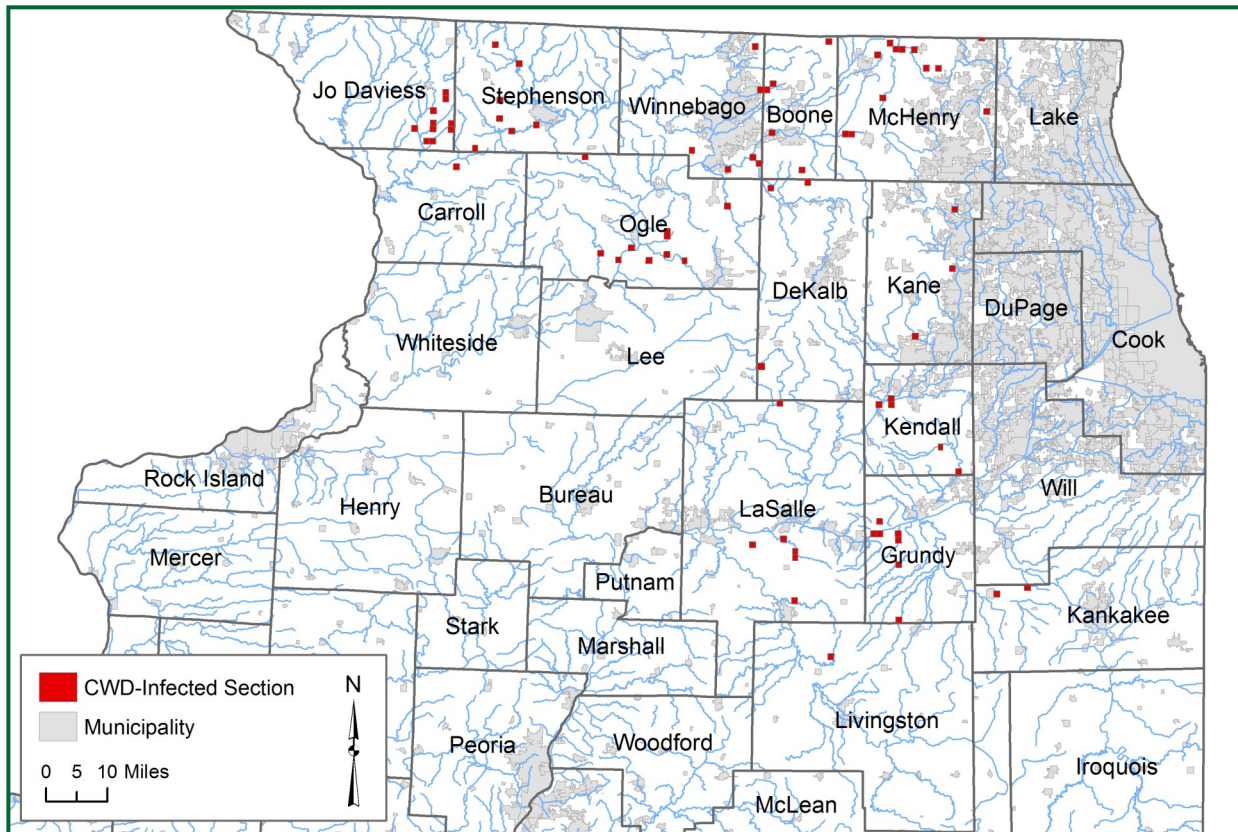


Figure 5. Distribution of CWD-positive deer identified during FY2019.

Gun permit quotas: In counties with established CWD, permit quotas far exceeded demand, so that the number of permits was for all practical purposes unlimited. In counties with limited cases of CWD, permit quotas were more limited, so as not to significantly lower the entire county population. For the Special CWD season, hunters were allowed to purchase unlimited over-the-counter (OTC) permits, and could also use any unfilled deer tags from firearm, muzzleloader, or youth deer seasons.

Significant changes: None.

Hunter harvest: Hunters harvested 15,846 deer from the 17 CWD counties during 2018-2019 (Table 2), compared to 15,186 deer during 2017-2018. The previous 5-year average harvest for the 17 counties was 16,444. In the 2001-2002 hunting season, the last season prior to the discovery of CWD in Illinois, hunter harvest totaled 17,642.

IDNR Sharpshooting Protocols

Rationale: Management using sharpshooting to supplement hunter harvest allows the Department to conduct localized, focused deer reductions in small areas known to have CWD. Our goal is to reduce disease transmission rates by lowering densities in infected areas, to reduce environmental contamination from infected deer, and to remove sick deer from the population at a higher rate than deer are becoming newly-infected. Advantages of sharpshooting include: (1) reductions are limited to areas with disease, so healthy populations in uninfected areas are not impacted as would be the case if hunting was the only management tool; (2) sharpshooting can be conducted on properties that do not normally allow hunting (or allow only very limited hunting), so management can occur in areas that normally serve as refuges to hunting; (3) focused sharpshooting has been shown to remove sick animals at a higher rate than hunting programs; and (4) sharpshooting can target specific high-risk deer social groups known to have CWD. Sharpshooting also provides detailed, localized surveillance information about disease distribution and prevalence rates within infected areas.

Table 2. Deer harvest in CWD counties during the 2018-19 hunting seasons.

County	Youth	Muzzleloader	CWD	Firearm	Archery	All Seasons
Boone	3	2	27	140	125	297
Carroll	13	25	107	684	546	1,375
DeKalb	0	5	21	120	160	306
DuPage	<i>Not open to firearm deer hunting</i>				29	29
Grundy	5	20	75	270	332	702
JoDaviess	47	71	442	1,690	1,090	3,340
Kane	0	0	5	30	330	365
Kankakee	4	17	61	199	318	599
Kendall	1	8	32	87	165	293
Lake ¹	<i>Not open to firearm deer hunting</i>			1	309	310
LaSalle	15	31	162	749	743	1,700
Livingston	6	13	57	387	219	682
McHenry	1	15	62	275	562	915
Ogle	19	30	170	737	626	1,582
Stephenson	7	20	162	602	461	1,252
Will	7	21	50	276	801	1,155
Winnebago	7	13	92	370	462	944
Totals	135	291	1,525	6,617	7,278	15,846

¹ Only Chain O Lakes SP is open to firearm deer hunting in Lake County.

Timing: Following the close of deer hunting seasons in January, teams of IDNR staff that were trained/certified for sharpshooting began culling deer wintering in or around known CWD locations. All IDNR sharpshooting activities were carried out between January 20 and March 31, 2019.

Aerial Surveys: Deer were counted via helicopter survey during periods of suitable snow cover to determine distribution and population size within known CWD areas, enabling staff to focus sharpshooting activities on deer in winter concentration areas that included or were near CWD-infected properties.

Locations used for sharpshooting: Sharpshooting areas were generally limited to locations within a 2-section buffer zone around each known CWD-positive section (1 section = ~1 mile²). Sharpshooting was only conducted with the permission of the landowner.

Carcass handling/disposition: All animals (including fawns) providing suitable tissue samples were tested for CWD. Additional tissue samples were collected for genetic testing and evaluation of reproductive status at the University of Illinois Champaign/Illinois Natural History Survey. Deer may be returned to the landowner at their request and results provided as soon as available. Remaining deer with CWD test results of “Not Detected” were processed and donated to Illinois charities for further distribution.

Results of Helicopter Deer Counts

In northern Illinois, CWD management unit boundaries were established by buffering each CWD-positive section that occurred during the past five years (2014-2018) with a 2-section buffer (Figure 6). Total size of all CWD management areas was 2,824 square miles. Deer counts were conducted over 72% of deer habitat present (938 mi² of 1296 mi²) within the CWD management areas. Highest deer densities were observed in the northwest Illinois counties of Carroll, JoDaviess, and Stephenson, followed by Grundy and LaSalle counties along the Illinois River (Table 3). No aerial surveys were conducted in southwest Illinois.

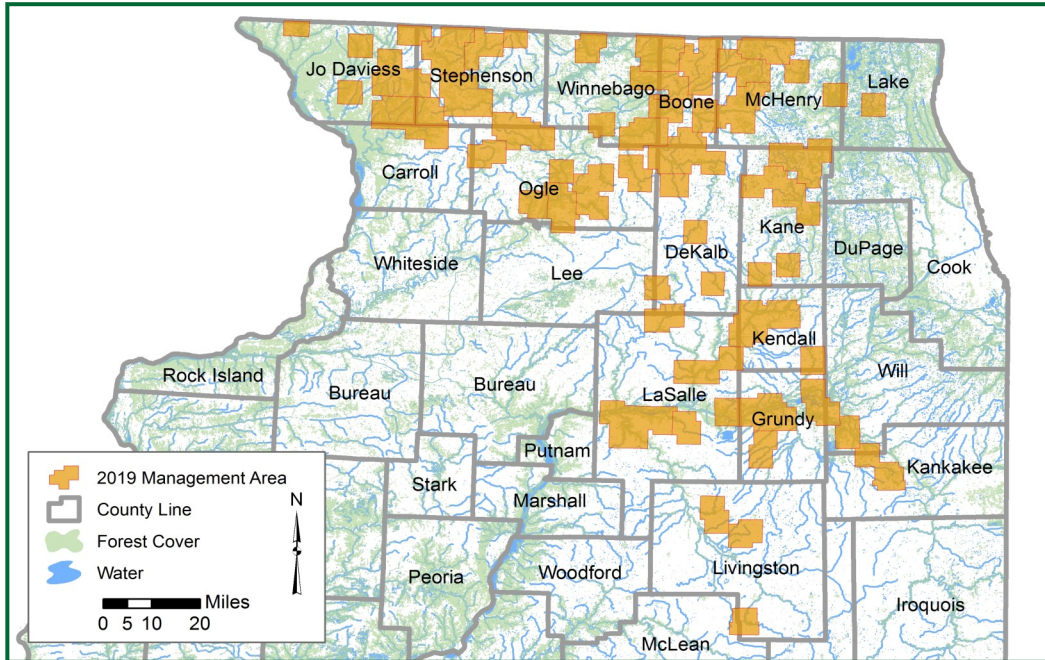


Figure 6. CWD management area boundaries in northern Illinois for Winter 2019.

Table 3. Summary of aerial deer counts within CWD management units per county during Winter 2019.

County	Management Unit Total Area (mi ²)	Amount of Deer Habitat in Unit (mi ²)	Total Deer Habitat Surveyed (mi ²)	Total Number of Deer Counted	Deer per mi ² of Deer Habitat Surveyed
Boone	237.07	92.06	48.54	278	5.73
Carroll	49.46	33.13	33.09	1,317	39.80
DeKalb	181.04	39.08	5.35	15	2.80
Grundy	168.74	71.55	67.52	1,541	22.82
JoDaviess	212.32	148.27	125.64	3,190	25.39
Kane	223.40	103.49	50.46	488	9.67
Kankakee	50.14	24.20	14.37	219	15.24
Kendall	125.80	55.15	53.66	803	14.97
Lake	29.78	17.07	0.00	0	—
LaSalle	293.67	121.30	110.36	2,249	20.38
Livingston	103.42	18.08	14.54	288	19.80
McHenry	255.85	131.57	39.01	464	11.90
Ogle	346.60	159.08	124.86	1,096	8.78
Stephenson	314.99	137.89	130.04	3,671	28.23
Will	58.69	37.07	31.26	479	15.32
Winnebago	172.61	106.85	88.97	763	8.58
Total	2,823.56	1,295.83	937.67	16,861	17.98

IDNR Sharpshooting Results

Management area: Sharpshooting in northern Illinois was conducted within CWD management units created by buffering each CWD-positive section detected during the past five years (2014-2018) with a 2-section buffer (Figure 6). These units comprised 2824 mi² of total area, including 1296 mi² of deer habitat. In southern Illinois (Randolph County), deer were taken solely from Kaskaskia Island on the west side of the Mississippi River. Kaskaskia Island is directly adjacent to CWD positive sections in St. Genevieve County, Missouri.

Number of counties in which deer were taken: 16

Number of townships in which deer were taken: 64

Number of sections in which deer were taken: 126

Number of deer taken: 1017 (mean # deer taken/section = 8.1; range = 1-50)

Number of CWD-positive deer taken: 20

Carcass Disposition: 951 deer were donated to Illinois charities, with 928 to the Northern Illinois Food Bank and 23 to the Chester Area Christian Food Pantry. 35 were returned to the landowner of the property where they were taken. 12 deer were judged unsafe for human consumption upon examination, and landfilled (these included 1 deer that was subsequently found to be CWD positive). 19 deer were cremated after they were found to be CWD positive. More specific sharpshooting results for each county are presented in Table 4.

Sharpshooting Programs by Other Agencies/Entities in CWD counties

Deer Population Control Permits (DPCP): Nine land-managing entities with DPCPs collected CWD samples as a condition of their permit. Sampling occurred in 7 CWD counties (DuPage, JoDaviess, Kane, Lake, McHenry, Will and Winnebago) and Cook County, which is bordered by 5 CWD counties. Permit recipients submitted tissue samples for CWD testing from 563 deer (563 usable samples) taken from at least 63 sections in those counties. Two CWD-positive deer were found, both from Winnebago County.

Nuisance Deer Removal Permits (DRP): Thirty-eight samples were submitted from deer taken in 4 CWD counties using DRPs, with no CWD-positive deer identified.

Table 4. Summary of IDNR sharpshooting effort and results by county during winter 2019.

County	# of Townships With Removals	# of Sections With Removals	Total Number of Deer Removed	Avg. # of Deer Removed/Section	Number of Positive Deer Removed
Boone	3	6	73	12.2	0
Carroll	3	6	41	6.8	1
DeKalb	2	3	9	3.0	0
Grundy	4	8	126	15.8	4
JoDaviess	4	14	100	7.1	4
Kane	7	16	104	6.5	2
Kankakee	1	4	27	6.8	0
Kendall	5	8	51	6.4	1
LaSalle	9	14	116	8.3	0
Livingston	3	3	6	2.0	0
McHenry	6	10	70	7.0	2
Ogle	4	6	37	6.2	0
Randolph	1	3	24	8.0	0
Stephenson	8	16	177	11.1	1
Will	2	2	5	2.5	0
Winnebago	2	7	51	7.3	5
All Counties	64	126	1017	8.1	20

Figure 7. Trends in CWD prevalence for hunter-harvested adult deer (\geq yearling) during 2003-2019 for the seventeen counties in which CWD has been identified. Error bars at each point depict the 95% confidence interval of the estimate. Mean prevalence rates in males have been 75% higher than in females during this 17-year period.

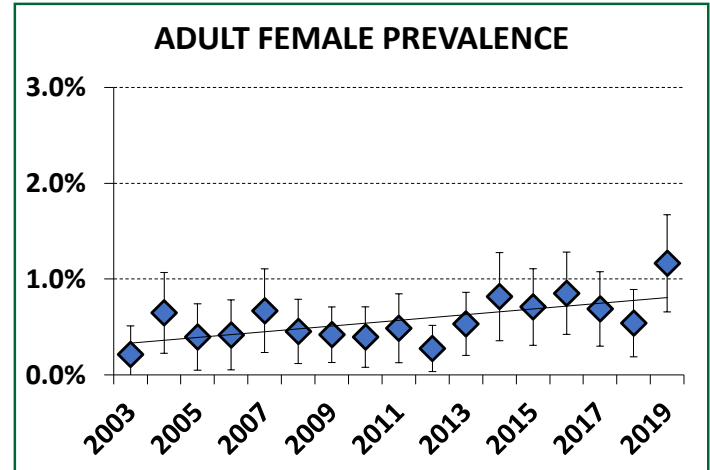
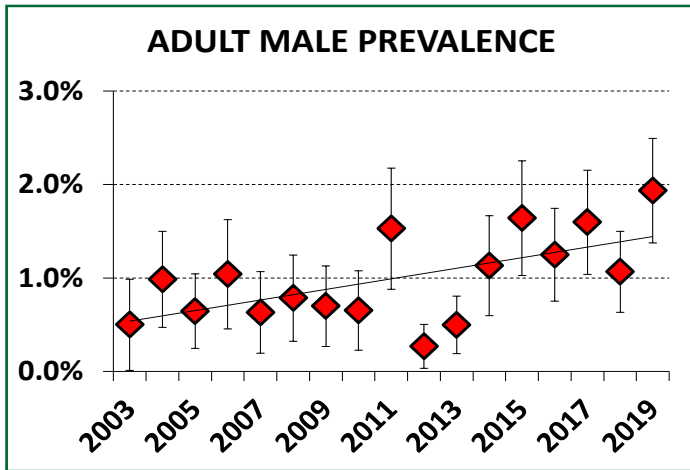
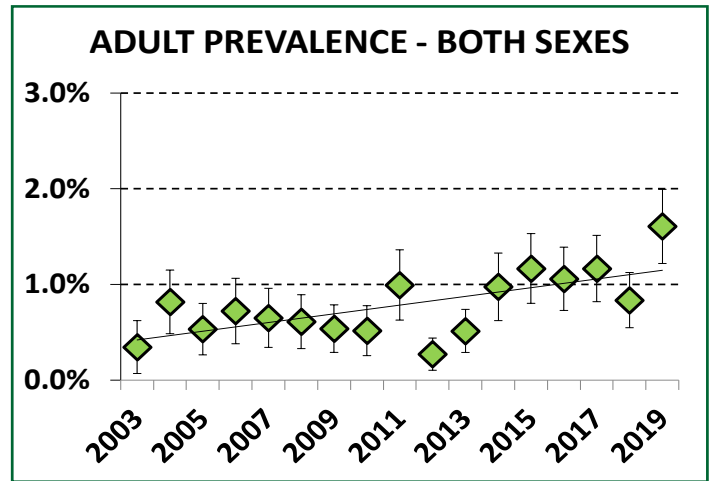


Table 5. County CWD prevalence estimates for adult deer during 1 July 2018 through 30 June 2019. Estimates are based only on samples collected from hunter-harvested adult deer.

County	# of Samples	# of Positives	Percent Positive	95% Confidence Interval (\pm)
Boone	78	5	6.41%	5.44%
Carroll	128	0	0.00%	N/A
DeKalb	79	3	3.80%	4.21%
DuPage	7	0	0.00%	N/A
Grundy	166	6	3.61%	2.84%
JoDaviess	1,120	8	0.71%	0.49%
Kane	115	1	0.87%	1.70%
Kankakee	109	2	1.83%	2.52%
Kendall	53	2	3.77%	5.13%
Lake	36	0	0.00%	N/A
LaSalle	416	6	1.44%	1.15%
Livingston	245	1	0.41%	0.80%
McHenry	321	12	3.74%	2.08%
Ogle	434	10	2.30%	1.41%
Stephenson	394	7	1.78%	1.30%
Will	158	0	0.00%	N/A
Winnebago	187	2	1.07%	1.47%
All CWD Counties	4,046	65	1.61%	0.39%

Discussion: Illinois CWD in FY2019

Ninety CWD-positive deer were identified from 8,824 usable samples collected statewide. Across the 17-county CWD range, estimated disease prevalence rate for all adult deer taken by hunters was 1.6%, highest observed since CWD was discovered in Illinois. The prevalence rate for hunter-harvested adult males (1.9%) continues to be higher than that of adult females (1.2%). Deer taken during IDNR sharpshooting were slightly more likely to be CWD-positive (IDNR sharpshooting adult prevalence 2.0% vs hunter-harvest adult prevalence 1.6%). Despite higher prevalence rates in 2018-19, prevalence has remained low and changed little over time since discovery of CWD in 2002, increasing an average of 0.08% per year since 2003 (Figure 7).

- McHenry County produced the highest number of hunter-harvested CWD positive deer (CWDp), followed closely by Ogle. JoDaviess, Stephenson, Grundy, LaSalle, and Boone also produced 5 or more CWDp's in FY2019 (Table 5).
- As in previous years, areas with above-average prevalence rates were observed in southeastern Winnebago, southern Boone, and northwest DeKalb counties (blocks 1,0; 1,1; 2,0; 2,1). Prevalence was also higher in northern McHenry (block 0,2), eastern Ogle (block 2,-1), southwest Kendall (block 5,2) as well as western Grundy and southeast LaSalle (blocks 6,2; 7,2; 7,1) (Figure 8).

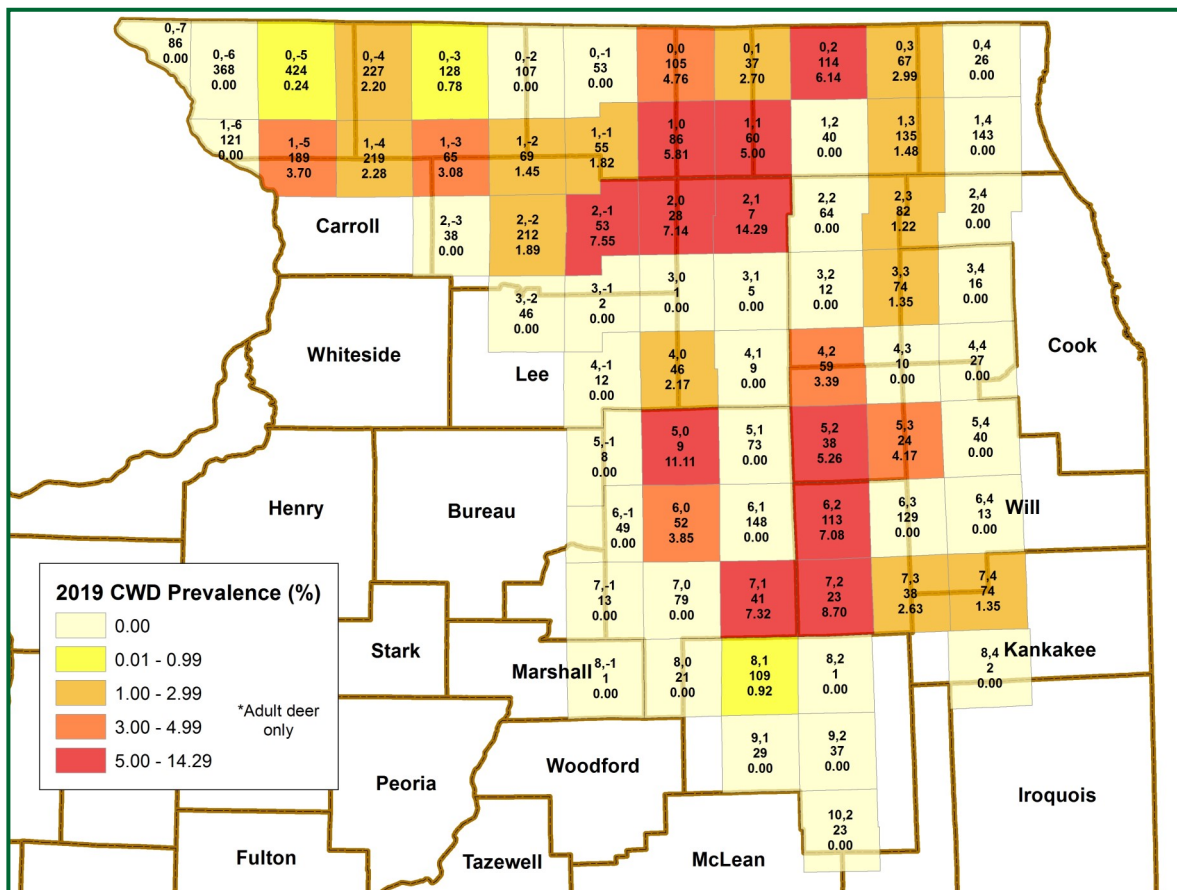


Figure 8. Estimated prevalence rates in adult deer during FY2019 per 4-township block. For each block, the upper number is the grid coordinate; the middle number is the sample size; and the lower number is the estimated adult prevalence rate (%). Includes all sources except suspect deer.

- The area along the Winnebago-Boone county line (blocks 0,0; 1,0; 2,0 collectively), which is the area of initial infection and historically highest levels of infection, had 5.4% prevalence, which is higher than the 3.2% detected in FY2018, but still lower than historic levels (12.7% in FY2014).
- Counties along the Fox and Illinois rivers including Kane, Kendall, LaSalle, Grundy, and Will produced more positive deer (15 CWDp, 908 samples, 1.6% prevalence) than in FY2018 (5 CWDp, 741 samples; 0.7% prevalence) with most of this increase occurring in Grundy (FY2019 - 6 CWDp, FY2018 - 1 CWDp) and LaSalle (FY2019 - 6 CWDp, FY2018 - 3 CWDp) counties. Prevalence rates had been relatively stable to declining in these counties prior to this year (Figure 9).
- The northwestern Illinois area that includes JoDaviess, Stephenson, and northern Carroll counties is an area of concern because of its proximity to Wisconsin's southwestern CWD area and the relatively high deer numbers found there. Estimated prevalence for the combined Blocks 1,-4 and 1,-5 (southern JoDaviess and southwestern Stephenson) was 2.9% in FY2019, with 12 positives from 408 samples. This was unchanged from FY2018 (12 CWDp, 421 samples, 2.9% prevalence). Blocks 0,-4 and 0,-3 (northern JoDaviess and Stephenson), which had been experiencing increasing levels of infection in recent years saw lower prevalence in FY2019 (FY2019 - 6 CWDp, 355 samples, 1.7% prevalence; FY2018 - 9 CWDp, 359 samples, 2.5% prevalence) (Figure 8).
- McHenry County had its highest historical prevalence rate (12 CWDp, 321 samples, 3.7% prevalence) (Figure 9). Northern McHenry County (blocks 0,1 and 0,2) which has seen consistently high prevalence levels for the past 5 years was slightly lower than last year (FY2019 - 8 CWDp, 151 samples, 5.3% prevalence; FY2018 - 8 CWDp, 114 samples, 7.0% prevalence) (Figure 8).
- Ogle County saw the most dramatic increase in CWD infection in Illinois this past year. Prevalence, which had been ranging between 0.2% and 0.8% from FY2011 - FY2018 was 2.3% (10 CWDp, 434 samples) in FY2019 (Figure 9). Nearly all of this increase came from blocks 2,-1 (FY2019 - 4 CWDp, 53 samples, 7.5% prevalence; FY2018 - 0 CWDp, 64 samples, 0.0% prevalence) and 2,-2 (FY2019 - 4 CWDp, 212 samples, 1.9% prevalence; FY2018 - 1 CWDp, 195 samples, 0.5% prevalence) (Figure 8). This should be an area of special concern in the future, and the Department should consider increasing management intervention if possible.

The spread of CWD and the establishment of new disease foci into new areas of the state continues to be the biggest management challenge in Illinois. During 2002-2010, 80% of all CWD-positives identified in Illinois originated from either Boone or Winnebago County. In FY2019, only 11% of CWD-positives came from those counties. This shift in CWD distribution poses significant challenges for management, as resources available for CWD management continue to be spread more thinly rendering them less effective.

In addition to the expansion of disease from the initial outbreak area in northern Illinois, an outbreak recently detected in southeastern Missouri is separated from Randolph County, Illinois by only the Mississippi River. This past year, IDNR worked in cooperation with the Missouri Department of Conservation and the U.S. Fish and Wildlife Service to conduct surveillance and disease management on Kaskaskia Island, a portion of Randolph County that lies on the western side of the Mississippi River adjacent to the Missouri infection area. Twenty-four deer were removed from Kaskaskia Island, and no positive deer were found. However, during the past 2 years, several positives have been identified from Missouri sections adjoining Kaskaskia Island, so continued action is warranted. Continued work will provide valuable surveillance data to identify the disease status of herds in that area, and will help minimize the potential for CWD to spread across the river, but our level of concern remains very high.

Figure 9. Patterns in estimated CWD prevalence rates in counties with at least five years of data. County prevalence rates were calculated using only hunter-harvested adult deer (both sexes).

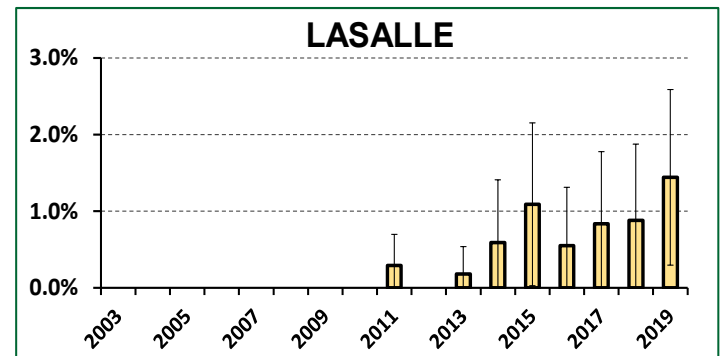
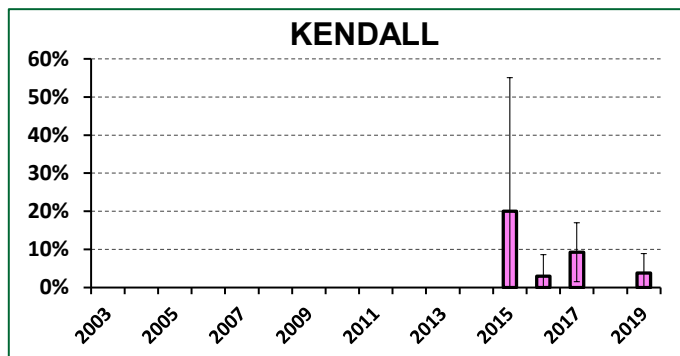
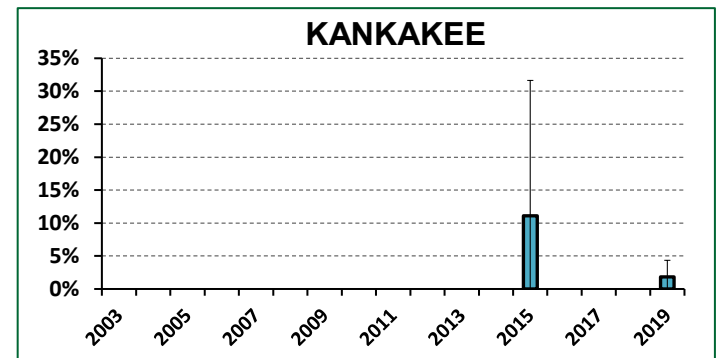
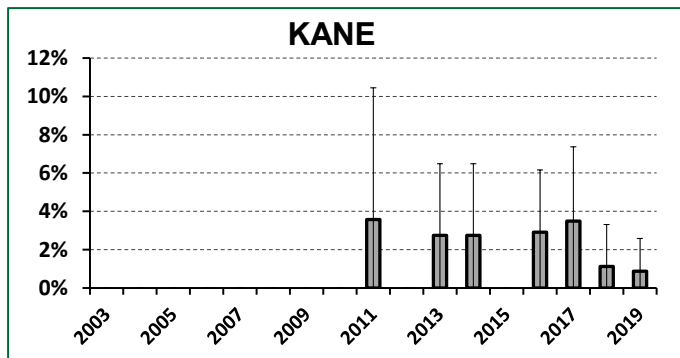
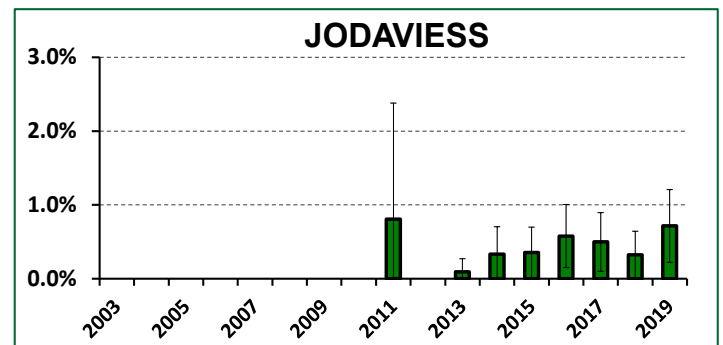
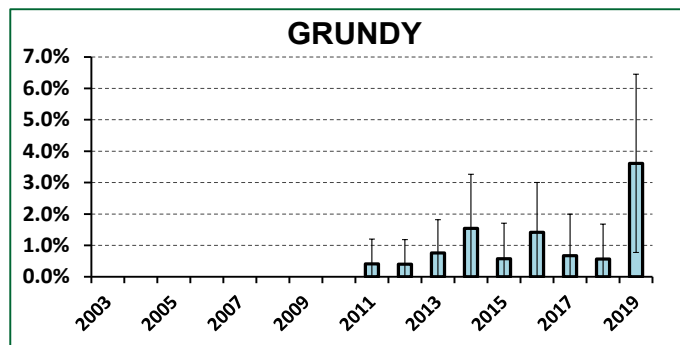
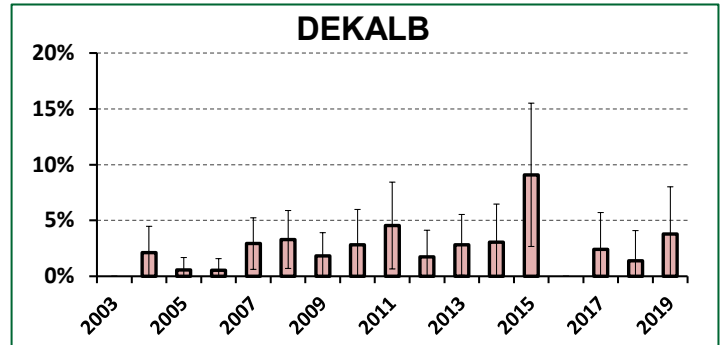
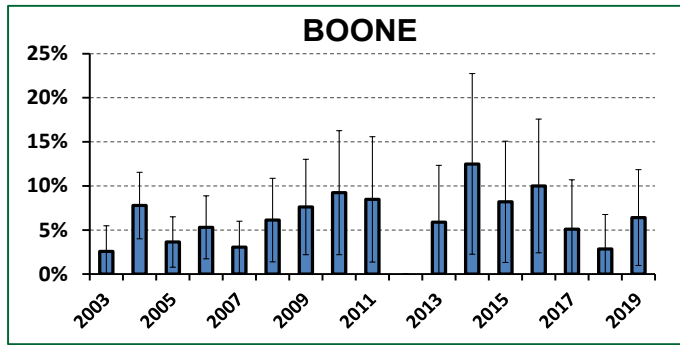
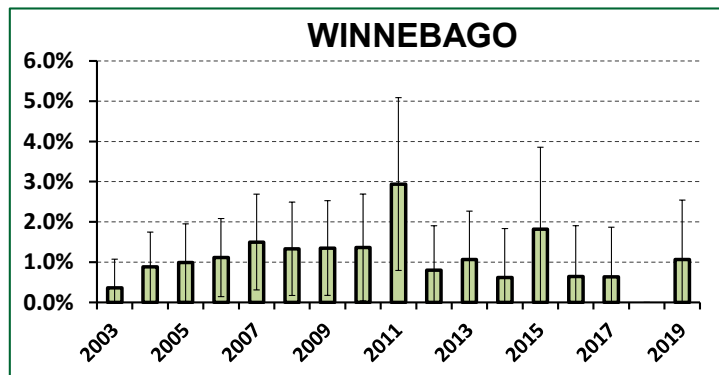
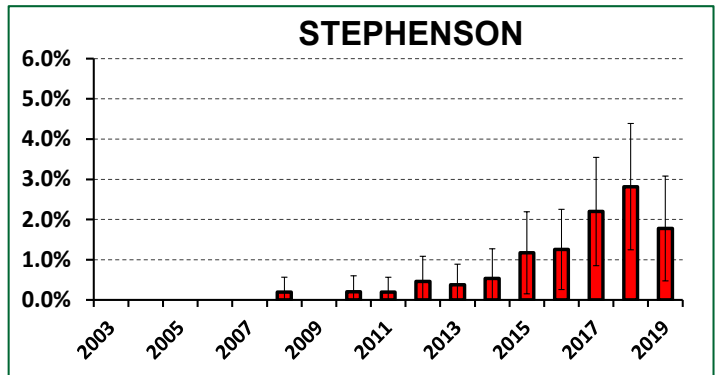
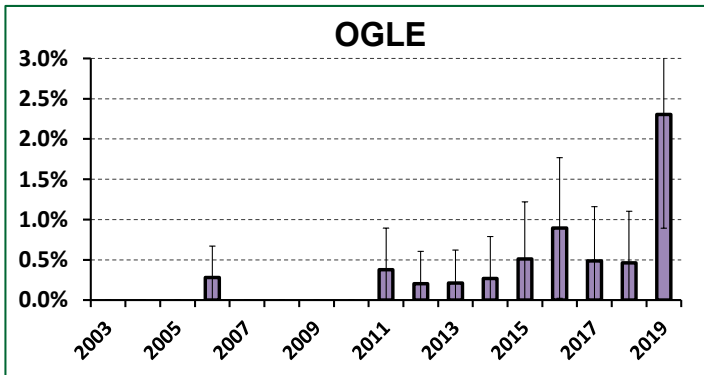
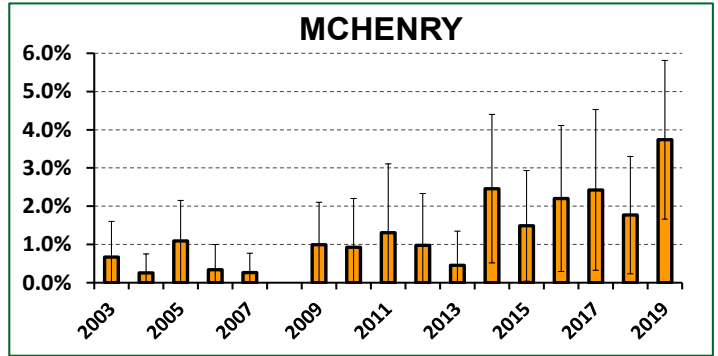
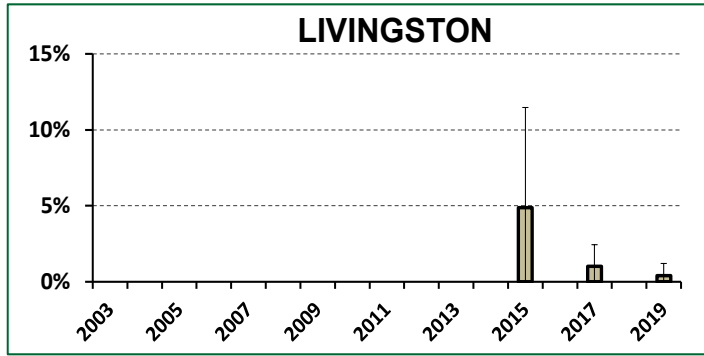


Figure 9. Continued.



Disease management strategies in Illinois have been successful in controlling CWD prevalence rates at low levels, but in many management units the number of deer removed by sharpshooters is currently insufficient, whether because of limited access to property or because of limited resources. Continuing this management program will slow increases in prevalence rates and also slow spread to the remainder of the state, but managers will require new tools in the future if we are to successfully fight this disease.

IDNR staff must continue to work to educate Illinoisans about CWD and its potential to negatively impact our white-tailed deer herd. Only through an educated public can the Department continue to receive support for CWD management, even though our program is viewed as a model for disease management by professionals in many other states.

Appendix A. Useable CWD samples from white-tailed deer by county in Illinois taken during the 2018-2019 sampling season. Numbers in parentheses reflect the number of CWD-positive deer identified.

County	Check Stations	Drop-off Stations/ Meat Processors	Agency Culling	Special Permits ¹	Roadkill/ Incidental	Suspect	Total
ADAMS		60					60
ALEXANDER		16		30			46
BOND		4					4
BOONE	55 (4)	23 (1)	73	6	2 (1)	1	160 (6)
BROWN		9					9
BUREAU		14			2		16
CALHOUN		28			1		29
CARROLL	4	128	41 (1)			1	174 (1)
CASS		13			1		14
CHAMPAIGN		2			1		3
CHRISTIAN		5					5
CLARK		41					41
CLAY		129					129
COLES		142			1		143
COOK		10		119	4		133
CRAWFORD		146					146
CUMBERLAND		42					42
DEKALB	58 (3)	23	9		1	1	92 (3)
DEWITT		4					4
DOUGLAS		11					11
DUPAGE		8		112		1	121
EDGAR		45			1		46
EDWARDS		1					1
EFFINGHAM		33					33
FAYETTE		17					17
FORD		1			1		2
FRANKLIN		38					38
FULTON		19					19
GREENE		37					37
GRUNDY	132 (5)	34 (1)	126 (4)		11		303 (10)
HAMILTON		9					9
HANCOCK		48					48
HARDIN		15					15
HENDERSON		10					10
HENRY		3			1	1	5
IROQUOIS		3					3
JACKSON		99		34			133
JASPER		31					31
JEFFERSON		89					89
JERSEY		33					33
JODAVIESS	831 (6)	302 (2)	100 (4)	90	2	6	1331 (12)
JOHNSON		117		5		1	123
KANE	8	108 (1)	104 (2)	11	4		235 (3)
KANKAKEE	100 (2)	10	27		3		140 (2)
KENDALL	35 (2)	18	50 (1)		3 (1)	2 (1)	108 (5)
KNOX		13			1		14
LAKE		37		188			225
LASALLE	370 (5)	48 (1)	116		8	2	544 (6)
LAWRENCE		6					6

Appendix A continued.

County	Check Stations	Drop-off Stations/ Meat Processors	Agency Culling	Special Permits ¹	Roadkill/ Incidental	Suspect	Total
LEE	1	36				1	38
LIVINGSTON	217 (1)	28	6		1	2	254 (1)
LOGAN		7					7
MACON		1			1		2
MACOUPIN		17					17
MADISON		31				1	32
MARION		28					28
MARSHALL		16					16
MASSAC		24					24
MCDONOUGH		50					50
MCHENRY	125 (8)	199 (4)	70 (2)	5	8	4	411 (14)
MCLEAN		19					19
MENARD		1					1
MERCER		2					2
MONROE		19					19
MONTGOMERY		6					6
MORGAN		3					3
MOULTRIE		36					36
OGLE	374 (8)	61 (2)	37	2	3	3	480 (10)
PEORIA		5			1		6
PERRY		176		25	1		202
PIATT		2			1		3
PIKE		124					124
POPE		44		5			49
PULASKI		11					11
PUTNAM	1	24			1		26
RANDOLPH		153	24	33			210
RICHLAND		15					15
ROCKISLAND		3			2	1	6
SALINE		27					27
SANGAMON		3			1		4
SCHUYLER		18					18
SCOTT		10					10
SHELBY		38			1		39
STARK		1					1
STCLAIR		4					4
STEPHENSON	318 (4)	78 (3)	177 (1)		6	1	580 (8)
TAZEWELL		11					11
UNION		70		53	1	1	126
VERMILION		4					4
WABASH		1					1
WARREN		5					5
WASHINGTON		2					2
WAYNE		69					69
WHITESIDE		125			1		126
WILL	105	54	5	90	2	1	257
WILLIAMSON	1	152		1	1	1	156
WINNEBAGO	149 (2)	38	51 (5)	42 (2)	9		289 (9)
WOODFORD		19					19
TOTALS	2884 (50)	3952 (15)	1016 (20)	851 (2)	89 (2)	32 (1)	8824 (90)

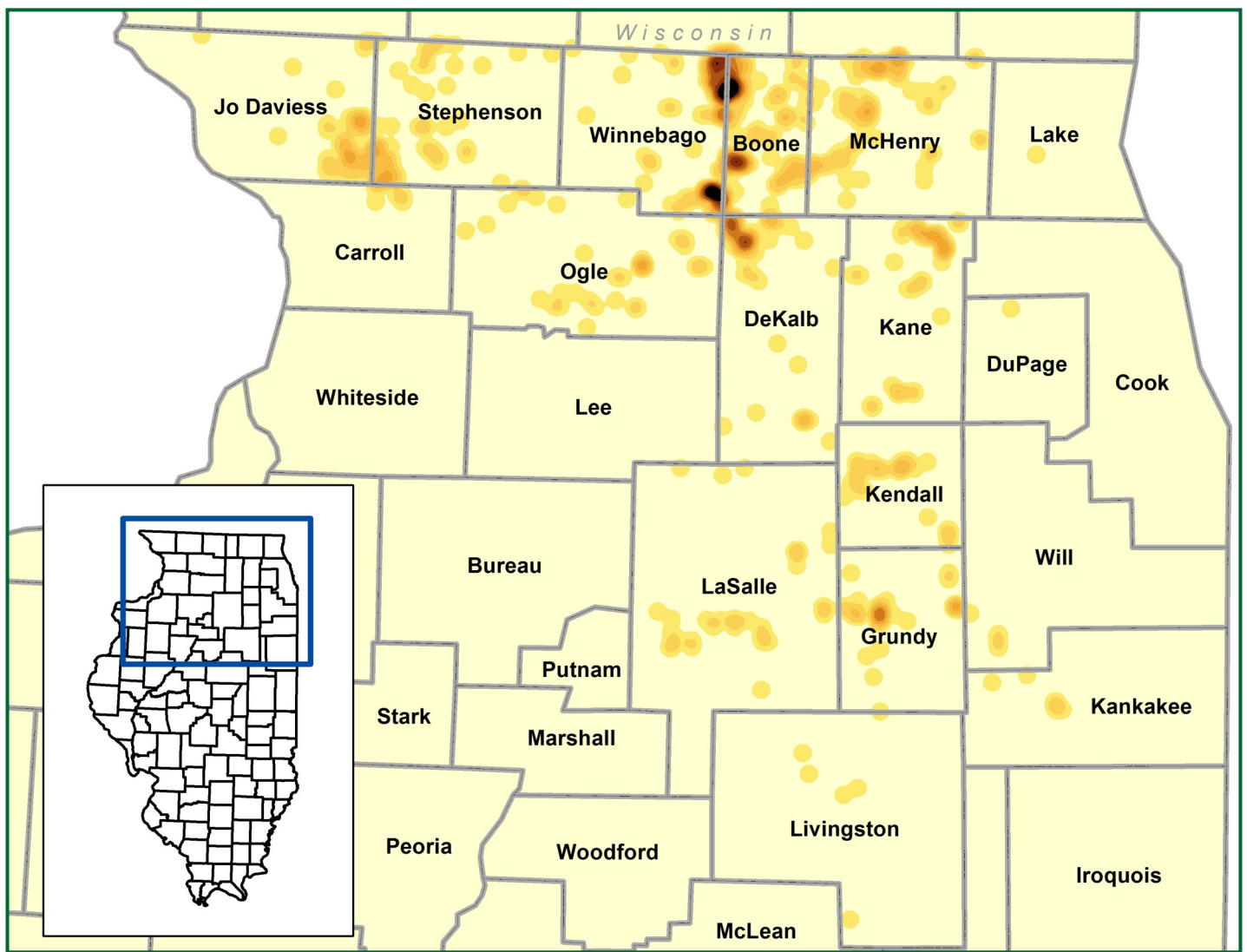
¹Special permits include urban Deer Population Control Permits, nuisance Deer Removal Permits, and Scientific Permits.

Appendix B. Summary of CWD-positive deer collected during FY2019.

Date Collected	County	Township, Range, Section	Sex	Age	Collection Method
10/01/18	KANE	340N 8E16	M	2	HUNTING
10/16/18	MCHENRY	346N 6E 9	M	3	HUNTING
10/16/18	STEPHENSON	428N 7E20	M	A	HUNTING
10/23/18	MCHENRY	344N 5E28	M	2	HUNTING
10/23/18	BOONE	344N 3E29	F	3	HUNTING
10/29/18	OGLE	423N 9E22	F	2	HUNTING
11/14/18	MCHENRY	346N 6E14	M	A	HUNTING
11/15/18	OGLE	423N10E30	M	2	HUNTING
11/16/18	MCHENRY	346N 6E19	M	3	HUNTING
11/16/18	BOONE	345N 3E17	M	1	HUNTING
11/16/18	LASALLE	336N 3E 3	M	2	HUNTING
11/16/18	KANKAKEE	331N10E 4	M	1	HUNTING
11/16/18	LASALLE	331N 4E18	M	1	HUNTING
11/16/18	LASALLE	333N 2E36	M	2	HUNTING
11/16/18	LASALLE	333N 3E26	M	2	HUNTING
11/16/18	LIVINGSTON	330N 5E31	F	1	HUNTING
11/16/18	MCHENRY	344N 9E 6	M	1	HUNTING
11/16/18	MCHENRY	344N 9E 6	F	2	HUNTING
11/16/18	OGLE	342N 2E30	M	2	HUNTING
11/16/18	OGLE	423N11E21	M	2	HUNTING
11/16/18	OGLE	423N11E25	F	1	HUNTING
11/16/18	OGLE	423N11E25	M	3	HUNTING
11/16/18	STEPHENSON	426N 7E11	M	3	HUNTING
11/16/18	STEPHENSON	427N 6E23	F	2	HUNTING
11/16/18	BOONE	345N 3E19	F	3	HUNTING
11/16/18	WINNEBAGO	343N 1E 7	M	5	HUNTING
11/16/18	OGLE	423N10E25	F	1	HUNTING
11/16/18	WINNEBAGO	343N 2E30	M	1	HUNTING
11/16/18	JODAVIESS	426N 4E25	M	3	HUNTING
11/17/18	BOONE	346N 4E11	M	3	HUNTING
11/17/18	DEKALB	337N 3E 6	M	1	HUNTING
11/17/18	GRUNDY	332N 6E13	F	2	HUNTING
11/17/18	GRUNDY	333N 6E21	M	3	HUNTING
11/17/18	JODAVIESS	426N 4E21	M	3	HUNTING
11/17/18	JODAVIESS	426N 4E12	M	2	HUNTING
11/17/18	MCHENRY	345N 6E29	M	2	HUNTING
11/17/18	MCHENRY	346N 7E18	M	3	HUNTING
11/17/18	OGLE	423N10E16	M	3	HUNTING
11/17/18	OGLE	423N11E 4	M	1	HUNTING
11/18/18	BOONE	343N 4E30	F	2	HUNTING
11/18/18	DEKALB	342N 4E 5	M	2	HUNTING
11/18/18	GRUNDY	333N 6E24	F	3	HUNTING
11/18/18	GRUNDY	333N 6E 9	M	3	HUNTING
11/18/18	STEPHENSON	426N 6E31	M	2	HUNTING
11/18/18	STEPHENSON	426N 7E18	M	3	HUNTING

Appendix B. Continued.

Date Collected	County	Township, Range, Section	Sex	Age	Collection Method
11/18/18	LASALLE	332N 4E 7	M	3	HUNTING
11/19/18	JODAVIESS	426N 4E16	M	3	HUNTING
11/21/18	GRUNDY	333N 6E25	M	3	HUNTING
11/29/18	MCHENRY	346N 8E 1	F	1	HUNTING
11/29/18	STEPHENSON	427N 6E23	M	3	HUNTING
11/29/18	KENDALL	336N 6E 2	M	4	ROADKILL
11/30/18	DEKALB	342N 3E 8	F	1	HUNTING
11/30/18	KENDALL	335N 8E34	M	2	HUNTING
11/30/18	GRUNDY	331N 6E36	M	2	HUNTING
11/30/18	JODAVIESS	426N 5E 9	M	2	HUNTING
11/30/18	JODAVIESS	426N 4E13	F	2	HUNTING
11/30/18	KANKAKEE	331N 9E10	M	3	HUNTING
11/30/18	LASALLE	332N 4E 6	M	2	HUNTING
11/30/18	MCHENRY	346N 7E33	F	3	HUNTING
11/30/18	MCHENRY	346N 8E 1	F	2	HUNTING
11/30/18	JODAVIESS	427N 5E17	M	3	HUNTING
12/1/18	KENDALL	336N 6E 4	F	3	HUNTING
12/1/18	OGLE	425N 9E 6	M	1	HUNTING
12/2/18	JODAVIESS	426N 5E16	F	4	HUNTING
12/18/18	MCHENRY	344N 5E29	F	1	HUNTING
1/10/19	KENDALL	335N 8E 7	F	2	SUSPECT
1/15/19	STEPHENSON	428N 6E 3	F	3	HUNTING
1/28/19	KENDALL	337N 6E35	M	2	SHARPSHOOTING
2/11/19	GRUNDY	333N 6E20	F	2	SHARPSHOOTING
2/11/19	WINNEBAGO	343N 2E24	F	2	SHARPSHOOTING
2/12/19	BOONE	344N 3E29	M	5	ROADKILL
2/13/19	KANE	338N 7E 9	M	2	SHARPSHOOTING
2/13/19	JODAVIESS	426N 4E26	M	1	SHARPSHOOTING
2/13/19	WINNEBAGO	343N 2E14	M	1	SHARPSHOOTING
2/14/19	STEPHENSON	426N 6E 2	M	2	SHARPSHOOTING
2/14/19	WINNEBAGO	345N 2E24	M	3	SHARPSHOOTING
2/18/19	MCHENRY	346N 7E35	M	3	SHARPSHOOTING
2/27/19	WINNEBAGO	346N 2E14	F	F	SHARPSHOOTING
2/27/19	WINNEBAGO	346N 2E14	F	F	SHARPSHOOTING
2/28/19	KANE	342N 8E29	M	2	SHARPSHOOTING
2/28/19	MCHENRY	346N 6E15	F	F	SHARPSHOOTING
2/28/19	CARROLL	425N 5E15	M	2	SHARPSHOOTING
3/5/19	GRUNDY	333N 6E24	F	4	SHARPSHOOTING
3/5/19	GRUNDY	333N 6E24	F	2	SHARPSHOOTING
3/6/19	JODAVIESS	427N 5E20	M	3	SHARPSHOOTING
3/6/19	WINNEBAGO	345N 2E24	F	2	SHARPSHOOTING
3/7/19	WINNEBAGO	346N 2E14	M	3	SHARPSHOOTING
3/12/19	GRUNDY	333N 6E24	M	1	SHARPSHOOTING
3/13/19	JODAVIESS	426N 4E13	M	2	SHARPSHOOTING
3/20/19	JODAVIESS	427N 4E36	F	5	SHARPSHOOTING



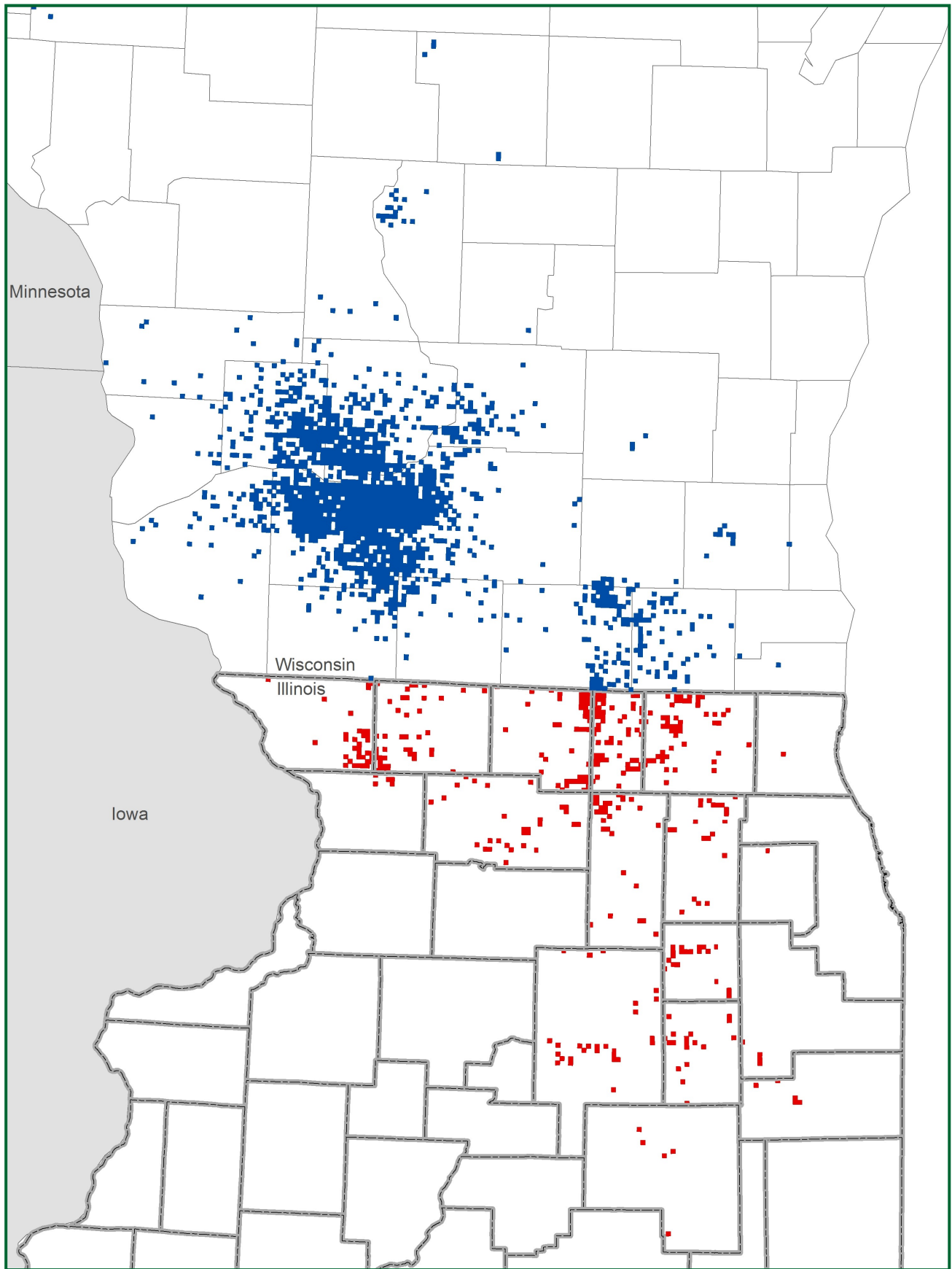
Appendix C. Cumulative distribution and relative intensity of chronic wasting disease in northern Illinois. Darker areas represent larger numbers of positive deer identified.

Public Outreach

Informational Materials: CWD related informational materials are provided on the CWD page of the IDNR website (<https://www.dnr.illinois.gov/Programs/CWD/Pages/default.aspx>), in the annual IDNR Hunting and Trapping Digest (<https://www.dnr.illinois.gov/hunting/Pages/HuntingTrappingDigests.aspx>), and in CWD specific pamphlets.

CWD Public Meetings: Six public meetings were held in September and October; 4 were in locations near Illinois CWD infection areas (Orangeville - Stephenson County, Oregon—Ogle County, Morris—Grundy County, Big Rock—Kane County) and 2 were near infection identified in Missouri (Chester and Sparta—Randolph County). Approximately 150 people attended.

CWD Presentation: A CWD related presentation was provided to the Harvard Sportsmen's Group—Harvard; approximately 50 people were in attendance.



Appendix D. Historical distribution of CWD in southern Wisconsin and northern Illinois as of June 30, 2019. Squares represent sections in which CWD has been detected.