



Illinois Chronic Wasting Disease (CWD): 2020-2021 Surveillance and Management Report

(Project Period: July 1, 2020 - June 30, 2021)



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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, 2021: 141,074

Total positives through June 30, 2021: 1,165

Number of counties affected through 6/30/2021: 19 (Boone, Carroll, Cook, DeKalb, DuPage, Grundy, Jo Daviess, Kane, Kankakee, Kendall, Lake, LaSalle, Lee, Livingston, McHenry, Ogle, Stephenson, Will, Winnebago) (Figure 1).

General distribution through 6/30/2021: Total affected area (determined by a minimum convex polygon that includes all positives) is now 9,765 mi². Firearm deer season check stations were not operated in FY2020 due to Covid 19 safety restrictions resulting in a decrease in the number of hunter harvested deer samples collected in CWD counties. As a result, the number of positive deer collected this past year was lower (Table 1). However, overall prevalence was higher (Figure 7) with increases noted in 13 of 19 counties; 3 counties saw decreases in prevalence (Cook, Livingston and McHenry), 2 counties were the same (Ogle, DuPage, and 1 county was newly detected (Lee). Of counties where CWD has been detected for 5 years or more, 6 counties including Boone, Grundy, Jo Daviess, LaSalle, Stephenson, and Will had the highest prevalence on record (Figure 9). Prior to last year (2019), prevalence rates in CWD counties had remained low and increased only slightly (0.08% per year since 2003). However, the more dramatic increases in prevalence observed the past two years (1.6% in 2020 and 1.3% in 2021) (Figure 7) is a departure from that pattern and cause for concern.

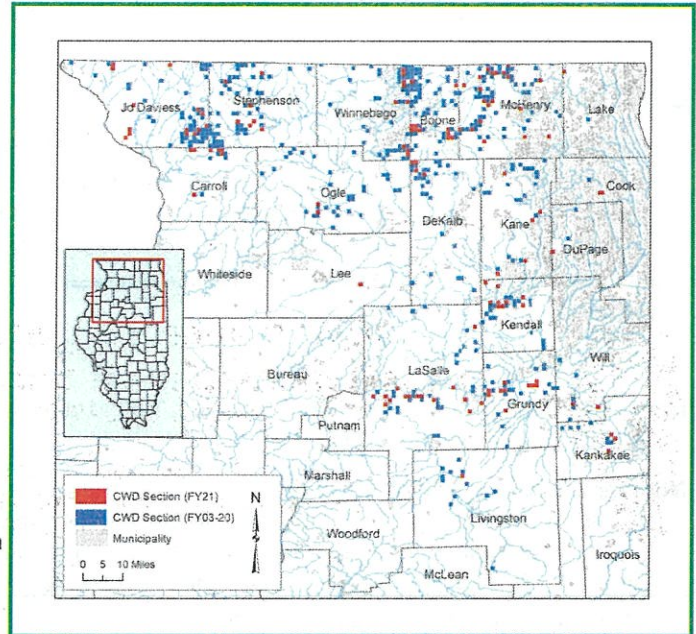


Figure 1. Distribution of all known CWD-infected deer identified in Illinois through June 30, 2021.

CWD Surveillance Protocols During FY2021 (July 1, 2020 - June 30, 2021)

Testing: The bulk of CWD testing was conducted by the Wisconsin Veterinary Diagnostic Laboratory, University of Wisconsin-Madison; polymerase chain reaction (PCR) was used for initial screening and immunohistochemistry (IHC) was used to confirm testing results of retropharyngeal lymph nodes (RPLN) tissue. A limited number of samples (vehicle-killed and suspect deer) were tested directly with IHC at the Veterinary Medical Diagnostic Laboratory, University of Missouri-Columbia. These samples were initially screened using tissue from RPLN, followed by confirmatory testing of recut RPLN tissue and obex.

Sampling of hunter-harvested deer: Two sources were used to provide tissue samples from adult deer harvested by hunters: (1) designated voluntary drop-off testing locations in northern Illinois and Randolph County; and (2) cooperating meat lockers/taxidermists statewide who collected heads/sample tissues for IDNR. Mandatory firearm deer check stations in high-risk counties in northern Illinois were not operated in 2020 due to Covid 19 safety concerns.

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 in northern Illinois from mid-January through March 24 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, culled deer from that portion of Randolph County which lies on the Missouri side of the Mississippi River navigation channel.

CWD Surveillance Results FY2021

Total number of CWD samples collected statewide: 8,377 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: 8,340

Number of CWD-positive deer identified: 163. Table 1 presents a comparison of the number of positive deer found each year by county.

Number of counties with positive deer: 19 — Boone (14), Carroll (9), Cook (2), DeKalb (5), DuPage (1), Grundy (15), Jo Daviess (18), Kane (6), Kankakee (3), Kendall (9), Lake (1), LaSalle (19), Lee (2), Livingston (1), McHenry (31), Ogle (2), Stephenson (8), Will (3), Winnebago (14). For distribution of positive sections, see Figure 5.

Number of new CWD counties: 1— Lee.

CWD prevalence information for the known CWD area (19 counties; adult deer from hunting sources only) —

Average CWD prevalence (all adult deer): 4.4% (73/1,653)

Average CWD prevalence (adult males): 5.4% (52/959)

Average CWD prevalence (adult females): 3.0% (21/694)

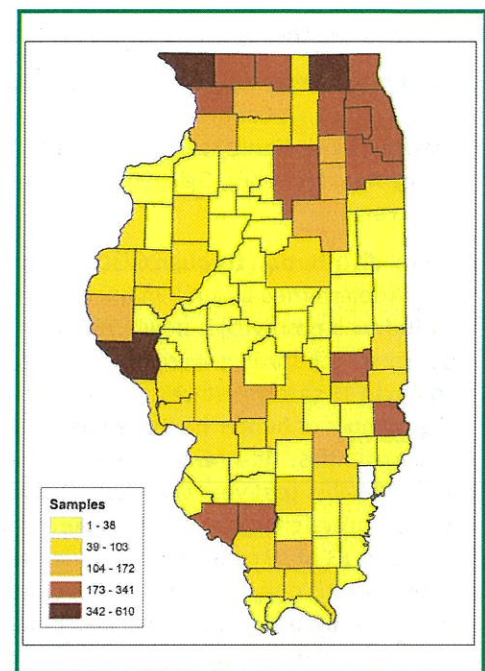


Figure 2. CWD sample distribution across Illinois during FY2021 (all sources).

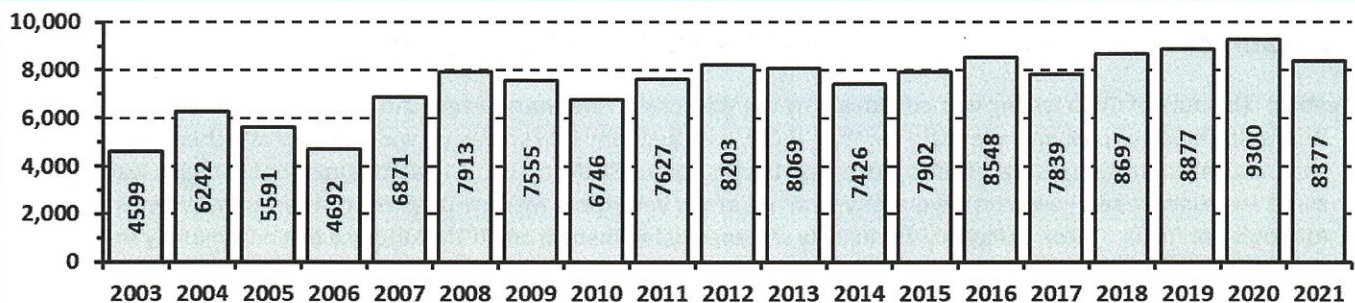


Figure 3. Number of CWD surveillance samples collected statewide each year during FY2003 through FY2021.

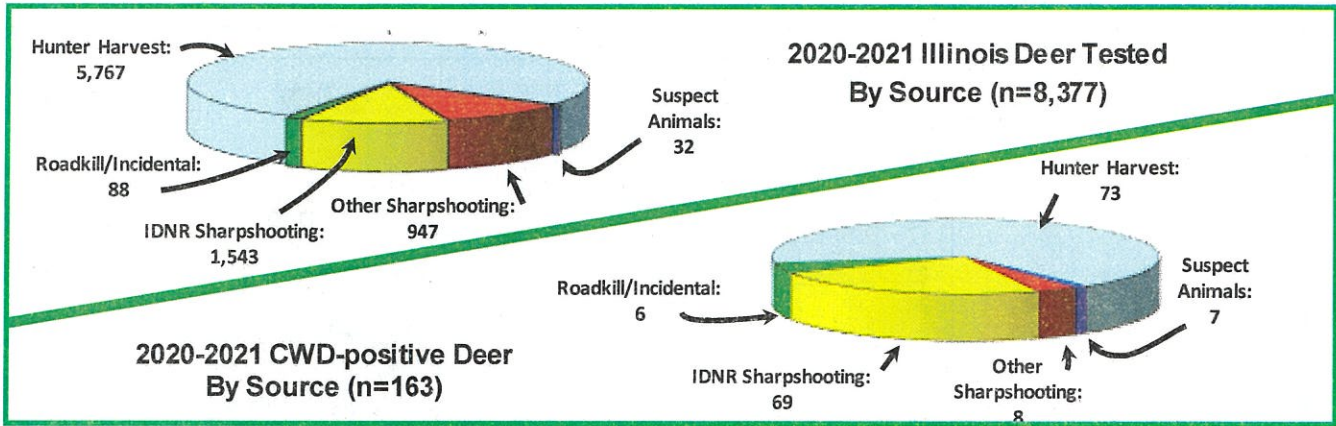


Figure 4. Number of CWD samples tested and number of positives identified by sampling source during FY2021. Note: Number tested includes all samples submitted for wild deer, regardless of whether a valid test result was obtained.

Table 1. Number of CWD positive deer by fiscal year (July 1 through June 30).

	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	Total
Boone	9	25	13	15	13	11	9	14	7	5	4	5	6	11	7	3	6	10	14	187
Carroll	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	1	4	9	18
Cook	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	2	3
DeKalb	—	4	1	5	6	8	4	3	7	5	7	8	8	3	3	1	3	1	5	82
DuPage	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	1	3
Grundy	—	—	—	—	—	—	—	—	2	5	3	3	5	3	7	2	10	17	15	72
Jo Daviess	—	—	—	—	—	—	—	—	1	—	1	4	7	9	10	8	12	25	18	95
Kane	—	—	—	—	—	—	—	—	4	7	4	5	7	8	5	2	3	2	6	53
Kankakee	—	—	—	—	—	—	—	—	—	—	—	—	1	1	2	—	2	3	3	12
Kendall	—	—	—	—	—	—	—	—	—	—	1	4	6	6	6	1	5	11	9	49
Lake	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	2
LaSalle	—	—	—	—	1	—	—	—	3	—	1	2	6	5	4	5	6	20	19	72
Lee	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
Livingston	—	—	—	—	—	—	—	—	—	—	—	—	2	—	2	—	1	7	1	13
McHenry	2	2	4	4	4	—	4	3	3	3	3	7	6	8	8	8	14	30	31	144
Ogle	—	—	—	2	—	—	1	—	4	2	3	1	2	6	2	3	10	7	2	45
Stephenson	—	—	—	—	—	—	1	—	1	1	2	3	4	6	10	11	12	8	26	93
Will	—	—	—	—	—	—	—	—	—	—	—	—	2	1	1	—	—	—	4	11
Winnebago	3	20	13	25	18	18	12	16	10	7	5	13	8	1	6	4	9	7	14	209
Total	14	51	31	51	42	38	30	37	42	36	36	59	71	72	75	51	90	176	163	1,165

CWD Management During FY2021

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 and Presentations: Due to the current vacancy of the Wildlife Disease Program Manager position, there were no CWD related public meetings or presentations provided this past year.

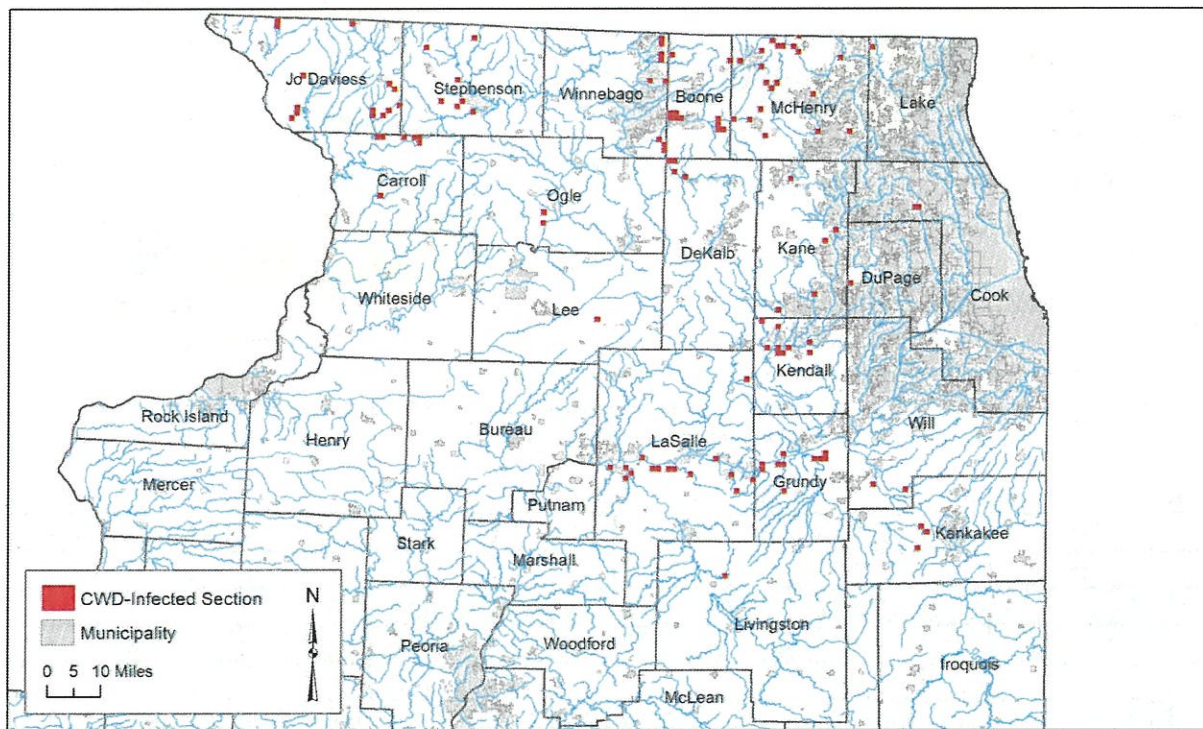


Figure 5. Distribution of CWD-positive deer identified during FY2021.

Hunting Seasons for Herd/Disease Control

Length: Archery deer season (Oct. 1-Jan. 17; closed during firearm season) consisted of 109 days in DuPage and Lake counties (no firearm hunting), and 102 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.

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: Due to Covid 19 health safety restrictions, deer check stations were not in operation in CWD counties during the regular firearm deer season and zero samples were collected from this source. There were 2,537 samples collected in 2020 from check stations, and an average of 2,779 samples during the previous 5 years. In total there were 5,735 hunter-killed deer samples collected in 2021, a 19% decrease from 2019, and 15% lower than the previous 5 year average (2016-2020).

Hunter harvest: Hunters harvested 17,758 deer from the 19 CWD counties during 2020-2021 (Table 2), compared to 15,939 deer during 2019-2020. The previous 5-year average harvest for the 19 counties was 16,872. In the 2001-2002 hunting season, the last season prior to the discovery of CWD in Illinois, hunter harvest totaled 17,642.

Table 2. Deer harvest in CWD counties during the 2020-2021 hunting seasons.

County	Youth	Muzzleloader	CWD	Firearm	Archery	All Seasons
Boone	2	7	33	138	182	362
Carroll	4	22	105	566	607	1,304
Cook	<i>Not open to firearm deer hunting</i>				191	191
DeKalb	2	6	27	115	215	365
DuPage	<i>Not open to firearm deer hunting</i>				42	42
Grundy	7	10	72	259	365	713
Jo Daviess	29	67	363	1,561	1,209	3,229
Kane	0	2	6	34	405	447
Kankakee	5	5	50	196	336	592
Kendall	0	3	25	78	215	321
Lake	<i>Not open to firearm deer hunting</i>			1 ¹	384	385
LaSalle	10	25	196	709	850	1,790
Lee	17	20	78	536	504	1,155
Livingston	10	15	53	387	247	712
McHenry	5	17	66	295	662	1,045
Ogle	14	22	182	689	759	1,666
Stephenson	12	21	142	618	552	1,345
Will	10	24	62	253	825	1,174
Winnebago	5	7	64	285	559	920
Totals	132	273	1,524	6,720	9,109	17,758

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

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.

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 initiated January 18 and concluded March 24, 2020.

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 negative CWD test results were processed and donated to the Feeding Illinois food pantry network.

Results of Helicopter Deer Counts

CWD management unit boundaries were established by buffering each CWD-positive section that occurred during the past five years (2016-2020) with a 2-section buffer (Figure 6). Total size of all CWD management areas was 3,575 square miles. Snow conditions during winter 2021 allowed deer counts to be conducted over 63% of deer habitat present (1,064 mi² of 1,702 mi²) within the CWD management areas. Highest deer densities were observed in Cook and Livingston counties, as well as Jo Daviess, Stephenson, and Carroll in northwest Illinois, and the Illinois River counties of Grundy and LaSalle (Table 3).

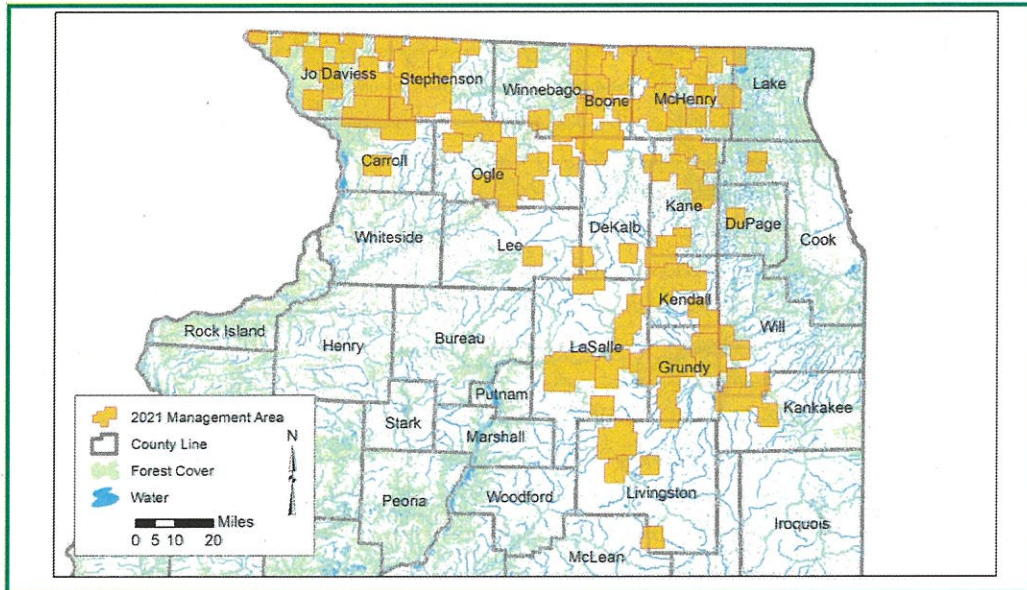


Figure 6. CWD management area boundaries for winter 2021.

Table 3. Summary of aerial deer counts within CWD management units per county during winter 2021

County	Management Unit Total Area (mi ²)	Amount of Deer Habitat in Management Unit (mi ²)	Total Deer Habitat Surveyed (mi ²)	Total Number of Deer Counted	Deer per mi ² of Deer Habitat Surveyed
Boone	231.70	89.97	47.24	1,014	21.47
Carroll	102.82	72.34	54.23	1,853	34.17
Cook	26.31	6.41	3.57	203	56.89
DeKalb	120.96	27.32	8.06	123	15.26
DuPage	24.02	12.33	9.60	151	15.73
Grundy	234.06	96.46	70.59	2,347	33.25
Jo Daviess	371.71	269.47	197.85	5,779	29.21
Kane	226.49	103.26	40.54	993	24.49
Kankakee	76.31	33.06	24.99	381	15.25
Kendall	170.80	64.81	47.72	759	15.91
Lake	24.64	12.51	10.40	217	20.86
LaSalle	355.07	156.00	86.40	1,530	17.71
Lee	42.63	12.13	5.66	151	26.66
Livingston	178.91	48.39	14.35	486	33.87
McHenry	428.90	220.93	142.34	3,685	25.89
Ogle	345.52	164.41	124.55	2,907	23.34
Stephenson	352.36	153.13	60.93	1,955	32.09
Will	119.36	69.16	56.58	1,384	24.46
Winnebago	142.76	90.05	58.46	1,193	20.41
Total	3,575.33	1,702.14	1,064.05	27,111	25.48

IDNR Sharpshooting Results

Management area: Sharpshooting was conducted within CWD management units created by buffering each CWD-positive section detected during the past five years (2016-2020) with a 2-section buffer (Figure 6). These units comprised 3,575 mi² of total area, including 1,702 mi² of deer habitat.

Number of counties in which deer were taken: 16

Number of townships in which deer were taken: 77

Number of sections in which deer were taken: 148

Number of deer taken: 1,543 (mean # deer taken/section = 10.4; range = 1-61)

Number of CWD-positive deer taken: 69

Carcass Disposition: 1,359 - donated to the Feeding Illinois food pantry network; 18 - donated to food banks in Randolph County; 90 - returned to landowner, 2 of which were CWD positive and cremated; 9 - deemed unsuitable for processing and landfilled; 67 - CWD positive and cremated.

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): Eight land-managing entities with DPCPs collected CWD samples as a condition of their permit. Sampling occurred in 8 CWD counties (Cook, DuPage, Jo Daviess, Kane, Lake, McHenry, Will and Winnebago). Permit recipients submitted tissue samples for CWD testing from 875 deer (872 usable samples) taken from at least 108 sections in those counties. Eight CWD-positive deer were found, one from DuPage County, two from Cook County, two from Will County, and three from Winnebago County.

Nuisance Deer Removal Permits (DRP): Eleven samples were submitted from deer taken in 2 CWD counties using DRPs, with no CWD-positive deer identified.

Table 4. Summary of IDNR sharpshooting effort and results by county during winter 2021.

County	# of Townships Where Removals Occurred	# of Sections Where Removals Occurred	Total Number of Deer Removed	Average Number of Deer Removed per Section	Number of Positive Deer Removed
Boone	4	7	56	8.0	7
Carroll	4	6	89	14.8	2
DeKalb	2	4	38	9.5	3
Grundy	4	8	106	13.4	9
Jo Daviess	10	22	228	10.4	7
Kane	9	19	173	9.1	4
Kankakee	4	7	49	7.0	1
Kendall	5	8	89	11.1	2
LaSalle	8	13	138	10.6	9
Livingston	3	3	12	4.0	0
McHenry	7	13	102	7.8	12
Ogle	2	8	57	7.1	0
Randolph	2	4	18	4.5	0
Stephenson	7	12	214	17.8	4
Will	4	7	68	9.7	0
Winnebago	2	7	106	15.1	9
All Counties	77	148	1543	10.4	69

Figure 7. Trends in CWD prevalence for hunter-harvested adult deer (\geq yearling) during 2003-2021 for the nineteen 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 19-year period.

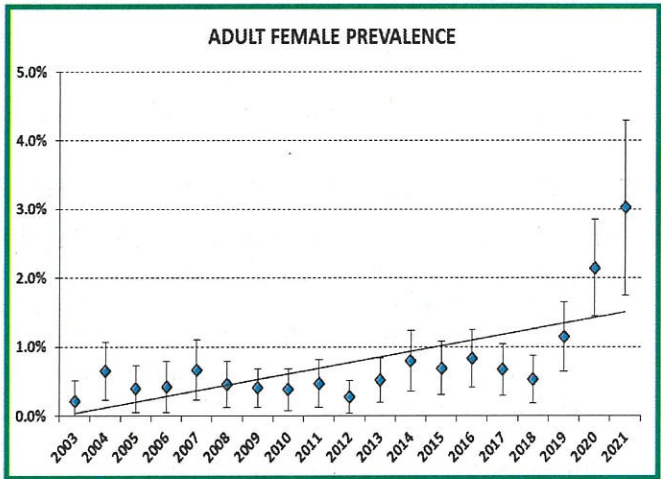
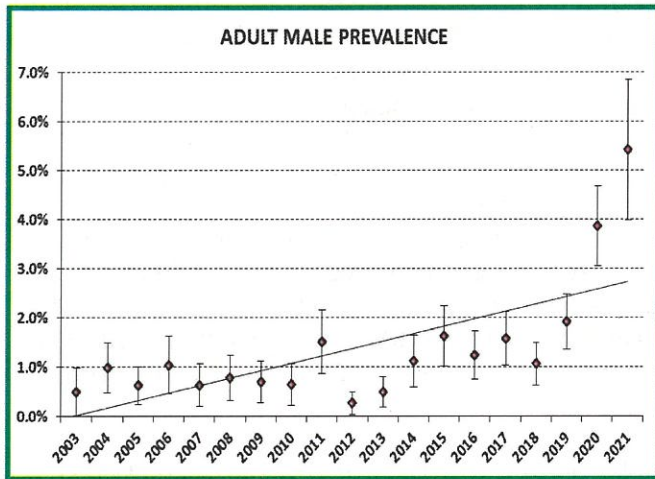
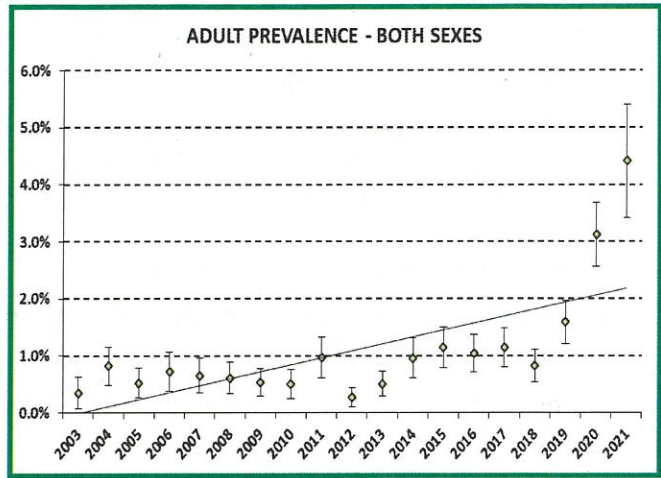


Table 5. County CWD prevalence estimates for adult deer during 1 July 2020 through 30 June 2021. Estimates are based only on samples collected from hunter-harvested deer.

County	# of Samples	# of Positives	Percent Positive	95% Confidence Interval (\pm)
Boone	43	6	13.95%	10.36%
Carroll	131	7	5.34%	3.85%
Cook	14	0	0.00%	0.00%
DeKalb	50	1	2.00%	3.88%
DuPage	11	0	0.00%	0.00%
Grundy	47	5	10.64%	8.81%
JoDaviess	289	11	3.81%	2.21%
Kane	148	2	1.35%	1.86%
Kankakee	15	1	6.67%	12.62%
Kendall	44	5	11.36%	9.38%
Lake	47	1	2.13%	4.13%
LaSalle	79	9	11.39%	7.01%
Lee	62	2	3.23%	4.40%
Livingston	107	1	0.93%	1.82%
McHenry	320	15	4.69%	2.32%
Ogle	94	2	2.13%	2.92%
Stephenson	32	3	9.38%	10.10%
Will	82	1	1.22%	2.38%
Winnebago	38	1	2.63%	5.09%
All CWD Counties	1,653	73	4.42%	0.99%

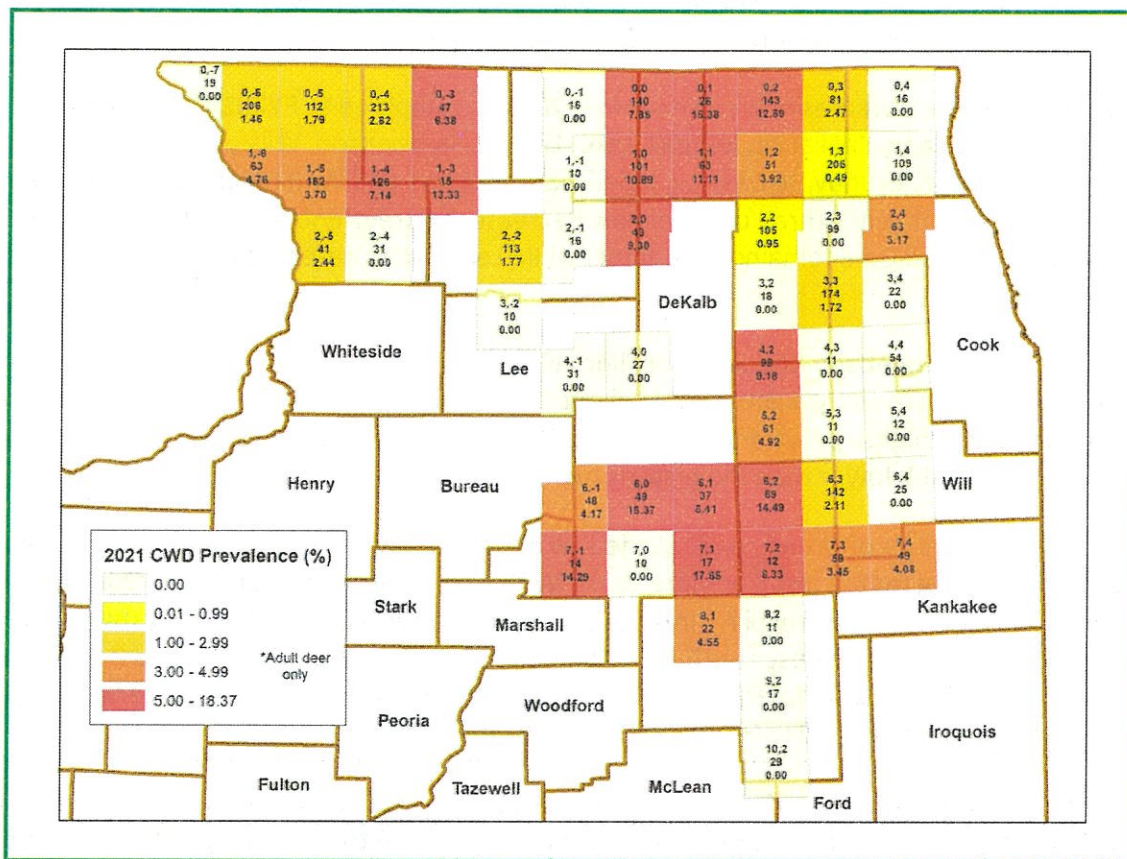


Figure 8. Estimated prevalence rates in adult deer during FY2021 per 4-township block. For each block, the upper number is the grid coordinate; the middle number is the sample size; and the lower number the estimated adult prevalence rate (%). Includes all sources except suspect deer.

Discussion: Illinois CWD in FY2021

One hundred sixty three (163) CWD-positive (CWDp) deer were identified from 8,340 usable white-tailed deer samples collected statewide. Across the 19-county CWD range, the disease prevalence rate for all adult deer taken by hunters was 4.42%, highest observed in the history of the program; forty two percent (42%) higher than in FY2020 and nearly three times (275%) higher than FY2019 (Figure 7). The prevalence rate for hunter-harvested adult males (5.4%) continues to be higher than that of adult females (3.0%) (Figure 7). Prior to 2019, prevalence rates had remained low and relatively steady, increasing only 0.08% per year. However, the amount of increase in prevalence during the last two years (1.6% in 2020 and 1.3% in 2021) (Figure 7) is a departure from that pattern and cause for concern. If this new trend continues it would indicate the beginning of a new phase of disease dynamics going forward.

Surveillance data indicate that prevalence rates were higher this year in most counties, though trends are not consistent throughout the CWD infection area. (Figure 8, Figure 9, Table 5):

- Counties along the Wisconsin border produced the highest number of hunter harvested CWDp deer including McHenry (15) in the northeast and Jo Daviess (11) in the northwest. These were followed by LaSalle (9), Carroll (7), Boone (6), Kendall (5) and Grundy (5) (Table 5):
- The highest infection levels were observed along the Illinois River including central LaSalle (block 6,0—18.4%), and northwest Grundy (block 6,2—14.5%). Other areas with prevalence above 10% include

north central McHenry (block 0,2 - 12.6%), southeast Winnebago/southwest Boone (1,1 - 11.1%), and southeast Boone/southwest McHenry (block 1,0 - 10.9%)(Figure 8).

- Thirteen counties saw increases in prevalence in FY2021 as compared to FY2020 (Boone, Carroll, Dekalb, Grundy, Jo Daviess, Kane, Kankakee, Kendall, Lake, LaSalle, Stephenson, Will, and Winnebago). Six of these counties (Boone, Grundy, Jo Daviess, LaSalle, Stephenson, and Will) recorded their historically highest prevalence this year. Three counties saw decreases in prevalence (Cook, Livingston, and McHenry). DuPage and Ogle remained the same, while Lee County detected CWD positive deer for the first time in 2021.
- 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 9.1% prevalence (26 CWDp, 284 samples) continuing a trend of higher prevalence for the last three years (FY2020 - 7.9%, FY2019 - 5.4%, and FY2018 - 3.2%), but still lower than the historic high level (FY2014 - 12.7%).
- The Illinois River counties of Grundy and LaSalle saw a continuation of a trend of increasing prevalence that has been ongoing for the last 6 or more years. With a combined prevalence in FY2021 of 8.9% (34 CWDp from 380 samples) (Appendix A), infection rates have doubled from FY2020 (4.0%, 22 CWDp, 553 samples), 4 times higher than observed in FY2019 (2.1%, 12 CWDp, 582 samples), and 8 times that of FY2016 (0.9%, 5 CWDp, 572 samples) (Figure 9). Areas of highest infection include blocks 6,0, 6,1, 7, -1, and 7,1 in LaSalle and blocks 6,2 in Grundy County (Figure 8).
- The northwestern Illinois area that includes Jo Daviess, Stephenson, and Carroll counties is an area of great concern due to its proximity to southwestern Wisconsin and the relatively high deer numbers present. Although prevalence was higher in Jo Daviess and Stephenson counties in FY2021 (4.3% combined prevalence) than in FY2020 (3.0% combined prevalence), the greatly reduced number of samples taken in FY2021 (321 samples FY2021, 1375 samples FY2020) makes direct comparison less certain (Table 5). Blocks 1,-4 and 1,-5 had a combined prevalence of 5.2% (15 CWDp, 288 samples) which was similar to levels observed in 2020 (5.9%, 25 CWDp, 421 samples), but still twice the prevalence observed in FY2019 (2.9%) and FY2018 (2.9%). Prevalence in the northern Jo Daviess and Stephenson County blocks 0,-4 and 0,-3 was lower in FY2021 (3.5%, 9 CWDp, 260 samples) than in FY2020 (5.1%), but higher than FY2019 (1.7%) and FY2018 (2.5%). Lastly, the infection expanded into the southwest corners of both Jo Daviess (block 1,-6) and Carroll (block 2,-5) counties (Figure 8).
- For the first time since 2018, prevalence estimates in McHenry County decreased to 4.7% in FY2021, down from 6.1% in FY2020 (Figure 9). Northern McHenry County (blocks 0,1 and 0,2) saw 13% prevalence, the same as in FY2020 (13%), but approximately double the levels observed in FY2019 (5.3%), and FY2018 (7%) (Figure 8).

The spread of CWD and the establishment of new disease foci into new areas of the state remains 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 FY2021, only 17% of CWD-positives came from those counties. Because the area of infection is increasing, resources available for CWD management are becoming less effective as they continue to be spread more thinly across the treatment area.

In addition to the expansion of disease from the initial outbreak area in northern Illinois, an outbreak detected in 2018 in southeastern Missouri, which is separated from Randolph County, Illinois by only the Mississippi River has created a new area of disease concern in southern Illinois. Beginning in 2019, IDNR has worked in cooperation with the Missouri Department of Conservation to conduct disease management on Kaskaskia Island, a portion of Randolph County that lays on the western side of the Mississippi River and

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).

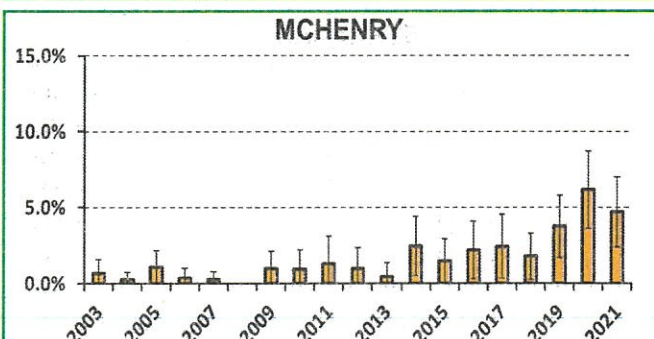
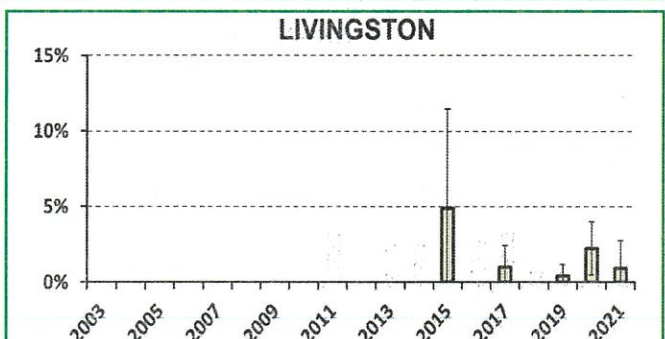
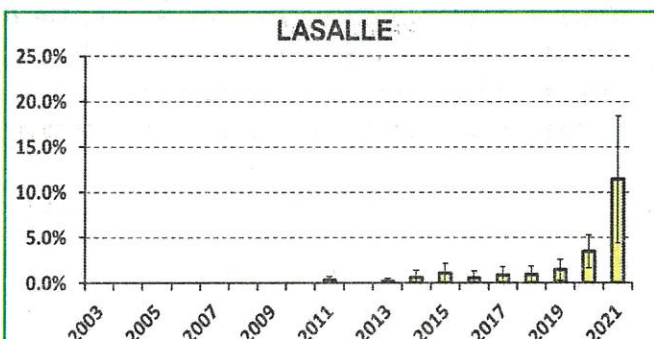
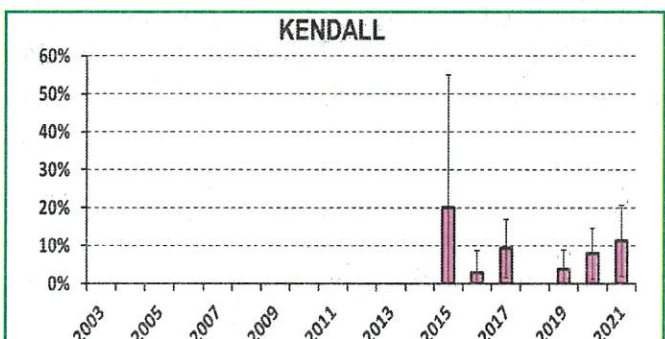
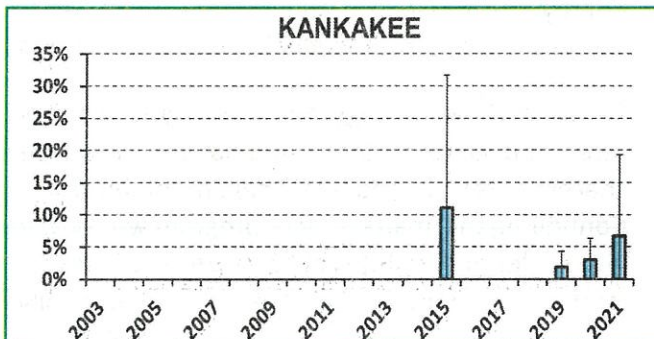
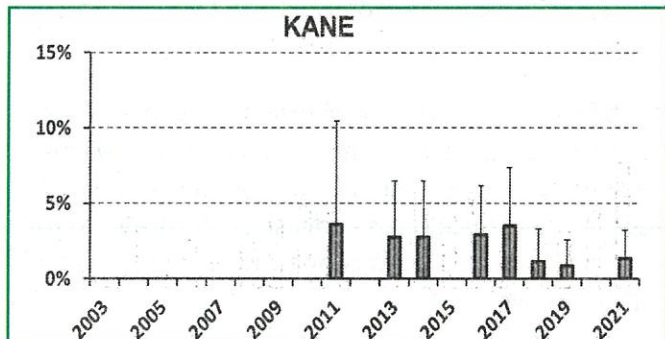
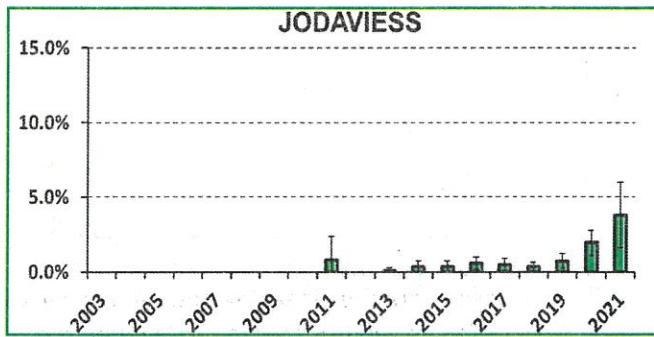
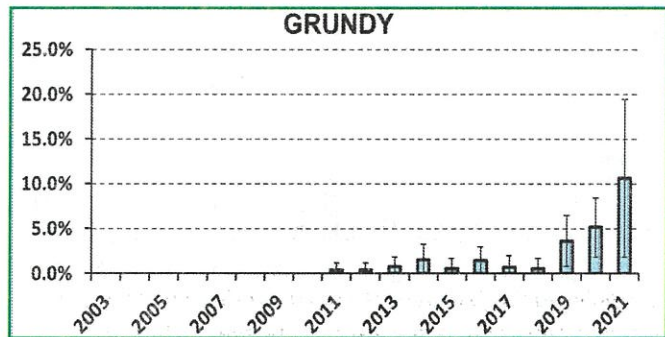
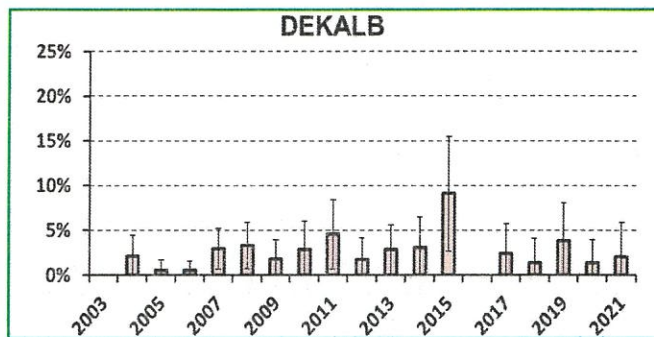
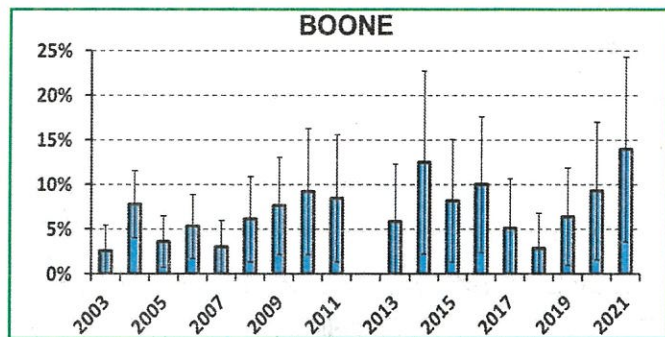
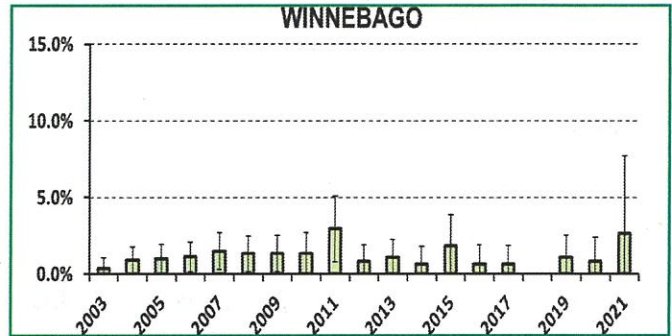
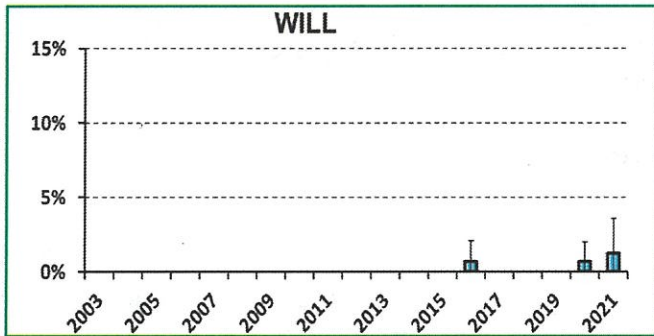
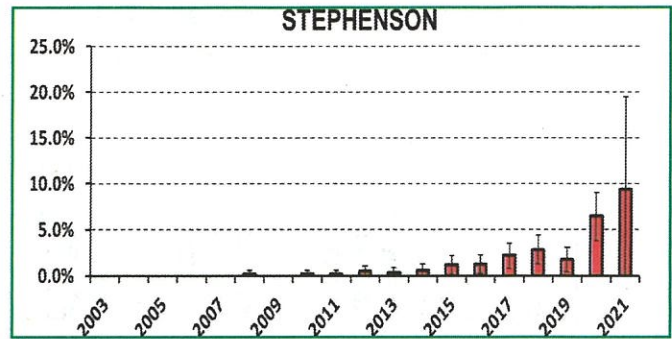
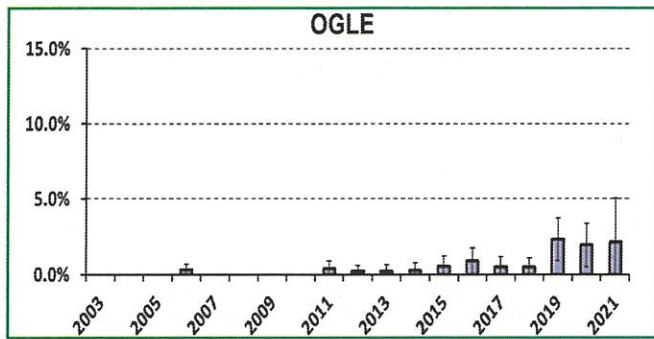


Figure 9. Continued.



nearby the Missouri infection area. This action will help minimize the potential for CWD to spread across the river, but the level of concern remains very high.

So far, disease management strategies in Illinois have been successful in minimizing CWD prevalence rates and keeping them at relatively low levels, but increasingly the number of deer removed by sharpshooters in many management units is insufficient to impact the disease at desired levels. Continuing this management program will slow increases in prevalence rates and also slow spread to the remainder of the state, but managers will need new tools and the continued cooperation of hunters and landowners 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 by county taken during 2020 -2021. 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		134					134
ALEXANDER		10					10
BOND		75				1	76
BOONE		44 (6)	56 (7)		1	1 (1)	102 (14)
BROWN		29					29
BUREAU		25					25
CALHOUN		37		8		1	46
CARROLL		131 (7)	89 (2)		4		224 (9)
CASS		17					17
CHAMPAIGN		4			1	1	6
CHRISTIAN		23					23
CLARK		61					61
CLAY		150					150
CLINTON		3					3
COLES		207			1		208
COOK		14		196 (2)	2		212 (2)
CRAWFORD		216					216
CUMBERLAND		69					69
DEKALB		50 (1)	38 (3)		1	1 (1)	90 (5)
DEWITT		13		1		1	15
DOUGLAS		22					22
DUPAGE		11		197 (1)			208 (1)
EDGAR		51			1	1	53
EFFINGHAM		37					37
FAYETTE		76					76
FORD		7			1		8
FRANKLIN		27					27
FULTON		40					40
GALLATIN		3					3
GREENE		46		5			51
GRUNDY		47 (5)	106 (9)		2	1 (1)	156 (15)
HAMILTON		13					13
HANCOCK		92					92
HARDIN		18					18
HENDERSON		43					43
HENRY		21			1		22
IROQUOIS		13					13
JACKSON		56		14	1		71
JASPER		34					34
JEFFERSON		82					82
JERSEY		47					47
JODAVIESS		289 (11)	228 (7)	80	10	3	610 (18)

Appendix A continued.

County	Check Stations	Drop-off Stations/ Meat Processors	Agency Culling	Special Permits ¹	Roadkill/ Incidental	Suspect	Total
JOHNSON		102		1			103
KANE		149 (2)	173 (4)	18			340 (6)
KANKAKEE		15 (1)	49 (1)	7	1	2 (1)	74 (3)
KENDALL		44 (5)	88 (2)		5 (2)		137 (9)
KNOX		43					43
LAKE		48 (1)		167	4	2	221 (1)
LASALLE		79 (9)	138 (9)		6 (1)	1	224 (19)
LAWRENCE		7					7
LEE		63 (2)					63 (2)
LIVINGSTON		107 (1)	12		4		123 (1)
LOGAN		12					12
MACON		1			1		2
MACOUPIN		64					64
MADISON		73					73
MARION		29					29
MARSHALL		19			1		20
MASON		2					2
MASSAC		17					17
MCDONOUGH		74					74
MCHENRY		322 (15)	102 (12)	37	8 (2)	3 (2)	472 (31)
MCLEAN		45		4	3		52
MENARD		11				1	12
MERCER		8					8
MONROE		6					6
MONTGOMERY		172					172
MORGAN		4					4
MOULTRIE		31					31
OGLE		97 (2)	57		3		157 (2)
PEORIA		10					10
PERRY		266					266
PIATT		3					3
PIKE		375					375
POPE		43					43
PULASKI		3					3
PUTNAM		29					29
RANDOLPH		159	18	19	1		197
RICHLAND		14					14
ROCK ISLAND		4					4
SALINE		24					24
SANGAMON		4					4
SCHUYLER		50					50
SCOTT		16					16
SHELBY		45					45

Appendix A continued.

County	Check Stations	Drop-off Stations/ Meat Processors	Agency Culling	Special Permits ¹	Roadkill/ Incidental	Suspect	Total
ST CLAIR		17					17
STARK		2					2
STEPHENSON		32 (3)	213 (4)		16 (1)	5	266 (8)
TAZEWELL		24					24
UNION		51		6	2		59
VERMILION		3					3
WABASH		1					1
WARREN		17					17
WASHINGTON		5			1	1	7
WAYNE		59					59
WHITE		1					1
WHITESIDE		141		3		1	145
WILL		82 (1)	68	121 (2)	5	1	277 (3)
WILLIAMSON		168				1	169
WINNEBAGO		38 (1)	106 (9)	60 (3)		2 (1)	206 (14)
WOODFORD		18			1	1	20
TOTALS		5,735 (73)	1,541 (69)	944 (8)	88 (6)	32 (7)	8,340 (163)

Appendix B. Summary of CWD-positive deer collected during FY21.

Date Collected	County	Township, Range, Section	Sex	Age	Collection Method
10/2/21	KENDALL	337N 6E33	F	1	HUNTING
10/3/21	KENDALL	337N 6E 5	F	1	HUNTING
10/3/21	CARROLL	425N 5E 3	M	2	HUNTING
10/4/21	MCHENRY	343N 8E 2	F	1	HUNTING
10/5/21	JODAVIESS	426N 4E13	M	1	HUNTING
10/5/21	MCHENRY	346N 6E13	F	1	ROADKILL
10/5/21	KANE	340N 8E20	M	2	HUNTING
10/5/21	MCHENRY	344N 5E30	M	2	HUNTING
10/5/21	CARROLL	425N 6E 7	F	3	HUNTING
10/6/21	JODAVIESS	429N 3E24	M	3	HUNTING
10/6/21	MCHENRY	344N 5E27	F	2	HUNTING
10/8/21	JODAVIESS	426N 4E10	F	2	HUNTING
10/9/21	LASALLE	332N 5E 1	M	5	HUNTING
10/11/21	JODAVIESS	426N 4E15	M	1	HUNTING
10/14/21	JODAVIESS	427N 2E 9	M	3	HUNTING
10/16/21	MCHENRY	345N 6E21	M	4	HUNTING
10/18/21	GRUNDY	333N 8E18	M	3	HUNTING
10/19/21	OGLE	423N10E19	M	1	HUNTING
10/21/21	CARROLL	425N 6E 6	F	4	HUNTING
10/21/21	CARROLL	425N 5E 1	F	2	HUNTING
10/24/21	MCHENRY	344N 5E27	M	3	HUNTING
10/24/21	STEPHENSON	427N 7E 8	M	3	HUNTING
10/27/21	MCHENRY	346N 6E 8	M	2	HUNTING
10/27/21	MCHENRY	343N 7E 2	M	2	HUNTING
10/28/21	BOONE	344N 3E20	M	2	HUNTING
10/29/21	GRUNDY	333N 6E29	M	2	HUNTING
10/31/21	MCHENRY	343N 6E 7	F	1	HUNTING
11/2/21	GRUNDY	333N 7E13	M	3	HUNTING
11/2/21	CARROLL	425N 6E 7	F	3	HUNTING
11/5/21	CARROLL	424N 4E36	M	1	HUNTING
11/9/21	KENDALL	336N 6E 2	M	1	ROADKILL
11/10/21	KENDALL	336N 7E 2	M	3	HUNTING
11/11/21	JODAVIESS	427N 5E18	M	3	HUNTING
11/11/21	JODAVIESS	429N 3E24	M	4	HUNTING
11/12/21	JODAVIESS	426N 5E 4	M	2	HUNTING
11/13/21	GRUNDY	333N 6E12	M	3	HUNTING
11/16/21	MCHENRY	345N 5E 1	M	3	HUNTING
11/16/21	LAKE	346N 9E16	M	1	HUNTING
11/18/21	CARROLL	425N 6E 6	M	3	HUNTING
11/20/21	LASALLE	333N 4E14	M	2	HUNTING
11/20/21	STEPHENSON	426N 7E11	M	4	HUNTING
11/20/21	GRUNDY	333N 8E17	M	4	HUNTING
11/21/21	MCHENRY	346N 8E28	M	2	HUNTING

Appendix B continued.

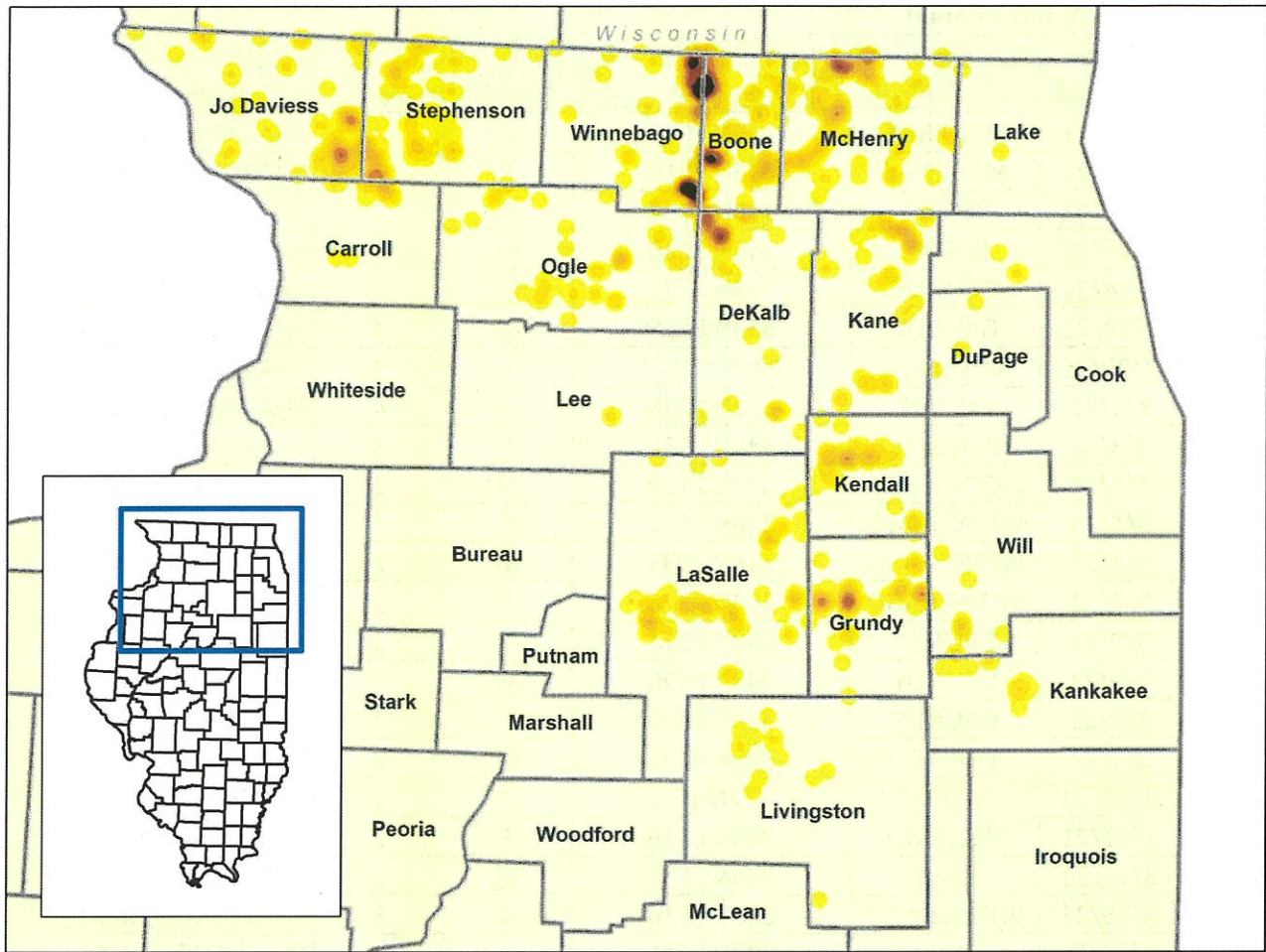
Date Collected	County	Township, Range, Section	Sex	Age	Collection Method
11/21/21	STEPHENSON	429N 7E35	M	2	HUNTING
11/21/21	KENDALL	337N 6E11	F	2	HUNTING
11/21/21	LASALLE	333N 3E29	M	3	HUNTING
11/22/21	BOONE	344N 3E28	M	1	HUNTING
11/22/21	MCHENRY	345N 6E19	M	2	HUNTING
11/22/21	JODAVIESS	426N 2E 8	M	4	HUNTING
11/22/21	BOONE	344N 4E34	M	1	HUNTING
11/23/21	LEE	420N11E24	F	5	HUNTING
11/23/21	WINNEBAGO	343N 2E25	M	2	HUNTING
11/23/21	LASALLE	336N 5E35	M	3	HUNTING
11/24/21	WILL	332N10E14	M	3	HUNTING
12/4/21	LASALLE	333N 2E25	M	3	HUNTING
12/4/21	MCHENRY	344N 5E13	F	2	HUNTING
12/4/21	MCHENRY	346N 5E24	M	2	HUNTING
12/4/21	DEKALB	342N 3E17	F	5	SUSPECT
12/5/21	MCHENRY	345N 7E34	F	2	HUNTING
12/6/21	DEKALB	342N 3E 6	F	2	HUNTING
12/8/21	LIVINGSTON	329N 5E 6	F	2	HUNTING
12/10/21	LASALLE	333N 3E36	M	4	HUNTING
12/10/21	LASALLE	333N 3E36	M	3	HUNTING
12/14/21	MCHENRY	346N 5E32	M	1	ROADKILL
12/14/21	BOONE	344N 3E28	F	2	HUNTING
12/14/21	LASALLE	333N 5E32	M	2	HUNTING
12/21/21	KANE	338N 6E26	M	2	HUNTING
12/21/21	MCHENRY	345N 6E29	F	2	HUNTING
12/21/21	BOONE	344N 3E19	M	2	HUNTING
12/22/21	KANKAKEE	331N11E20	M	3	HUNTING
1/4/21	JODAVIESS	426N 2E17	M	2	HUNTING
1/8/21	WINNEBAGO	346N 2E11	M	2	SUSPECT
1/10/21	JODAVIESS	429N 1E27	M	2	HUNTING
1/10/21	LEE	420N11E24	F	2	HUNTING
1/11/21	OGLE	423N10E 7	F	2	HUNTING
1/12/21	KENDALL	337N 7E26	M	5	HUNTING
1/13/21	STEPHENSON	427N 7E33	F	2	ROADKILL
1/17/21	LASALLE	333N 3E28	M	5	HUNTING
1/17/21	BOONE	343N 4E 2	F	3	HUNTING
1/18/21	WINNEBAGO	346N 2E35	F	1	SHARPSHOOTING
1/19/21	WINNEBAGO	343N 2E14	M	3	SHARPSHOOTING
1/19/21	WINNEBAGO	343N 2E24	M	3	SHARPSHOOTING
1/19/21	KANE	342N 6E24	M	1	SHARPSHOOTING
1/19/21	BOONE	344N 3E30	F	3	SHARPSHOOTING
1/20/21	JODAVIESS	426N 5E 7	M	F	SHARPSHOOTING
1/20/21	JODAVIESS	426N 5E 7	F	2	SHARPSHOOTING

Appendix B continued.

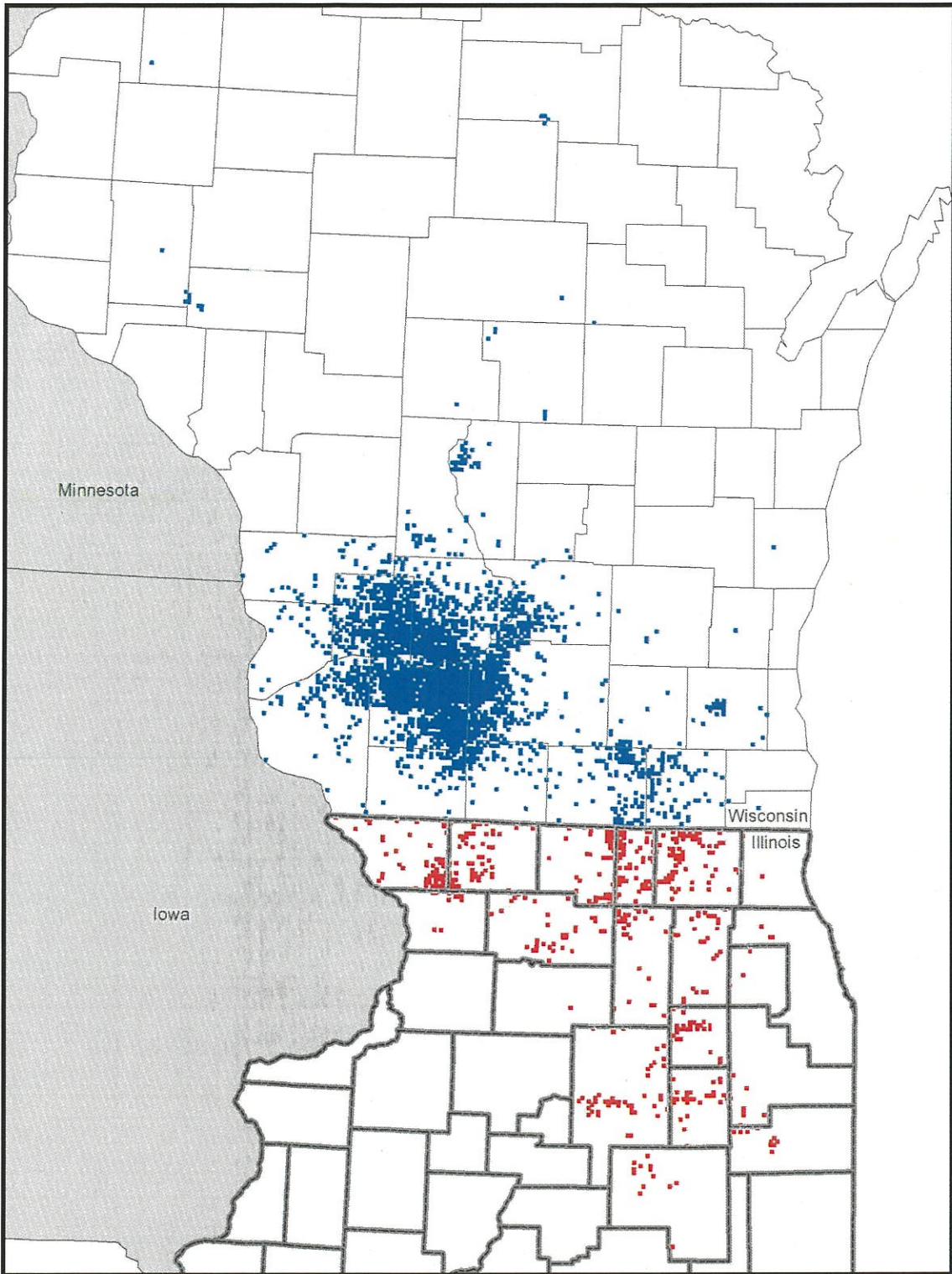
Date Collected	County	Township, Range, Section	Sex	Age	Collection Method
1/20/21	WINNEBAGO	345N 2E21	F	2	SHARPSHOOTING
1/20/21	WINNEBAGO	345N 2E24	M	1	SHARPSHOOTING
1/20/21	LASALLE	333N 1E25	M	2	SHARPSHOOTING
1/25/21	WILL	332N 9E11	F	A	SHARPSHOOTING
1/25/21	JODAVIESS	429N 1E22	M	2	SHARPSHOOTING
1/25/21	WINNEBAGO	346N 2E14	M	1	SHARPSHOOTING
1/26/21	LASALLE	333N 2E16	F	2	ROADKILL
1/26/21	MCHENRY	346N 6E 8	M	1	SHARPSHOOTING
1/27/21	BOONE	344N 3E28	F	3	SHARPSHOOTING
1/27/21	BOONE	344N 3E20	M	2	SHARPSHOOTING
2/1/21	WINNEBAGO	343N 2E24	M	1	SHARPSHOOTING
2/1/21	MCHENRY	346N 6E 8	M	2	SHARPSHOOTING
2/1/21	GRUNDY	333N 8E 8	M	3	SHARPSHOOTING
2/1/21	MCHENRY	343N 7E 2	M	2	SUSPECT
2/3/21	STEPHENSON	427N 6E35	M	2	SHARPSHOOTING
2/4/21	BOONE	344N 4E27	M	5	SHARPSHOOTING
2/8/21	JODAVIESS	427N 5E20	M	2	SHARPSHOOTING
2/8/21	LASALLE	332N 5E16	M	1	SHARPSHOOTING
2/9/21	MCHENRY	346N 6E16	F	2	SHARPSHOOTING
2/9/21	MCHENRY	346N 6E16	M	3	SHARPSHOOTING
2/9/21	CARROLL	425N 4E 1	M	3	SHARPSHOOTING
2/9/21	KENDALL	337N 6E35	M	2	SHARPSHOOTING
2/9/21	GRUNDY	333N 6E20	M	2	SHARPSHOOTING
2/10/21	JODAVIESS	426N 4E13	M	F	SHARPSHOOTING
2/10/21	LASALLE	332N 1E 1	F	3	SHARPSHOOTING
2/10/21	LASALLE	333N 2E26	M	2	SHARPSHOOTING
2/11/21	BOONE	346N 4E36	F	2	SHARPSHOOTING
2/11/21	GRUNDY	333N 6E12	M	2	SHARPSHOOTING
2/17/21	MCHENRY	346N 6E16	F	F	SHARPSHOOTING
2/17/21	MCHENRY	346N 6E16	F	2	SHARPSHOOTING
2/17/21	MCHENRY	346N 6E16	F	2	SHARPSHOOTING
2/17/21	LASALLE	333N 2E31	M	2	SHARPSHOOTING
2/17/21	LASALLE	333N 1E28	F	2	SHARPSHOOTING
2/17/21	DEKALB	342N 3E22	M	1	SHARPSHOOTING
2/18/21	STEPHENSON	428N 6E 8	M	2	SHARPSHOOTING
2/18/21	STEPHENSON	428N 6E 8	F	3	SHARPSHOOTING
2/18/21	JODAVIESS	427N 5E18	M	2	SHARPSHOOTING
2/18/21	COOK	341N11E20	M	2	SHARPSHOOTING
2/18/21	COOK	341N11E19	F	2	SHARPSHOOTING
2/22/21	DEKALB	342N 3E22	M	2	SHARPSHOOTING
2/22/21	GRUNDY	333N 6E23	F	2	SUSPECT
2/23/21	DEKALB	342N 3E 5	F	2	SHARPSHOOTING
2/24/21	KANE	340N 8E10	M	1	SHARPSHOOTING

Appendix B continued.

Date Collected	County	Township, Range, Section	Sex	Age	Collection Method
2/24/21	MCHENRY	346N 6E15	F	2	SHARPSHOOTING
2/24/21	MCHENRY	346N 6E16	F	2	SHARPSHOOTING
2/24/21	BOONE	346N 3E30	F	4	SHARPSHOOTING
2/24/21	BOONE	346N 3E30	M	F	SHARPSHOOTING
2/24/21	GRUNDY	333N 6E20	M	2	SHARPSHOOTING
2/24/21	GRUNDY	333N 6E29	M	4	SHARPSHOOTING
2/25/21	KANKAKEE	230N14W 7	F	3	SHARPSHOOTING
3/1/21	LASALLE	332N 5E16	M	4	SHARPSHOOTING
3/3/21	KENDALL	337N 7E31	F	5	ROADKILL
3/4/21	JODAVIESS	426N 2E19	M	3	SHARPSHOOTING
3/4/21	WINNEBAGO	346N 2E11	F	2	SHARPSHOOTING
3/8/21	WINNEBAGO	346N 2E35	M	2	SHARPSHOOTING
3/9/21	WINNEBAGO	346N 2E26	F	2	SHARPSHOOTING
3/9/21	GRUNDY	333N 6E24	M	1	SHARPSHOOTING
3/9/21	GRUNDY	333N 6E20	M	F	SHARPSHOOTING
3/9/21	GRUNDY	333N 6E20	F	2	SHARPSHOOTING
3/9/21	DUPAGE	339N 9E31	M	2	SHARPSHOOTING
3/10/21	LASALLE	332N 1E 1	M	1	SHARPSHOOTING
3/11/21	MCHENRY	346N 6E16	F	2	SHARPSHOOTING
3/11/21	KANE	338N 7E12	M	2	SHARPSHOOTING
3/15/21	WINNEBAGO	346N 2E14	M	3	SHARPSHOOTING
3/16/21	WILL	332N 9E11	F	1	SHARPSHOOTING
3/16/21	KENDALL	336N 6E 1	M	3	SHARPSHOOTING
3/17/21	CARROLL	425N 4E 2	M	1	SHARPSHOOTING
3/17/21	LASALLE	333N 2E26	F	F	SHARPSHOOTING
3/18/21	MCHENRY	346N 7E 6	F	2	SHARPSHOOTING
3/18/21	KANE	338N 7E12	M	1	SHARPSHOOTING
3/22/21	MCHENRY	346N 6E16	M	F	SHARPSHOOTING
3/22/21	WINNEBAGO	346N 2E26	F	F	SHARPSHOOTING
3/23/21	STEPHENSON	426N 7E 5	M	F	SHARPSHOOTING
3/23/21	GRUNDY	332N 6E13	M	3	SHARPSHOOTING
4/2/21	KANKAKEE	331N11E28	F	2	SUSPECT
5/10/21	BOONE	343N 4E 3	F	5	SUSPECT
5/22/21	MCHENRY	346N 7E19	F	1	SUSPECT



Appendix C. Cumulative distribution and relative intensity of chronic wasting disease in northern Illinois since 2003. Darker areas represent larger numbers of positive deer identified.



Appendix D. Historical distribution of CWD in southern Wisconsin and northern Illinois as of June 30, 2021. Squares represent sections in which CWD has been detected.

