

**Illinois Chronic Wasting Disease:
2011-2012 Surveillance/Management Summary**



**Paul Shelton and Patrick McDonald
Forest Wildlife Program
Division of Wildlife Resources
Illinois Department of Natural Resources**

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Background:

Chronic wasting disease (CWD) was first identified in wild white-tailed deer (*Odocoileus virginianus*) in Illinois during Fall 2002. By June 30, 2011, Illinois Department of Natural Resources (IDNR) personnel had sampled more than 58,000 wild deer, and identified 336 individual deer infected with CWD. Distribution of the disease is spatially clustered, with most cases occurring in a central core area where cases were first discovered several years ago, and becoming more diffuse at greater distances from the core (Fig. 1). CWD positive deer had been identified from 10 northern Illinois counties, but 94% of cases (251) were identified from the original 4 CWD counties (Winnebago, Boone, McHenry, and DeKalb). Furthermore, 75% of cases came from Boone or Winnebago counties, and 65% of all Illinois CWD cases occurred within 3 miles of the Winnebago-Boone county line in those 2 counties.

CWD Surveillance Activities During FY2011-2012:

All CWD testing was conducted at Illinois Department of Agriculture's (IDOA) Animal Disease Laboratory located at Centralia, Illinois, which is certified for CWD testing by USDA. Immunohistochemistry (IHC) was the testing method used. Sampling was accomplished primarily by collecting tissues from (1) hunter-harvested deer; (2) suspect animals reported to IDNR staff; (3) road-killed deer in known CWD-infected areas; (4) deer taken under authority of urban Deer Population Control Permits, nuisance Deer Removal Permits, and Scientific Permits; and (5) deer taken by IDNR sharpshooters in CWD areas.

Deer Hunting Season Surveillance. Tissue samples (retropharyngeal lymph nodes and obex) for CWD testing were collected from hunter-harvested deer at three sources: (1) mandatory check stations in high-risk counties in northern Illinois during the firearm seasons; (2) designated self-service drop-off locations in northern Illinois where hunters during any season could leave a deer head to be tested; and (3) cooperating meat lockers/taxidermists at which cooperators were paid a fee to collect heads or sample tissues for IDNR. Mandatory check stations were operated during firearm deer season (November 18-20 and December 1-4, 2011) for ten counties considered high-risk for CWD (JoDaviess, Stephenson, Winnebago, Boone, McHenry, Ogle, DeKalb, Kane [west of Highway 47], LaSalle and Grundy). Tissue samples were taken by IDNR staff from all adult deer that hunters would allow to be tested. The sampling objective was 500 samples per county, which provides 99% confidence of detecting a 1% disease prevalence rate. Harvest location was recorded to the nearest square mile according to the government land survey (Township, Range, and Section). A total of 3,400 usable samples were collected at check stations, with 10 CWD-positive individuals identified from six counties (DeKalb [2], Grundy [1], McHenry [2], Ogle [1], Stephenson [2] and Winnebago [2]). Although CWD testing of hunter-harvested deer is voluntary, participation has remained high with the exception of a few locales. If hunter cooperation declines so that surveillance is ineffective, it may become necessary to implement mandatory surveillance in high-risk areas in the future. Appendix A provides a tabulation of the number of usable samples taken in each county via all collection methods, and Figure 2 depicts the distribution of sampling intensity throughout Illinois from all sources.

Fig. 1. Distribution of CWD-infected deer identified in Illinois prior to July 1, 2011.

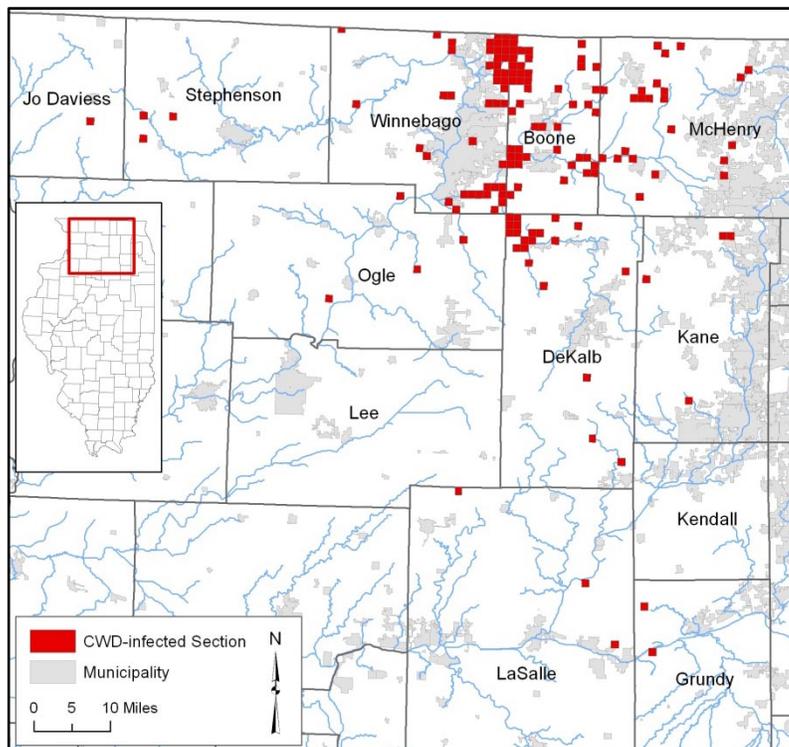
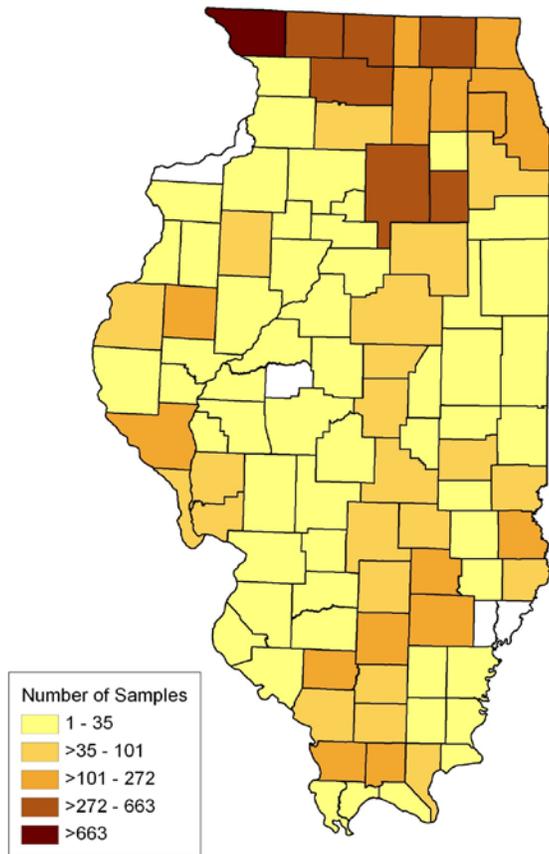


Fig. 2. Distribution of CWD sampling effort in Illinois counties during FY2011-2012 (all sources). Darker counties were sampled more intensively.



In order to collect additional samples from the CWD area during other hunting seasons, and to collect samples from hunter-harvested deer throughout the state, we used a system of self-serve “drop-off” stations and also contracted with commercial meat lockers and taxidermists to collect samples for us. Drop-off stations were available in select northern Illinois counties to allow deer hunters during any season to donate samples for CWD surveillance. To participate, hunters filled out a card to identify themselves and the location from which they harvested the deer, and left the deer head and the completed card in a plastic bag in the provided refrigerator. IDNR staff checked stations at least twice a week, removed tissue samples from heads, and forwarded samples to the Centralia Animal Disease Laboratory for testing. For statewide CWD surveillance efforts, IDNR contracted with cooperating meat lockers/taxidermists throughout the state to collect samples from hunter-harvested deer being processed at their facility. We assumed that each cooperator took in deer from an approximate 25 mile surrounding radius, and attempted to distribute cooperators accordingly. We were unable to find cooperators in some parts of the state, particularly in areas where processors rely exclusively on commercial renderers for offal disposal. Renderers will not accept offal from deer being tested for CWD, because of the threat of an FDA recall in the event that an animal tests positive. Using both these collection methods, we collected usable samples from 3,326 deer in 98 counties ($\bar{x}=34$, range = 1-199), with no further CWD-positive deer identified.

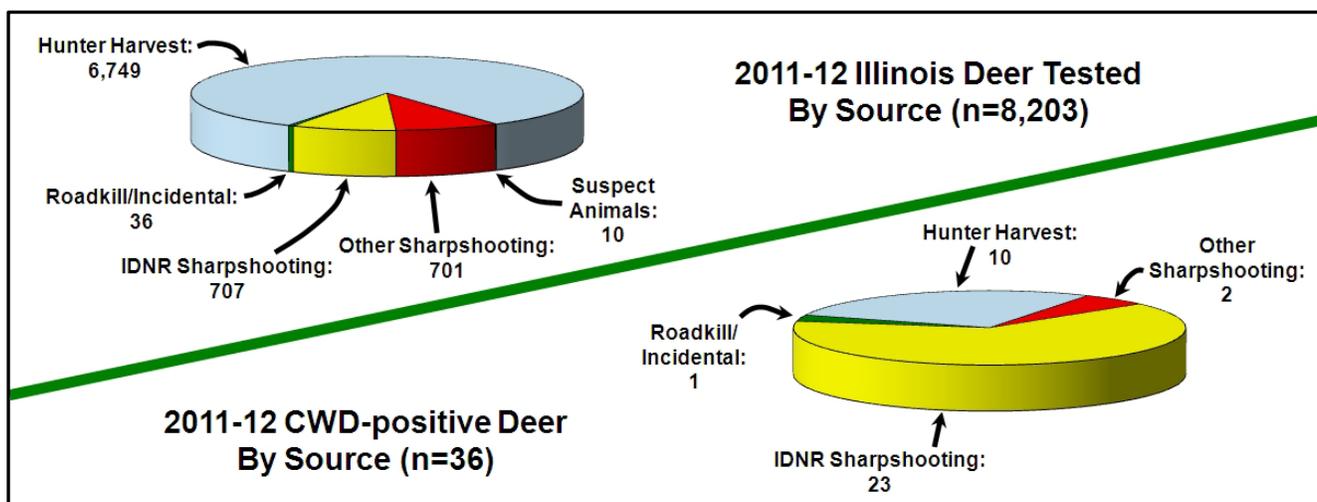
Surveillance Using Agency-issued Permits for Lethal Deer Removal. Recipients of special permits from IDNR authorizing lethal deer removals were required to collect CWD samples when working in high-risk CWD areas, or when working in areas in which other surveillance techniques were judged insufficient. These special permits include (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). This approach provided 699 usable CWD samples from northeastern Illinois counties not open to firearm deer hunting (Cook, Lake, DuPage), as well as from properties in Grundy, JoDaviess, McHenry, Ogle, Will, and Winnebago counties (Appendix A). Two CWD-positive deer were identified from southeast Winnebago County.

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 that could be attributed to chronic wasting disease. Samples were taken from 10 deer in 7 counties (Appendix A). None of the suspect deer tested this year were positive for CWD.

Surveillance from Post-Hunting Season Sharpshooting. Sharpshooting was conducted during the period January 15, 2012—March 31, 2012 by IDNR Wildlife Biologists and IDNR Conservation Police Officers. Sharpshooting locations were confined to those parts of Boone, DeKalb, Grundy, JoDaviess, Kane, LaSalle, McHenry, Ogle, Stephenson, and Winnebago counties in close proximity to areas where CWD-infected deer had been identified. More specific details of goals, procedures, and results of the experimental sharpshooting program are discussed in the management section of this report. Agency sharpshooters collected 699 usable samples from the ten counties, with an additional 5 usable samples taken from Lee and Will counties just across the county line from an adjacent positive section (704 total usable samples; Appendix A). Twenty-three positive deer were found in Boone (5), DeKalb (3), Grundy (4), Kane (7), Ogle (1), and Winnebago (3) counties. Figure 3 presents the number of samples taken by each collection method and the resulting positive deer identified.

Figure 3. Number of CWD samples tested and number of positives identified by sampling source during FY2011-12.

Note: Number tested includes all samples submitted, regardless of whether a valid test result was obtained.



Discussion of Surveillance Results to Date. A total of 8,175 usable samples were collected statewide during FY11-12, resulting in the identification of 36 CWD-positive deer from eight counties: Boone (5), DeKalb (5), Grundy (5), Kane (7), McHenry (3), Ogle (2), Stephenson (2), and Winnebago (7). No CWD-positive deer were found in JoDaviess or LaSalle counties, where CWD had been previously identified. The number of CWD-positive deer identified annually since the discovery of CWD in Illinois has varied from 14 to 51 (Figure 4).

As deer densities have declined in eastern Winnebago and western Boone counties, the number of positive deer found in those counties has also declined significantly (Fig. 5). However, some of the more recently discovered disease foci where management efforts (e.g., sharpshooting) have been limited are now producing a significant number of infected deer. Most notable of these were NE Kane County and eastern Grundy County (Fig. 6). The disease focus in NW DeKalb County also remains a great concern, because of recent prevalence increases and lack of agency access for management.

Figure 4. Number of CWD-positive deer identified in Illinois by year.

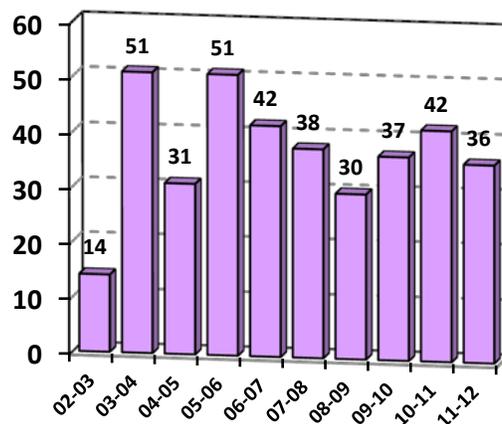


Figure 5. Trends in the number of positive deer identified in Boone and Winnebago counties during 2002-2012.

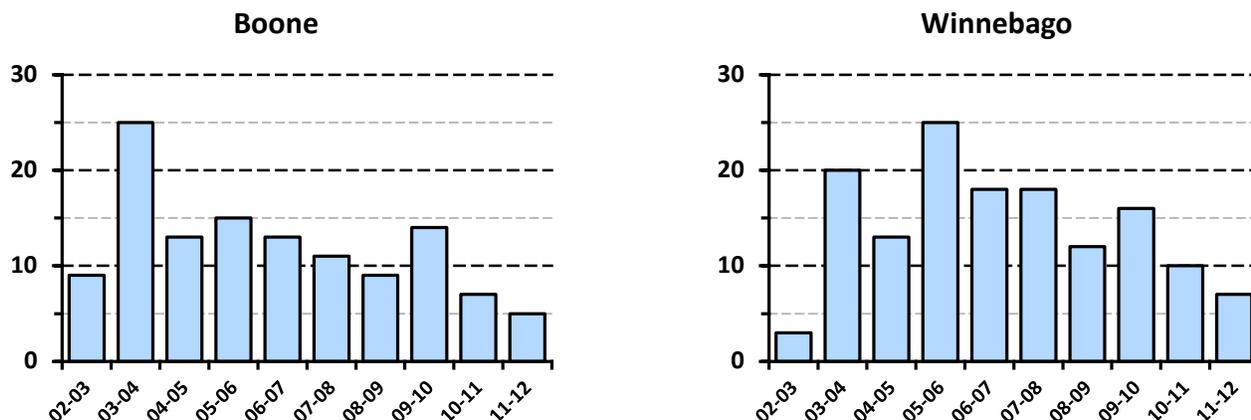
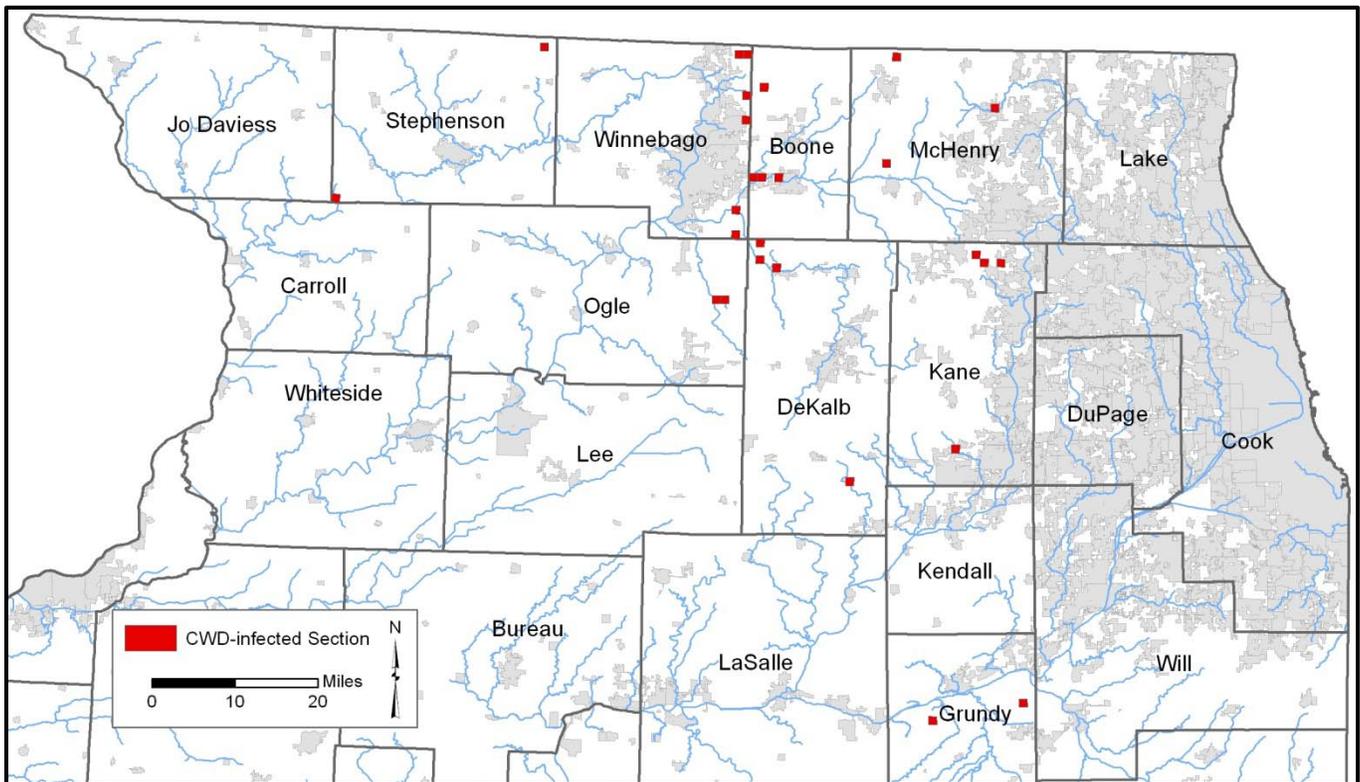


Figure 6. Distribution of CWD-positive deer identified during FY11-12.



Using surveillance data collected from hunter-harvested deer only, disease prevalence rates were calculated for adult deer (\geq yearling) in the 10 counties where CWD has been identified (Table 1). IDNR staff and cooperators were instructed to collect samples only from adult deer, so samples collected from deer for which no age were recorded were assumed to be adults. Adult prevalence rates throughout the 10-county area were 0.28% (± 0.17 , 95% confidence interval), and ranged from 0.00% in Boone, JoDaviess, Kane, and LaSalle counties to 1.74% (± 2.39 , 95% confidence interval) in DeKalb County.

Table 1. County CWD prevalence estimates for adult deer during 1 July 2011 through 30 June 2012. Estimates are based only on samples collected from hunter-harvested deer.¹

County	# of Samples	# of Positives	Percent Positive	95% Confidence Interval (+/-)
Boone	50	0	0.00%	-
DeKalb	115	2	1.74%	2.39%
Grundy	250	1	0.40%	0.78%
JoDaviess	1132	0	0.00%	-
Kane	54	0	0.00%	-
LaSalle	567	0	0.00%	-
McHenry	204	2	0.98%	1.35%
Ogle	489	1	0.20%	0.40%
Stephenson	439	2	0.46%	0.63%
Winnebago	250	2	0.80%	1.10%
All CWD Counties	3550	10	0.28%	0.17%

¹ Estimates derived from hunter-harvested deer represent hunted populations throughout the entire county.

In order to evaluate disease distribution and prevalence at a smaller scale, prevalence rates were also calculated within a grid across northern Illinois in which each unit consisted of four townships (approximately 144 mi²; see Figure 7). For these prevalence estimates, we used samples collected by all methods except suspect animal surveillance within each unit (block). The drawback to this approach is that the use of samples from sharpshooting may tend to bias prevalence estimates upward, since sharpshooting efforts are most intense within locales known to have highest prevalence. Estimates were made only for adult deer, as sample sizes for fawns were too small. Calculated prevalence rates (with 95% confidence intervals) for blocks with at least one positive are presented in Table 2.

Table 2. CWD prevalence rates for adult deer in known CWD areas during FY2011-2012. Blocks are those areas defined in Figure 7. Includes all test sources except suspect animals.

Block Number	Location	Number Tested	Number Positive	Estimated Prevalence	95% Confidence Interval (+/-)
0,0	North Winnebago-Boone	74	4	5.4%	5.2%
0,1	North Boone-McHenry	25	1	4.0%	7.7%
0,2	Northcentral McHenry	70	1	1.4%	2.8%
0,-2	Northeast Stephenson-Winnebago	102	1	1.0%	1.9%
1,0	South Winnebago-Boone	79	6	7.6%	5.8%
1,1	South Boone-McHenry	35	1	2.9%	5.5%
1,-4	Southeast Stephenson-Carroll	180	1	0.6%	1.1%
2,0	Northeast Ogle-Northwest DeKalb	47	6	12.8%	9.5%
2,2	Northwest Kane	82	4	4.9%	4.7%
2,3	Northeast Kane-Northwest Cook	62	2	3.2%	4.4%
4,2	Southwest Kane-Northwest Kendall	30	1	3.3%	6.4%
6,2	Northwest Grundy	156	1	0.6%	1.3%
6,3	Northeast Grundy-Westcentral Will	102	4	3.9%	3.8%

For the second straight year, highest observed prevalence rates (12.8%) occurred in Block 2,0 (Northeast Ogle-Northwest DeKalb), with 6 of 47 deer testing positive. We noted last year that prevalence rates appeared to be increasing in this block, that deer densities have not declined, and that IDNR access to properties for the purpose of CWD management was very limited. As a result, we expect that disease prevalence will continue to increase in this area so long as conditions remain unchanged.

Numbers of positive deer and prevalence rates in Illinois' historical core CWD area along the Winnebago-Boone county line (Blocks 0,0 [North Winnebago-Boone] and 1,0 [South Winnebago-Boone]) remained above average, with 4/74 (5.4%) and 6/79 (7.6%) of adult deer testing positive, respectively. In combination with Block 2,0 (above), this area constitutes Illinois' central disease core, with prevalence generally decreasing at increasing distance from these blocks. Some other disease foci of concern were evident this year, most notably in northern Kane County (Blocks 2,2 and 2,3) and in Grundy County (Block 6,3). In northern Kane County, 6/144 adult deer tested were positive (4.2%), while 4 CWD-positive deer were found in a single section in eastern Grundy County with no prior disease record.

We continue to find sporadic occurrences of CWD at relatively long distances from the core area, but promptly-initiated management efforts appear to have affected a positive response in many of those areas. In outlying areas where disease has become established at some level (for example, Stephenson County, northern Kane County, and LaSalle-Grundy counties), rigorous surveillance in combination with focused management should be continued to allow for informed monitoring and disease control.

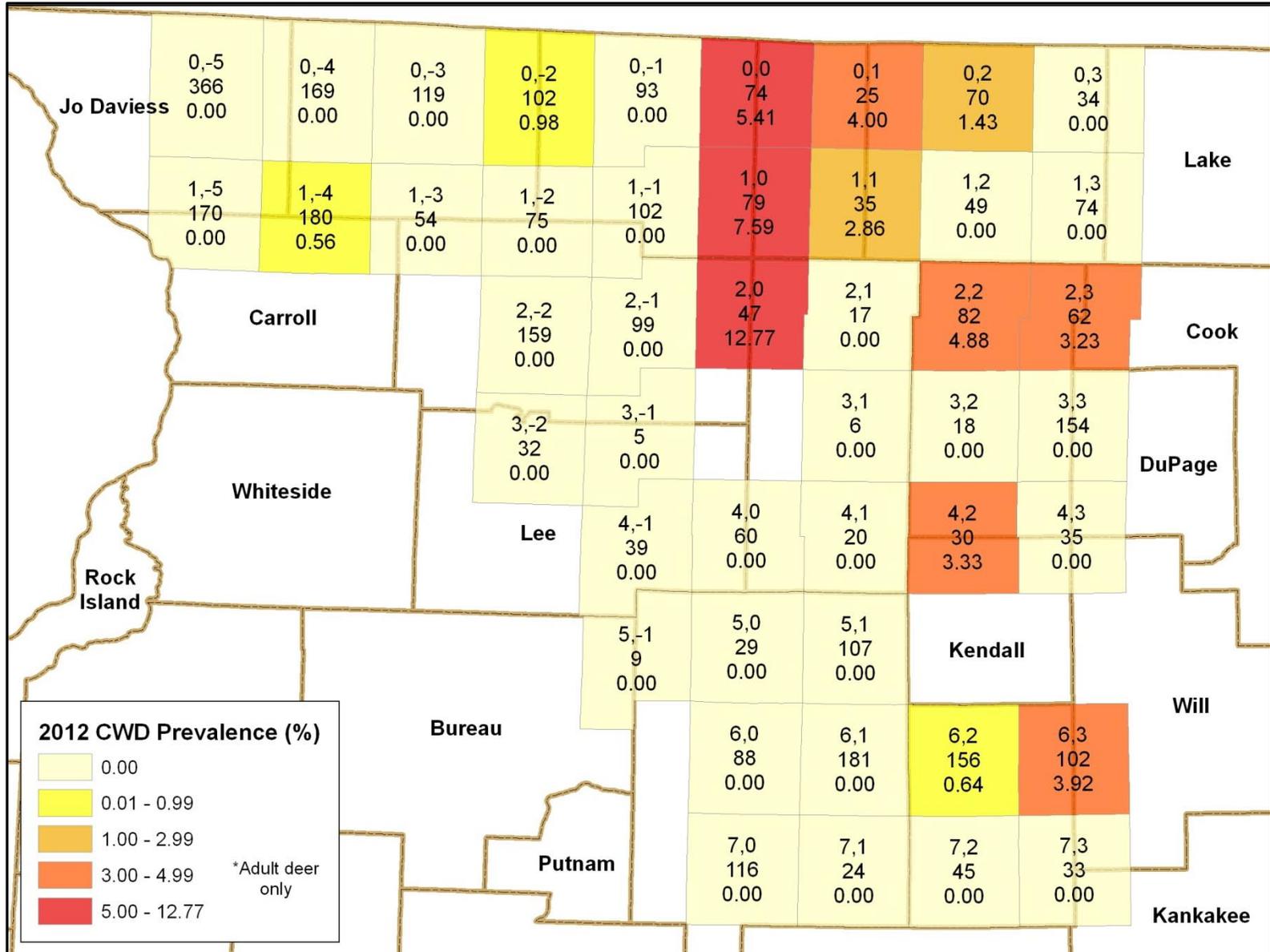


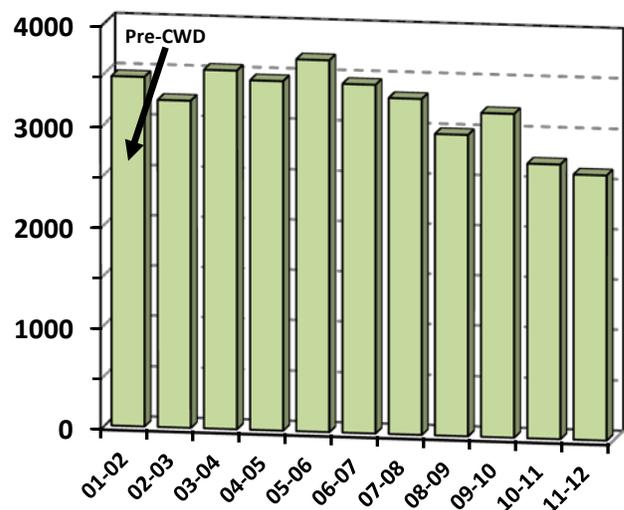
Figure 7. Estimated prevalence rates in adult deer during FY11-12 using a grid consisting of 4-township blocks. Within each block, the upper number is the grid coordinate of the block; the middle number is the sample size; and the lower number is the estimated adult prevalence rate (%). Prevalence rates were calculated from samples collected from all sources except suspect deer.

Experimental CWD Management Activities During FY2011-2012:

Use of regulated hunting for herd control in CWD-affected areas. Archery deer season (October 1, 2011 – January 15, 2012; closed during 7 days of firearm deer season) consisted of 100 days during which there was no bag limit for antlerless deer. Gun seasons totaled 19 days; consisting of firearm (Nov. 18-20; Dec. 1-4), youth (Oct. 8-9), muzzleloader (Dec. 9-11), and the special CWD season (Dec. 29-Jan. 1; Jan. 13-15). All 10 CWD counties were open to the CWD season. Liberal deer permit quotas remained in effect during regular firearm and muzzleloader seasons, allowing hunters to purchase virtually unlimited numbers of permits. For the special CWD season, hunters were allowed to purchase unlimited numbers of permits over-the-counter (OTC), while for the youth season hunters were limited to one OTC permit each per county. During the CWD season, hunters could also use any unfilled tags from firearm, muzzleloader, or youth deer seasons.

Liberalized regulations and increased opportunities have not resulted in deer harvest increases in any of the identified CWD counties. In general, deer harvests have remained relatively stable or declined in those counties, with harvest declines (when they occur) occurring more markedly during gun seasons than in archery. Any additional harvest accomplished during the Special CWD Hunting Season (first implemented during 2005-2006) has been offset by concomitant harvest declines during the regular firearm season, implying that hunters are postponing antlerless harvest until a later date when additional hunting days are offered. In the original 4-county CWD area (Winnebago, Boone, McHenry, and DeKalb) total deer harvest from all seasons numbered 2,635 compared to 2,730 in 2010-11. In those counties, the harvest trend has been downward since 2005 (Figure 7). While regulations to promote harvest have not proven effective for increasing deer harvest in CWD counties, we believe that they have been important in maintaining harvests comparable to historic levels in spite of evidence of smaller deer population size in the CWD portions of those counties.

Fig. 7. Number of deer taken by hunters annually in Illinois' four original CWD counties.



Sharpshooting in CWD “hot spots”. Following the close of deer hunting seasons in January, teams of sharpshooters (IDNR Biologists and Conservation Police Officers) began culling deer that were wintering in or around known CWD locations. An Urban Deer Population Control Permit (DPCP) was issued to the Winnebago County Forest Preserve District to allow their staff to conduct a sharpshooting program on forest preserves in known CWD areas in southeastern Winnebago County. In a few instances, nuisance Deer Removal Permits (DRP) were issued to private landowners in CWD areas that allowed them to shoot deer to help reduce crop depredation. All IDNR sharpshooting activities were carried out between January 15 and March 31, 2012.

Objectives of the sharpshooting were: (1) to provide detailed localized surveillance information about disease distribution and prevalence rates within infected areas; and (2) to examine the feasibility/effectiveness of controlling CWD in free-roaming deer populations by [a] removing as many sick deer as possible from known CWD areas; [b] removing/sampling deer that are inaccessible to hunters because of urbanization; and by [c] reducing densities in known CWD locales to lower transmission rates.

All animals (including fawns) removed during the sharpshooting program from which suitable tissue samples could be collected were tested for CWD to determine disease prevalence in affected areas. The retropharyngeal lymph nodes and the obex were removed at DNR processing facilities in the sampling zones, and transferred to the IDOA Disease Laboratory for testing. Additional tissues (tongues, fetuses) were collected and archived for further research/testing at the University of Illinois Champaign/Illinois Natural History Survey.

Aerial deer surveys (via helicopter) were conducted during periods of suitable snow cover to census deer wintering in known CWD areas. Surveys served to identify wintering habitat that contained concentrations of deer, and to provide estimates of deer numbers throughout the affected area. Our goal was to focus sharpshooting activities on deer in winter concentration areas that included or were nearby CWD-infected properties, thus maximizing our effectiveness. Unfortunately, the winter of 2011-2012 was abnormally mild, and snow depths ≥ 4 " only occurred on 7 days in the Rockford area between January 15 and March 31, with as few as 2 days in areas to the south. As a result, we were unable to census all areas of concern, and were forced to focus survey efforts based on prioritization of sites with suitable snow cover. The total area surveyed was approximately half the area surveyed during winter 2010-2011. Surveys were not flown in Grundy County, LaSalle County, and southern DeKalb County because of the lack of snow.

Figure 8 depicts the number of deer counted in each CWD management unit (CMU) in northern Illinois, and Table 3 presents deer densities within each of those individual units. Highest deer densities (> 25 deer/mi² of deer habitat) occurred in recently-discovered CWD areas (JoDaviess County and eastern Kane County), or in areas where significant refuges from disease management activities exist (east-central Ogle County). Most areas with intermediate densities (15 – 25 deer/mi² of deer habitat) were peripheral "spark" areas, with the exceptions of Block 1,0 (SW Boone – SE Winnebago) and Block 2,0 (E Ogle – NW DeKalb). These two blocks are a primary management concern because of their long history of CWD and their high prevalence rates. Most significant habitat in Winnebago County in Block 1,0 is controlled by the Winnebago County Forest Preserve District (WCFPD), and their board has recently expressed concerns about low deer densities even though aerial surveys have shown that an abundance of deer still remain. The number of deer that WCFPD staff has removed from their properties in recent years via Deer Population Control Permits has been insufficient to cause population declines, and the District no longer allows IDNR to sharpshoot on WCFPD properties for CWD control. Similarly, access to private property for sharpshooting in Block 2,0 is very poor, particularly in the northwestern portion of DeKalb County where the highest densities of deer occur. Most blocks with deer densities at desirable levels for disease control (< 15 deer/mi² of deer habitat) were those in which management has been ongoing for several years, and where the number of cooperating landowners remain good.

CWD management units were delineated by including all known CWD-positive sections (all years), plus a 2-section (1 section = ~ 1 mi²) buffer around each. Sharpshooting activities in the CWD zones were generally limited to this defined area. A total of 490 deer were removed from the CMUs that we were able to survey (Table 3), or about 9.0% of the deer counted via aerial surveys. The proportion of deer removed by post-hunt sharpshooting has been declining during the past several years, primarily because the agency does not have sufficient resources to effectively cover both the core CWD area and all of the spark areas, many of which are a considerable distance from the core (and our laboratory facilities). In addition, deer removals in the core areas have become progressively more difficult where densities have declined, resulting in low success rates.

Table 3. Deer census and sharpshooting results by management unit in the northern Illinois CWD area during winter 2011-2012. Management units are as depicted in Figure 8; only units with aerial census results are included.

Management Unit	Area Surveyed (mi ²)	# Deer Counted	Deer/mi ² of total area surveyed	Deer/mi ² of deer habitat	# Deer Removed	% of Counted Deer Removed
0,-5 North-Central JoDaviess	16.5	292	17.7	34.1	2	0.7%
0,-4 W Stephenson-E JoDaviess	54.4	506	9.3	18.4	42	8.3%
0,0 NW Boone-NE Winnebago	79.2	569	7.2	12.4	66	11.6%
0,1 NE Boone-NW McHenry	18.6	103	5.5	9.6	0	0.0%
0,2 North-Central McHenry	61.5	601	9.8	14.5	25	4.2%
1,-5 South-Central JoDaviess	4.2	189	44.8	52.9	11	5.8%
1,-4 SW Stephenson	15.2	163	10.7	17.3	25	15.3%
1,-1 South-Central Winnebago	48.2	765	15.9	23.3	11	1.4%
1,0 SW Boone-SE Winnebago	69.8	660	9.5	20.5	109	16.5%
1,1 SE Boone-SW McHenry	51.9	112	2.2	5.7	11	9.8%
2,-1 East-Central Ogle	40.0	383	9.6	47.2	16	4.2%
2,0 E Ogle-NW DeKalb	103.5	432	4.2	19.3	30	6.9%
2,1 NE DeKalb	54.6	149	2.7	9.5	0	0.0%
2,2 NW Kane	38.2	332	8.7	19.1	81	24.4%
2,3 NE Kane-W Cook	10.9	174	16.0	26.8	61	35.1%
TOTAL	666.8	5430	8.1	18.0	490	9.0%

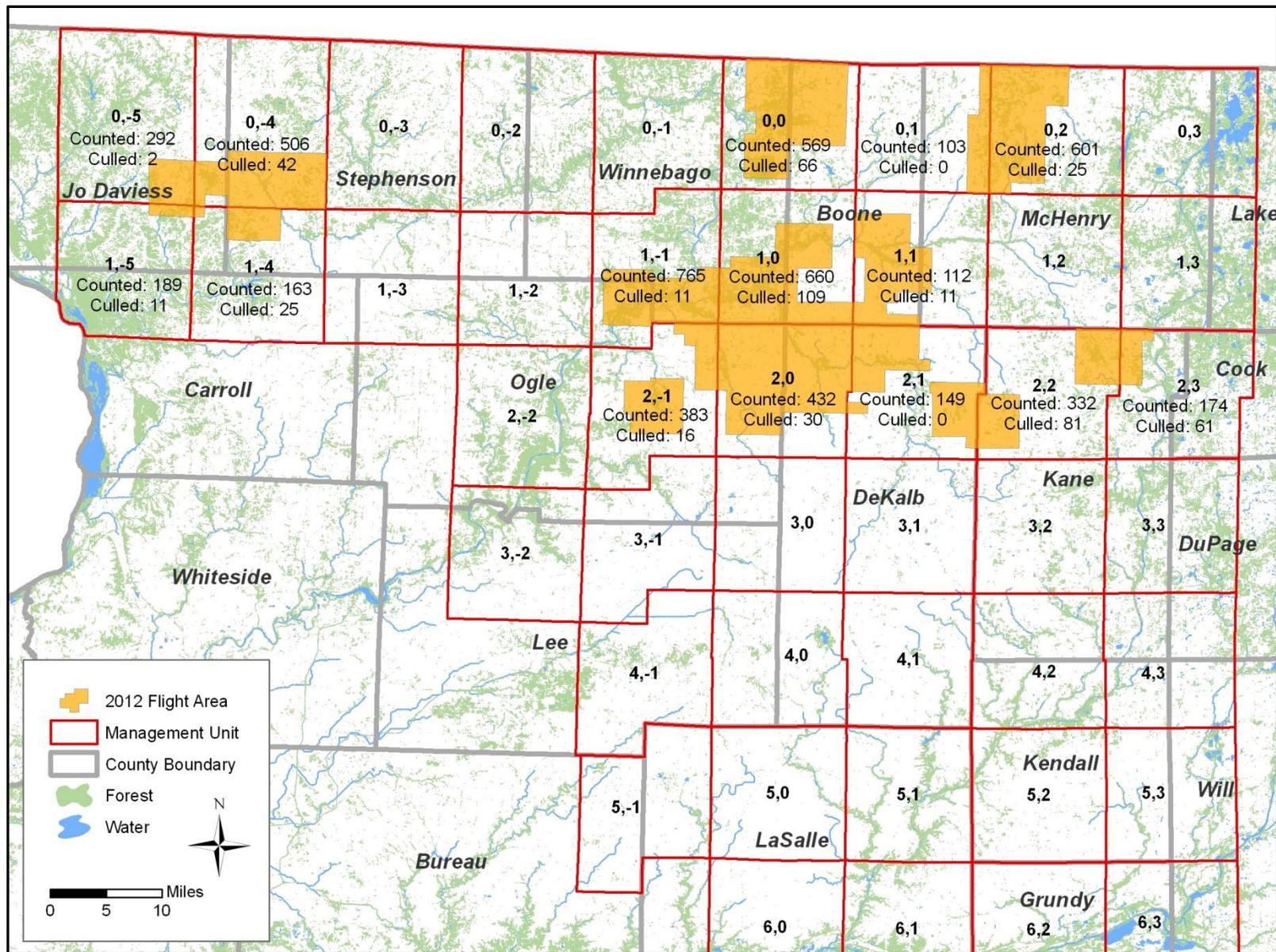


Figure 8. Number of deer counted during aerial censuses and removed by sharpshooters in CWD-affected areas of northern Illinois during winter 2011-12. Totals reflect number counted/culled within the shaded flight boundary.

Deer removed by sharpshooting consisted of 32.9% fawns and 67.1% adults. Sex ratios were 1 male to 1.30 females. County totals were as follows: Boone (65), DeKalb (37), Grundy (84), JoDaviess (34), Kane (180), LaSalle (94), Lee (2), McHenry (69), Ogle (35), Stephenson (50), Will (3) and Winnebago (126).

CWD Prevalence Patterns

During ten years of hunter harvest surveillance data collection (FY 2003-2012) in the four original CWD counties (Winnebago, Boone, McHenry, and DeKalb), estimated CWD prevalence rates have been almost twice as high for adult male deer (\bar{x} = 2.0% prevalence) as for female deer (\bar{x} = 1.3% prevalence). For that same period and area, prevalence rates in both sexes have remained remarkably consistent with the exception of the rate in males during 2011 and 2012, when a markedly higher rate was followed by the lowest rate found to date (Figure 9). No evidence of a significant upward trend in prevalence rates has been observed. Likewise, prevalence rates in adult deer throughout the known 10-county range of CWD have changed little during the same period, averaging 0.62% (Figure 10).

Figure 9. Estimated CWD prevalence rates during the period 2003-2012 (fiscal years) for adult female and adult male deer collected during hunting seasons in Boone, DeKalb, McHenry, and Winnebago counties. Error bars at each point depict the 95% confidence interval of the estimate.

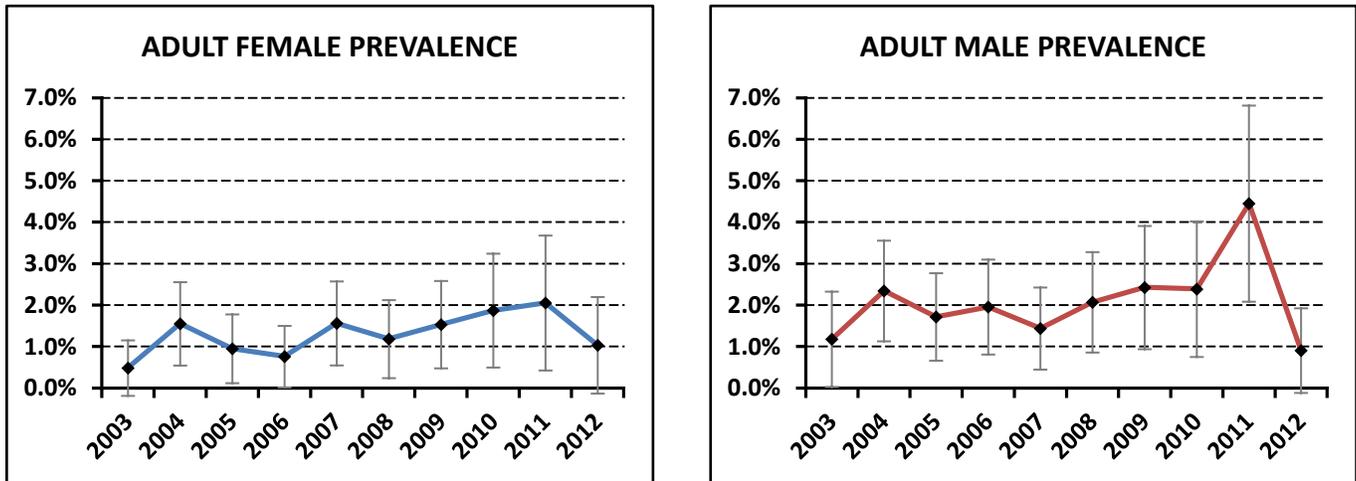
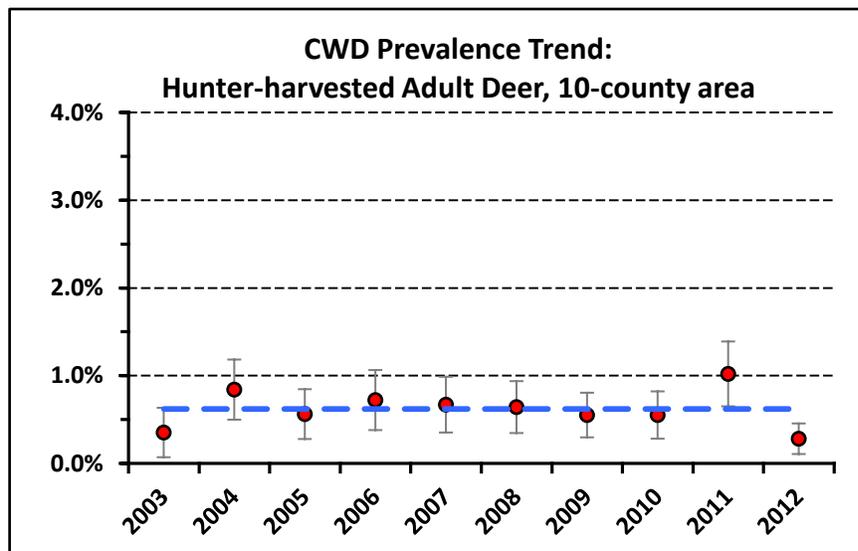


Figure 10. Regression line showing the trend in CWD prevalence for hunter-harvested adult deer (\geq yearling) during 2003-2012 for all ten counties in which CWD has been identified. Error bars at each point depict the 95% confidence interval of the estimate.



Summary

During FY11-12, a total of 8,175 usable samples from wild Illinois white-tailed deer were tested for chronic wasting disease, and 36 CWD-positive deer were identified. Only 16 of 36 CWD-positive deer (44%) originated from the core CWD area along the Winnebago-Boone county line from Wisconsin south into northwest DeKalb County (Blocks 0,0; 1,0; and 2,0). Discrete foci of disease persist in Kane County, Grundy County, LaSalle County, and the border area of JoDaviess and Stephenson counties. Without localized management, these foci have the potential to become significant source populations for the disease, which will facilitate spread into new areas. The number of positives identified this year was significantly lower than peak numbers found in 2003-04 and 2005-06 (51 each; see Table 4), and below the previous 9-year average even though 2011-12 sample numbers were the highest to date. In the future, staffing and monetary constraints will likely limit our ability to effectively manage if CWD spreads into areas that are currently unaffected. Past management efforts have lowered deer densities in strategic areas and maintained disease prevalence at low levels, but the mobility of white-tailed deer in fragmented Midwestern habitats poses a significant obstacle to controlling disease spread.

Following the deer hunting seasons in FY11-12, sharpshooters removed 779 deer from sites in 117 different sections of the CWD-affected area, averaging 6.7 (range = 1-30) deer culled per square mile in those sections (*Note: This total includes deer taken in the CWD area as authorized by DPCPs and DRPs*). Deer densities have been substantially lowered in CWD areas that have undergone multiple years of sharpshooting, and declining sharpshooting success rates reflect those trends. The number of deer removed per unit area peaked during winter 2003-04, when an average 16.2 deer/mi² was taken from a much smaller management area (65 sections). Prevalence rates in adult deer removed by DNR sharpshooters in the 10-county CWD area were 15 times higher than observed in hunter-harvested deer (4.3% vs. 0.3%), demonstrating the efficacy of focused agency sharpshooting for targeting areas of greatest need in a comprehensive management program.

Table 4. Number of CWD-positive deer identified in each county by year.

	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	Total
Boone	9	25	13	15	13	11	9	14	7	5	121
DeKalb	0	4	1	5	6	8	4	3	7	5	43
Grundy	0	0	0	0	0	0	0	0	2	5	7
JoDaviess	0	0	0	0	0	0	0	0	1	0	1
Kane	0	0	0	0	0	0	0	0	4	7	11
LaSalle	0	0	0	0	1	0	0	0	3	0	4
McHenry	2	2	4	4	4	0	4	3	3	3	29
Ogle	0	0	0	2	0	0	1	0	4	2	9
Stephenson	0	0	0	0	0	1	0	1	1	2	5
Winnebago	3	20	13	25	18	18	12	16	10	7	142
Total	14	51	31	51	42	38	30	37	42	36	372

Appendix A. Usable CWD samples taken by county in Illinois during the 2011-2012 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		20					20
ALEXANDER		10					10
BOND		2					2
BOONE	41	12	65 (5)		2		120 (5)
BROWN		12					12
BUREAU		11					11
CALHOUN		63					63
CARROLL	10	14					24
CASS	1	6					7
CHAMPAIGN		5					5
CHRISTIAN		8					8
CLARK		47					47
CLAY		153					153
CLINTON		1					1
COLES		75			1		76
COOK	1	8		143			152
CRAWFORD		128					128
CUMBERLAND		17					17
DEKALB	109 (2)	6	37 (3)		1	1	154 (5)
DEWITT		38					38
DOUGLAS		7					7
DUPAGE	2	8		205			215
EDGAR		10					10
EFFINGHAM		46					46
FAYETTE		38				1	39
FORD		7					7
FRANKLIN		59					59
FULTON		6			1		7
GALATIN		1					1
GREENE		83					83
GRUNDY	243 (1)	7	68 (4)	16	1	1	336 (5)
HAMILTON		25					25
HANCOCK		97			1		98
HARDIN		18					18
HENDERSON		12					12
HENRY		17					17
IROQUOIS		9					9
JACKSON		89					89
JASPER		23					23
JEFFERSON		156					156
JERSEY		48					48
JO DAVIESS	1023	112	34	36	1		1206
JOHNSON		109					109
KANE	23	31	179 (7)		6		239 (7)
KANKAKEE		2					2
KENDALL		1					1
KNOX		70					70
LAKE	1	17		153	3		174
LASALLE	561	6	94		2		663

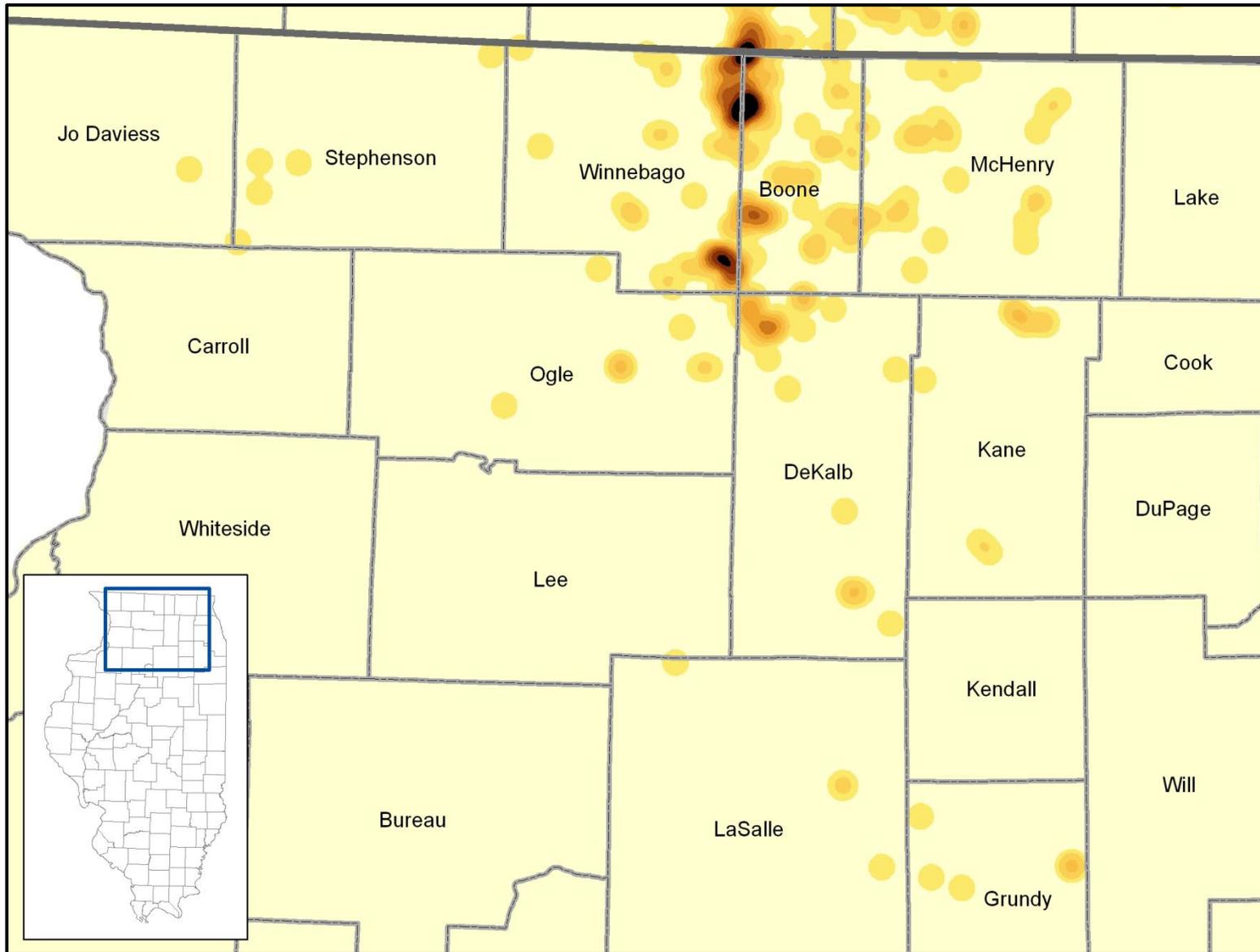
Appendix A cont'd.

County	Check Stations	Drop-off Stations/ Meat Processors	Agency Culling	Special Permits ¹	Roadkill/ Incidental	Suspect	Total
LAWRENCE		36					36
LEE	46	9	2		1	3	61
LIVINGSTON		62					62
LOGAN		8					8
MACON		52			1		53
MACOUPIN		25					25
MADISON		12					12
MARION		42					42
MARSHALL		3					3
MASON		1					1
MASSAC		17					17
MCDONOUGH		111					111
MCHENRY	163 (2)	41	69	59	6 (1)		338 (3)
MCLEAN		38					38
MERCER	2	12					14
MONROE		2					2
MONTGOMERY		2					2
MORGAN		6					6
MOULTRIE	19	16					35
OGLE	480 (1)	9	29 (1)	6	4	1	529 (2)
PEORIA		1					1
PERRY		144					144
PIATT		33					33
PIKE	1	110					111
POPE		46					46
PULASKI		24					24
PUTNAM		7					7
RANDOLPH		17					17
RICHLAND		22					22
SALINE		20					20
SANGAMON		4					4
SCHUYLER		11					11
SCOTT		5					5
SHELBY	28	60					88
ST CLAIR		22					22
STARK	1	2					3
STEPHENSON	409 (2)	30	50		3		492 (2)
TAZEWELL		2					2
UNION		199					199
VERMILION		2					2
WARREN		15					15
WASHINGTON		18					18
WAYNE		129					129
WHITE		2					2
WHITESIDE		17					17
WILL		7	3	31			41
WILLIAMSON		101					101
WINNEBAGO	236 (2)	15	74 (3)	50 (2)	2	1	378 (7)
WOODFORD		7				2	9
TOTALS	3400 (10)	3326	704 (23)	699 (2)	36 (1)	10	8175 (36)

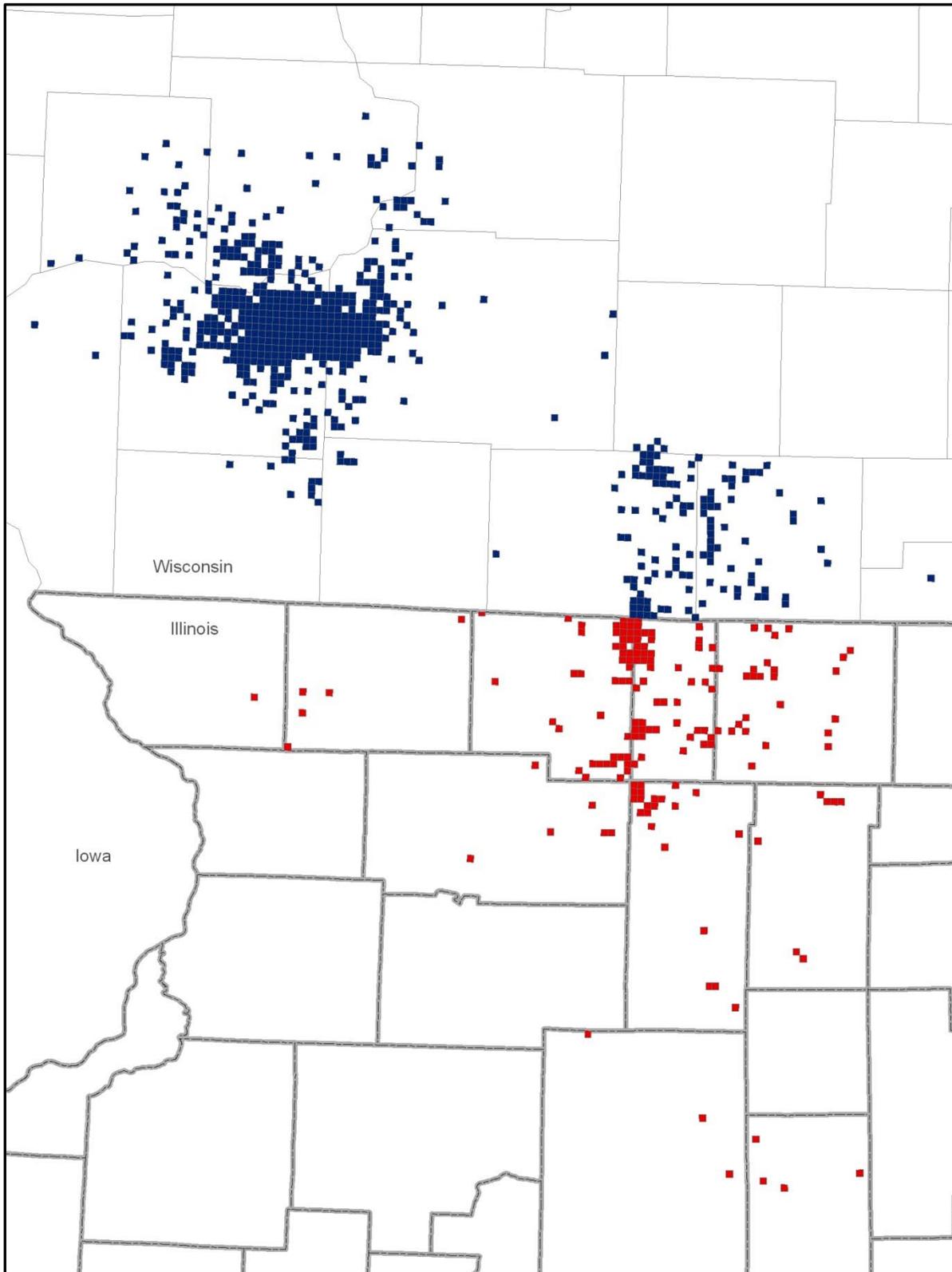
¹ Special permits include urban Deer Population Control Permits, nuisance Deer Removal Permits, and Scientific Permits.

Appendix B. Summary of CWD-positive Illinois deer collected during FY2011-2012.

Date Collected	County	Township, Range, Section	Sex	Age	Collection Method
11/18/11	DEKALB	342N 3E17	M	1	Hunting
11/18/11	WINNEBAGO	346N 2E12	F	1	Hunting
11/18/11	MCHENRY	346N 5E12	F	2	Hunting
11/19/11	GRUNDY	333N 8E14	F	4	Hunting
11/19/11	DEKALB	342N 3E17	M	2	Hunting
11/20/11	OGLE	341N 2E10	F	1	Hunting
12/1/11	WINNEBAGO	343N 2E35	F	2	Hunting
12/2/11	MCHENRY	345N 7E12	M	1	Hunting
12/3/11	STEPHENSON	429N 9E36	M	1	Hunting
1/17/12	WINNEBAGO	343N 2E14	F	2	Sharpshooting
1/17/12	WINNEBAGO	343N 2E14	F	2	Sharpshooting
1/18/12	MCHENRY	344N 5E14	F	1	Roadkill
1/20/12	STEPHENSON	426N 5E34	M	4	Hunting
1/23/12	BOONE	344N 3E27	M	2	Sharpshooting
1/23/12	DEKALB	342N 3E 5	M	5	Sharpshooting
1/23/12	GRUNDY	333N 6E25	M	1	Sharpshooting
1/24/12	KANE	342N 8E18	M	1	Sharpshooting
1/26/12	KANE	342N 8E18	M	4	Sharpshooting
1/26/12	KANE	342N 7E10	F	3	Sharpshooting
1/26/12	GRUNDY	333N 8E14	M	1	Sharpshooting
1/26/12	GRUNDY	333N 8E14	F	5	Sharpshooting
1/30/12	WINNEBAGO	345N 2E24	F	1	Sharpshooting
2/1/12	BOONE	344N 3E29	F	2	Sharpshooting
2/6/12	KANE	342N 7E10	M	1	Sharpshooting
2/15/12	DEKALB	338N 5E32	M	F	Sharpshooting
2/27/12	KANE	342N 7E10	F	5	Sharpshooting
2/27/12	BOONE	344N 3E30	F	F	Sharpshooting
2/28/12	BOONE	344N 3E30	F	2	Sharpshooting
2/29/12	DEKALB	342N 3E22	M	5	Sharpshooting
3/5/12	BOONE	346N 3E32	F	2	Sharpshooting
3/6/12	OGLE	341N 2E 9	M	2	Sharpshooting
3/7/12	WINNEBAGO	345N 2E 1	M	F	Sharpshooting
3/13/12	KANE	342N 7E14	F	3	Sharpshooting
3/13/12	GRUNDY	333N 8E14	F	1	Sharpshooting
3/14/12	KANE	338N 7E 9	M	4	Sharpshooting
3/15/12	WINNEBAGO	346N 2E11	M	3	Sharpshooting



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



Appendix D. Distribution of CWD in southern Wisconsin and northern Illinois as of June 30, 2012. Squares represent sections in which CWD has been detected.