

WISCONSIN DEER STATUS REPORT, 2008

Midwest Deer & Wild Turkey Study Group – Fort Robinson State Park, Nebraska
Robert E. Rolley

POPULATION GOALS

In the Northern and Central Forest regions population goals are set relative to carrying capacity. In the three farmland regions, goals have primarily been set relative to human tolerance for deer. Overwinter goals range by unit from 10 to 30 deer/mi² of deer habitat for a statewide overwinter population goal of approximately 702,000. Normal recruitment should produce fall populations of over 1,000,000 when the population is at goal and an annual gun and bow harvest of about 300,000.

POPULATION TRENDS

Overwinter deer populations in Wisconsin fluctuated around 500,000 during the 1960s and 1970s (Figure 1). Since about 1980, the population has generally increased with occasional short-term declines due to poor recruitment following severe winters and/or intensive antlerless harvests. Aggressive antlerless harvests in 2004, 2006 and 2007 may be stabilizing or reducing populations in portions of the state but the exact effects of these high antlerless harvests are difficult to interpret because of recent changes to inputs used in population models and greater use of aerial surveys for population estimation in the southern part of the state.

HARVEST TRENDS

During the 1960s and early 1970s, the combined gun and archery harvest fluctuated from a low of about 40,000 to a high of about 136,000 and averaged about 90,000 (Figure 2). Total harvest increased steadily during the late 1970s and 1980s, peaking at over 400,000 in 1991. Harvest fluctuated considerably during the 1990s around an overall increasing trend. An all-time record harvest of 618,374 was set in 2000. After a marked decrease in total harvest in 2001 and 2002, harvest during the past 5 years has averaged about 500,000 deer, with about 36% of the harvest composed of antlered bucks and about 64% antlerless deer. Archery harvest has contributed an average of about 20% of the total during the past 5 years.

HUNTING SEASON SUMMARY - 2007

The 2006 posthunt population was estimated to be about 1.2 million. The winter of 2006-07 was rated as mild. Observations of fawns and does in summer 2007 indicated that recruitment was slightly below the long-term average in the forested regions but was at or above average in the farmland regions. The estimated statewide fall 2007 population was approximately 1.8 million.

The 2007 archery season was held during September 15 – November 15 and November 26 – January 6. In most management units, archers were allowed to harvest one antlered and one antlerless deer during the season. Archers were allowed to harvest additional antlerless deer using a free herd control/earn-a-buck antlerless permits or purchased antlerless deer permits. More than 255,600 archers purchased licenses in 2007. Archers killed more than 116,000 deer (38,000 antlered, 77,200 antlerless, and 800 unknown). This was the highest archery harvest on record. Most deer (89%) were killed in the early part of the archery season.

A 2-day either-sex gun hunt was held statewide on October 6-7 for youths aged 12-15 who had completed hunter education. Youth were required to be accompanied by an adult. Approximately 4,600 deer were harvested during this season.

As part of a 2-year trial deer season framework, there was no October 4-day antlerless gun hunt outside of the CWD zones. Instead, all non-CWD units were open for a 4 day December antlerless hunt. The gun season in the CWD affected units included either a 4-day

or 9-day either-sex gun hunt in mid October. Approximately 9,300 deer were killed with a gun in the October gun seasons in the CWD management zones.

Sales of 643,170 gun deer licenses in 2007 were 0.4% lower than in 2006 and 7% below the 2001 pre-CWD level. The opening day of the firearm season was November 17, the earliest possible under the current season structure. Only a small portion of the northern forest had snow cover for the opening weekend. Temperatures were above average for the opener in much of the state. Snow fell across most of the state by the middle of the 9-day season and persisted until the second weekend of the season. Corn harvest was slightly above the 5-year average, with 92% of the harvest complete by mid-November. Approximately 354,400 deer (124,900 antlered, 228,400 antlerless, and 1,100 unknown) were killed during the 9-day November gun season. The 10-day muzzleloader-only season (November 26-December 5) resulted in a harvest of about 10,400 deer (3,000 antlered, 7,350 antlerless, and 50 unknown).

A 4-day antlerless gun season was held December 6-9 in all non-CWD units. Hunting conditions during this season were fair with statewide snow cover and average temperatures. There were areas of significant snow cover in the far north and across central Wisconsin which may have hindered movement for some hunters. Gun hunting continued through December 9 in the CWD units. More than 23,800 deer (1,900 antlered, 21,700 antlerless, and 200 unknown) were harvested during the December gun hunts.

In all seasons, gun hunters registered 402,563 deer. This was 2% higher than the gun harvest in 2006 and was the 3rd highest on record. The gun season antlered harvest of 133,131 was the 14th highest while the antlerless harvest of 267,939 was the 3rd highest. The combined bow and gun season harvest of 171,142 bucks was the 11th highest on record. The Chippewa tribes harvested 828 antlered bucks and 1,015 antlerless deer in the ceded territories outside of reservations.

A harvest quota of 592,300 antlerless deer in non-CWD units was established for the 2007 gun season. Each hunter received 1 free antlerless permit valid in herd control/earn-a-buck units with the purchase of his or her regular gun and bow license. In addition, hunters could purchase an unlimited number of antlerless-only licenses in these units. More than 86,900 antlerless permits were available in regular management units.

The Department conducted a 2-year trial moratorium of the October gun hunt as part of an agreement with a stakeholder advisory panel, 2007 was the second year of this experimental season framework. The stakeholder panel agreed to a specific performance measure to evaluate the experimental season, if the average ratio of antlerless to antlered deer harvested in Herd Control units in each deer management region did not meet or exceed 2.0 then the October gun hunt would be reinstated in 2008. The 2:1 benchmark was not met in four of five deer management regions (range 1.6 – 1.75), only in the Central Forest Region was the benchmark approached (average harvest ratio = 1.95).

Nearly 29,500 deer were checked for sex and age at 116 registration stations during the 2007 gun deer season. In the Northern Forest, the percentage of harvested bucks that were yearlings (58%) was higher than the 5-year average (51%). The percentage of yearlings among does (31%) was above the 5-year (28%) and long-term (27%) averages in the Northern Forest. Likewise, in the Central Forest the percentage of yearlings among harvested bucks (58%) and does (32%) were above the 5-year averages. The farmland regions continued to show below average percentages of yearlings among bucks (50-58%) suggesting increased survival of bucks. Yearling doe percents were near or above average in the Eastern and Western Farmland regions but continued to be below average in the Southern Farmland Region suggesting reduced recruitment perhaps due to competition for high-quality fawning sites.

Antler development of yearling bucks was near normal in the Northern Forest (59% of yearlings had forked antlers compared to a 33-year average of 58%, Figure 3). The percentage of yearling bucks with forked antlers in the Central Forest in 2007 was 13% higher than the long-term average. Antler development in the farmland regions was near the long-term

average; 90% of yearlings had forked antlers.

Three fatal and 4 non-fatal hunting accidents were reported during the 9-day November gun season. One non-fatal accident occurred during the muzzleloader season. No accidents were reported during the archery or supplemental gun seasons in 2007.

WINTER 2007-08

Winter weather conditions during 2007-08 varied considerably across northern Wisconsin. The average winter severity index (WSI) for the 28 recording stations with complete records was 70 (moderate) compared to a 30-year average of 56. However, severe conditions (WSI > 80) were reported from an 8 county area in northcentral Wisconsin while mild conditions (WSI < 50) were recorded in northwestern Wisconsin. On average, snow depths greater than or equal to 18 inches were recorded on 27 days in 2007-08 and minimum temperatures less than or equal to 0°F occurred on 43 days. Recruitment of fawns and yearlings may be negatively affected in portions of the Northern Forest in 2008. Recruitment effects may also be seen in portions of the Central Forest and the Eastern Farmland Region; the area of persistent deep snow extended into these regions.

2008 DEER SEASON

Outside of the CWD zones and Metro Units, there are three types of season structures: regular (R), herd control (HC), and earn-a-buck (EAB) (Figure 4). Season dates vary among these three structures:

- Bow - Sept. 13 - Nov. 20 and Dec. 1 - Jan. 4 (R, HC, EAB)
- Youth Deer Hunt - Oct. 11-12 (R, HC, EAB)
- October Antlerless-only Gun Hunt – Oct. 16-19 (most HC units, EAB)
- Gun - Nov. 22 - Nov. 30 (R, HC, EAB)
- Muzzleloader - Dec. 1 - Dec. 10 (R, HC, EAB)
- Antlerless-only Hunt - Dec. 11 - Dec. 14 (R, HC, EAB)

Regular units have deer populations at or near goal. Harvest limits in Regular units are 1 antlered buck (>3" antler) with a gun license and 1 buck plus 1 antlerless deer with an archery license. A limited number of unit-specific antlerless deer tags are available in Regular units, which allow a hunter to harvest additional antlerless deer. Unit-specific antlerless tags will be sold for \$12 on a first come, first serve basis beginning at noon on Saturday, August 23. Unused gun buck and antlerless deer tags are valid during the Muzzleloader season. Only antlerless deer may be harvested during the December Herd Control Hunt. Twenty-one of 120 units are designated as Regular units in 2008.

Additional harvest of antlerless deer is necessary in Herd Control units to reduce the deer population and move it toward goal. In addition to the harvest limits for Regular Units, one free antlerless deer tag that is valid in Herd Control or EAB units is issued with each gun and archery license. Additionally, an unlimited number of Herd Control Antlerless Deer Carcass Tags can be purchased for \$2.00 for use during any open season in Herd Control or EAB units. Forty-four units are designated as Herd Control units with the October gun hunt in 2008. Five HC units in the Central Forest Region do not have the October gun hunt because the performance measure of 2 antlerless deer harvested per antlered buck was met in the 2-year experimental trial in 2006 and 2007.

The Earn-A-Buck (EAB) season structure is recommended if a DMU has had at least two years of consecutive herd control seasons, which failed to reduce the population to near goal and if another non-EAB season is not likely to do so. The season dates and limits are the same as in Herd Control units except that hunters are required to first tag an antlerless deer before being allowed to tag an antlered deer. Hunters who registered an antlerless deer in an EAB unit in 2007 are pre-qualified to harvest a buck in 2008. Twenty-nine units are designated as EAB units in 2008.

CHRONIC WASTING DISEASE MANAGEMENT

The CWD eradication zone (DEZ) in southwestern Wisconsin was approximately 1,300 mi² in 2007. A second (300 mi²) eradication zone was in southeastern Wisconsin adjacent to the Illinois outbreak. The eradication zones were surrounded by a herd reduction zone (HRZ) that extends out to approximately 40 miles from the eradication zone. Deer population reduction strategies for 2007 utilized extended hunting seasons with liberal bag limits for both the eradication zone and the surrounding herd reduction zone. Deer hunting seasons within the eradication zone included an archery season during September 15-January 6 and gun seasons during October 13-21 and November 17-December 9. Unlimited earn-a-buck regulations were reinstated for the entire season; the either-sex regulations used in 2006 significantly reduced antlerless harvests. Landowners within the eradication zone were issued free permits. Landowner permits authorized harvest through March 31. The deer season in the surrounding herd reduction zone was similar to the disease eradication zone except that the early gun season was only during October 18-22. Nearly 13,550 deer (69% antlerless) were removed from the eradication zones in 2007-08. Approximately 56,350 deer (71% antlerless) were harvested in the herd reduction zone. Due to budget reductions, agency sharp-shooting activities were not conducted in winter 2007-08.

Disease surveillance activities in 2007 were primarily focused in and around the 2 DEZs. Sampling in Northern Region counties was initiated but then suspended when funds for CWD management were reduced. Sampling in areas of higher risk in proximity to infected cervid farms continued. Approximately 8,400 deer were tested in 2007-08, 134 tested positive. To date, more than 138,700 deer have been tested with a total of 990 free-ranging deer testing positive for CWD (Figure 5).

During 2007 the DNR conducted a public dialogue process to aid in planning the next phase of CWD management in Wisconsin. A stakeholder advisory group was formed with 18 members who represented a variety of interests in the state's deer population. The group met one Saturday per month from July through December and two Saturdays in January. A final report was submitted to the Department in January. Based in part on recommendations from the stakeholder advisory group the Department adopted a package of rule changes for the 2008 deer season. The changes included 1) combining the DEZs and HRZ into one zone called the CWD Management Zone, 2) setting interim posthunt deer population goals for deer management units within the CWD-MZ that averaged approximately 19 deer/mi² of deer range, 3) authorizing the use of rifles in addition to shotguns, muzzleloaders, and handguns within the CWD-MZ with the exception of metro deer management units, 4) restricting the import of whole deer and elk carcasses from areas within states and provinces that have CWD and movement of whole deer carcasses from the CWD-MZ to the rest of the state, and 5) establishing a deer season framework for the CWD-MZ with dates that were consistent with the Herd Reduction and Earn-a-Buck frameworks used in the rest of the state with the addition of a holiday firearm season from December 24-January 4. Unlimited earn-a-buck regulations apply in the CWD-MZ except during the four day October and December antlerless-only gun seasons.

Because it was felt the recommendations from the Stakeholder Advisory Group did not address the totality of CWD management, the Department Secretary directed staff to develop a comprehensive plan to guide the next 10 years of CWD management in Wisconsin. Work on the plan commenced in spring 2008 with the expectation that it will be presented to the Natural Resources Board for approval by the end of the year. The plan will form the basis of the next biennial budget request.

INDEPENDENT REVIEW OF DEER POPULATION ESTIMATION

In 2005, the Natural Resources Board commissioned an independent review of the Department's use of the Sex-Age-Kill procedure for deer population estimation. The review

panel submitted its final report to the Board in February 2007. The stakeholder steering committee that coordinated the independent review met several times in 2007 to develop an implementation plan for the recommendations made by the review panel. Their deliberations were significantly influenced by results from an attitudinal survey of Wisconsin deer hunters conducted by Dr. Robert Holsman of University of Wisconsin-Stevens Point (UWSP). This study concluded that the results of the independent review are unlikely to have much influence on hunter skepticism about the accuracy of deer population estimates. This is because the majority of respondents indicated that their opinion about deer population size is primarily based on their own field observations and their hunting companions. Additionally, the study concluded that hunter's belief in the accuracy of population estimates is strongly affected by overall credibility of the agency which is more influenced by shared values, fairness and trust than by technical competence.

Based on the conclusions from the UWSP study, the stakeholder steering committee made improving agency credibility a priority and recommended a number of specific communication and outreach actions. In addition, the committee recommended field studies of buck survival, analyses to increase the understanding of the relationship between population size and growth rate, an evaluation of alternative sampling schemes for collection of fawn:doe ratio data, and consideration of reducing the number of deer management units. It was recognized that field research on survival would require a substantial investment. As a first step in exploring possible funding sources, the Conservation Congress placed an advisory question on the April 2008 Spring Hearings questionnaire that asked hearing attendees about support for a \$1 Deer Stamp to fund research to improve deer population estimates. The question was rejected by nearly a 3:1 margin.

WILDLIFE DAMAGE ABATEMENT AND CLAIMS PROGRAM

Wisconsin has had a wildlife damage program since 1931. The current Wildlife Damage Abatement and Claims Program (WDACP) was created in 1983 by the legislature, in response to concerns from the agricultural community and with input from farmers, hunters, landowners, and wildlife damage specialists. Each county administers the WDACP to provide local control and minimize costs. The DNR only manages the program. The WDACP emphasizes wildlife damage prevention, but also offers partial compensation for damage caused by wild deer, bears, turkeys, and geese. Currently 70 of the 72 counties in Wisconsin participate in the WDACP. The WDACP is funded by a \$2 surcharge on all hunting licenses, and a \$12 resident and \$20 nonresident bonus deer permit fee. Bonus permit revenues can only be spent for WDACP expenses (administration, damage prevention, and damage compensation).

The WDACP paid 500 wildlife damage claims for damage that occurred during 2007, reflecting \$1,913,651 in appraised losses, with \$1,540,359 eligible for payment. Wildlife damage claims were filed in 64 of the 70 counties enrolled in the program in 2007. Deer damage represented 86% of appraised losses statewide. The WDACP built 18, 8-ft, high tensile, woven wire fences, which collectively measured 12.7 miles in length. The most commonly used abatement measure was deer damage shooting permits. In 2007, we issued a total of 717 deer shooting permits across the state under which 5,635 deer were removed. This includes 27 permits issued for urban, airport, and nuisance situations. An abatement method used for the first time in 2000 was a venison donation program. In 2007, 52 of 70 counties chose to participate in the donation program. In those counties, hunters donated 9,200 deer amounting to nearly 415,000 pounds of venison. The cost of the venison donation program in 2007 was approximately \$467,000, 97% for venison processing and 3% for advertising and administration.

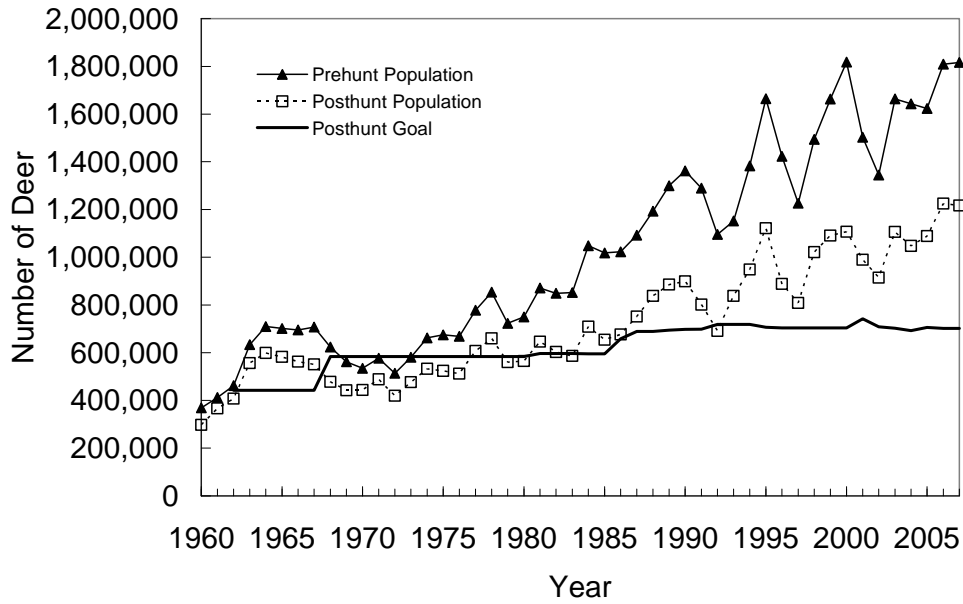


Figure 1. *White-tailed deer population estimates in Wisconsin, 1960-2007.*

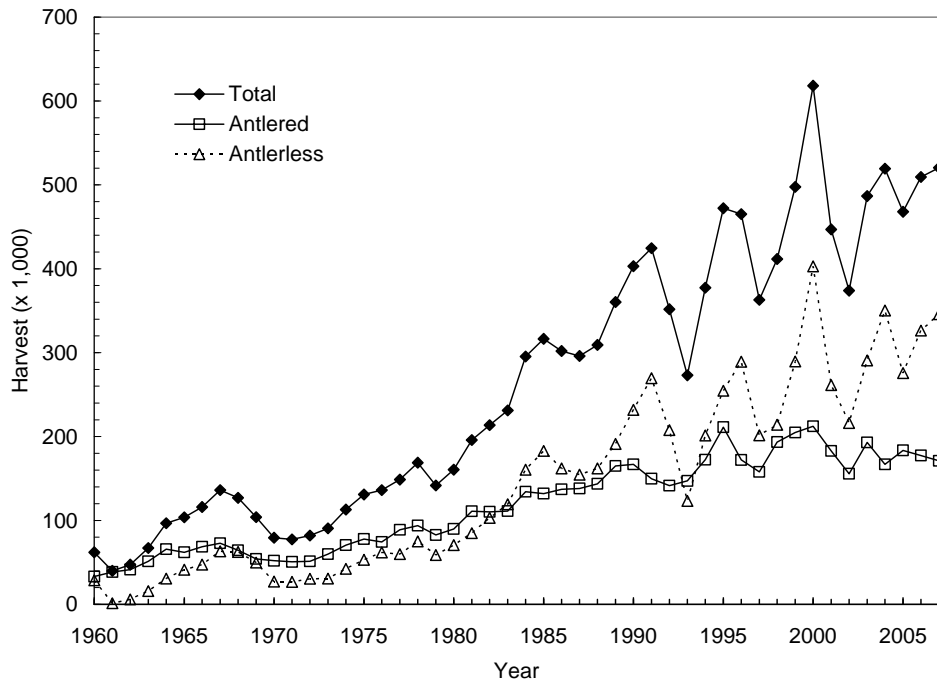


Figure 2. *Number of antlered, antlerless, and total deer harvested during gun and archery seasons in Wisconsin, 1960-2007.*

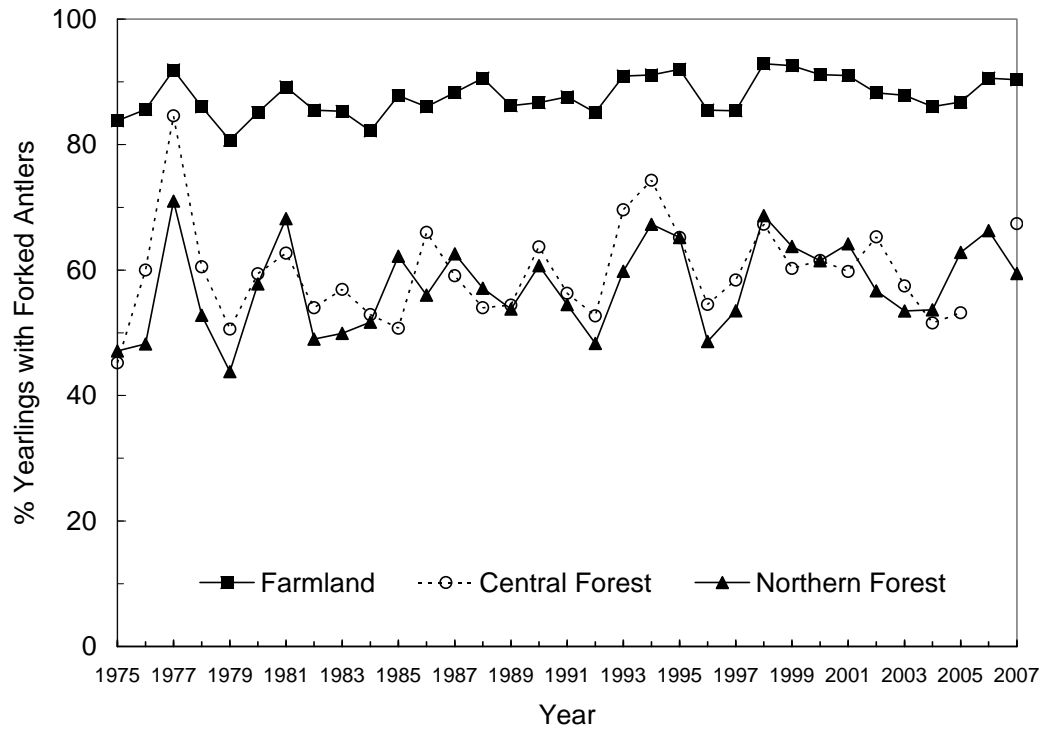


Figure 3. Yearling antler development in the principle deer habitat regions, 1976-2007.

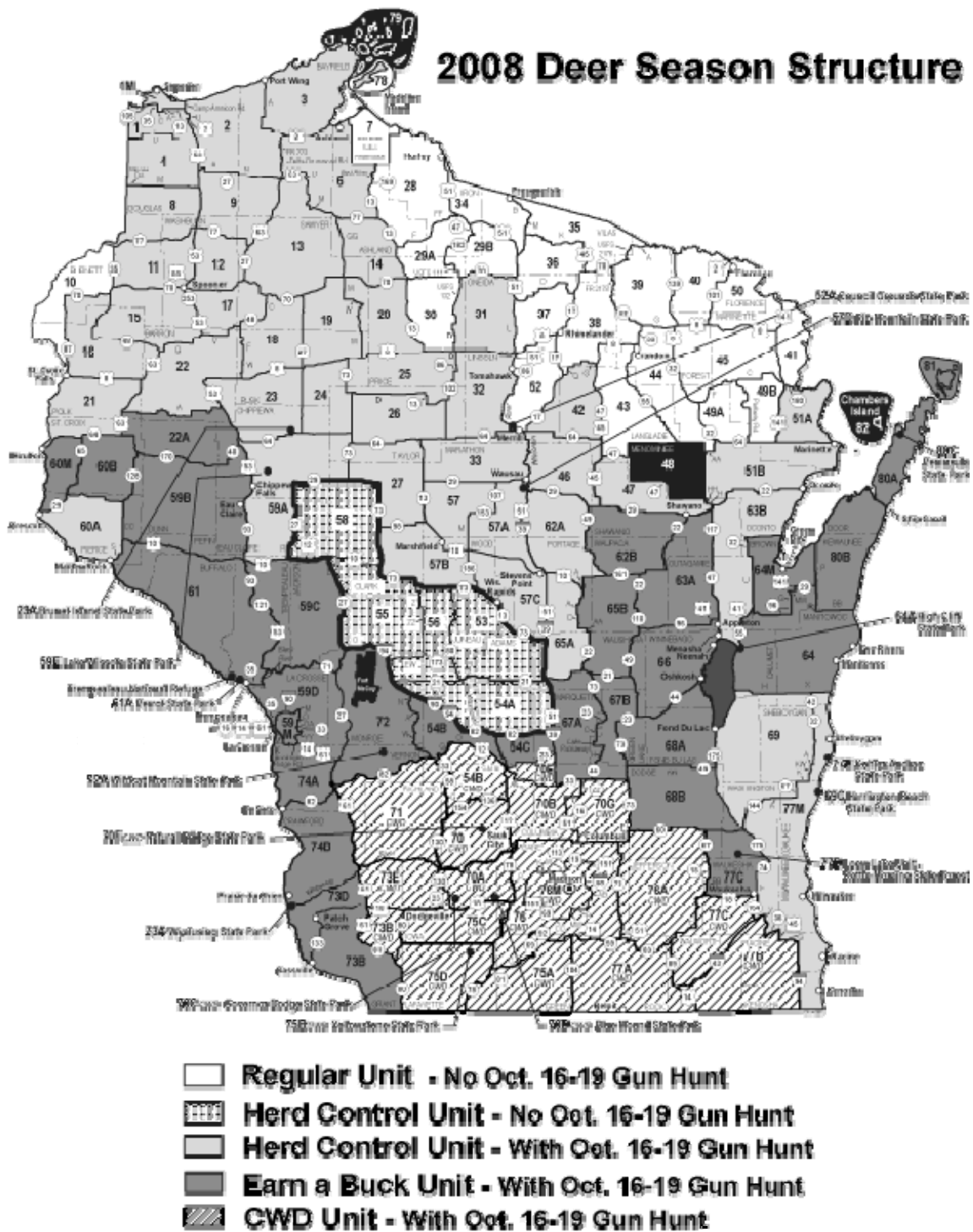


Figure 4. Deer season frameworks in Wisconsin, 2008.

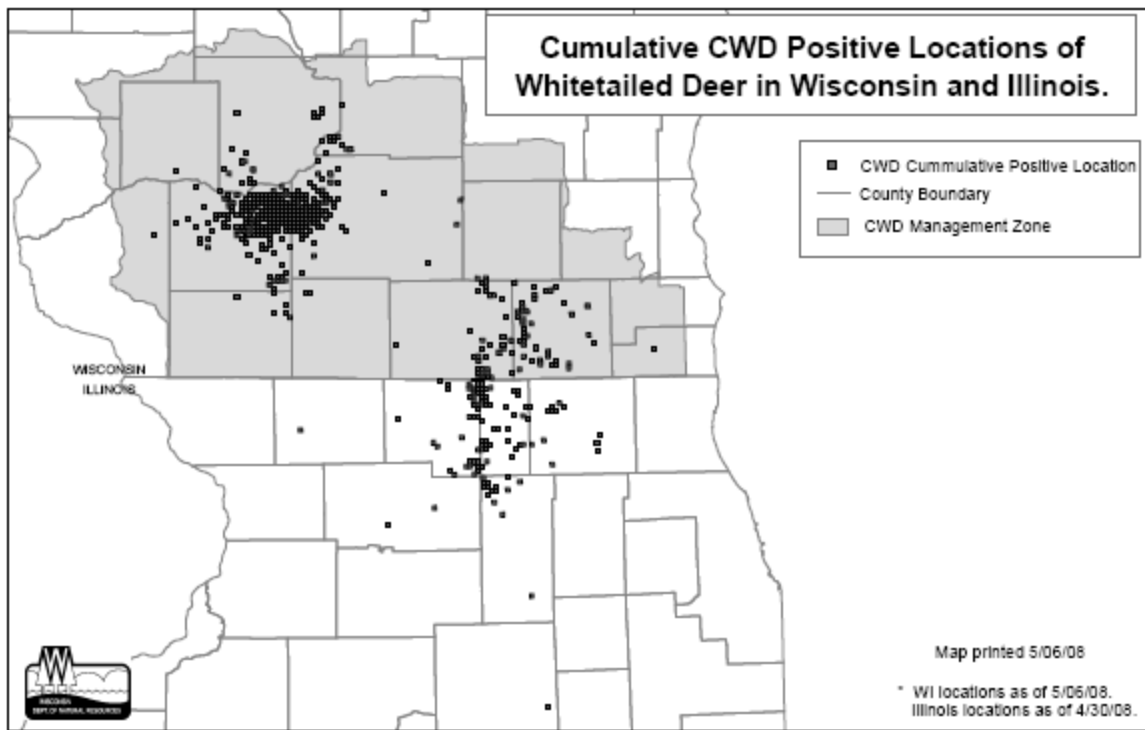


Figure 5. *Distribution of CWD positive deer in southern Wisconsin and northern Illinois, 2002-2008.*