



Pennsylvania's

# Deer Chronicle



*A publication to improve knowledge and understanding of Pennsylvania's white-tailed deer and their management*

Volume 1 Issue 1

Summer 2008

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*May and June are peak time for the birth of fawns in Pennsylvania. Does do not spend all their time with fawns.*

*If you find a newborn fawn, **PLEASE LEAVE IT IN THE WILD.** Its mother is likely nearby and will be checking on it later.*



Welcome to the first issue of *Pennsylvania's Deer Chronicle*. In this bi-annual publication, you will find information about deer and their management. As shown in this quote, challenges and debates surrounding deer and deer management are not new to Pennsylvania. Wildlife "historians" have tracked the story for decades and likely will have plenty to follow in the future.

*"The White-tailed deer is today Pennsylvania's most striking game animal. At the same time, it is also the Commonwealth's most complicated game problem."*

Pennsylvania Game News, Editorial, October 1947

Misinformation and rumors are a breeding ground for many needless battles about deer and deer management. By providing facts and explanations of the "whys" of deer management, we hope to reduce disagreements and debates based on information and assumptions that simply aren't true.

The Pennsylvania Game Commission looks forward to the next 100 years of deer management, with all its hurdles and rewards. Those challenges and opportunities will be covered regularly in this *Deer Chronicle* to ensure the public understands deer management and the research that supports it. Together we can ensure our state animal, the white-tailed deer, remains our most prized game animal and most important wildlife management consideration.

## Goals, Measures, and Antlerless Allocations

Making antlerless license allocation recommendations is the most important deer management action taken by the Game Commission each year. Allocations drive the antlerless harvest and subsequently deer impacts and population abundance.

Deer management goals guide the antlerless allocation process. The Game Commission manages deer 1) for healthy forest habitat, 2) for healthy deer, and 3) to reduce deer-human conflicts.

Progress is measured towards each of these goals through specific indicators.

*Managing Pennsylvania's wild birds, wild mammals, and their habitats for current and future generations.*

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For forest habitat health, our indicator is the number of tree seedlings and saplings growing under favorable light conditions. If 70 percent of forest plots have adequate numbers of seedlings and saplings, we consider forest health to be good.

For deer health, our indicator is the number of embryos in adult females. Adult females with at least 1.5 embryos are considered “at target”.

Finally, for deer-human conflicts, we rely on Citizen Advisory Committees (CACs). CAC members – citizens within a Wildlife Management Unit (WMU) representing interests of sportsmen, farmers, homeowners, businesses, and others – work together and provide a recommendation to increase, decrease, or stabilize the deer population for a five-year period.

This information is gathered for each WMU and used to make our recommendations. In general, less than adequate below target deer health or poor forest habitat health will prevent recommendations of deer population increases. However, if deer and forest habitat health are good and people, through the CAC process, want more deer, we will recommend a deer population increase.

## A Closer Look at the 2008-09 Antlerless Allocations

Antlerless allocations are based on measurements of forest habitat health, deer health, CAC recommendations, and population trends for each WMU. What occurs in one WMU has little to do with what is occurring in another WMU. Each WMU is treated individually.

Allocations were set to achieve specific population objectives for each WMU. Objectives for the 2008-09 are to:

- increase deer populations in three WMUs (WMUs 4B, 4E, and 5A),
- decrease deer populations in three WMUs (WMUs 2B, 5C, and 5D), and
- stabilize deer populations in all other WMUs.

WMU	Allocation	WMU	Allocation	WMU	Allocation
WMU 1A	42,000	WMU 2G	26,000	WMU 4D	40,000
WMU 1B	30,000	WMU 3A	26,000	WMU 4E	30,000
WMU 2A	55,000	WMU 3B	43,000	WMU 5A	19,000
WMU 2B	68,000	WMU 3C	27,000	WMU 5B	51,000
WMU 2C	49,000	WMU 3D	37,000	WMU 5C	92,000
WMU 2D	56,000	WMU 4A	29,000	WMU 5D	22,000
WMU 2E	21,000	WMU 4B	23,000		
WMU 2F	28,000	WMU 4C	35,000		

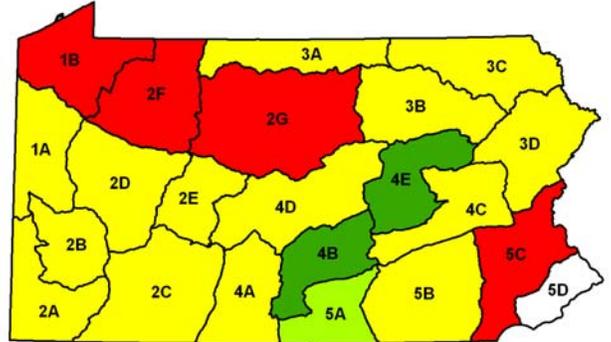


## Forest habitat health

WMUs 1B, 2F, 2G, and 5C (in red) are considered “poor”. In these WMUs, less than 50 percent of the plots – that have adequate light for small trees to grow – have enough regeneration to replace the current forest.

WMUs 4B and 4E (in green) are considered “good” with adequate regeneration to replace the current forests.

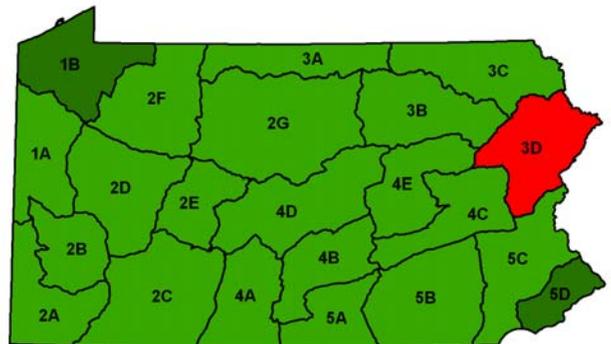
WMU 5A (in light green) is a special case. In this WMU, 66 percent of forest plots have adequate regeneration, but it is considered fair based on statistical analyses. This is due to the smaller size of this WMU and fewer forest plots in this WMU. Since regeneration in WMU 5A falls between WMUs 4B and 4E, we considered it good.



The rest of the WMUs (in yellow) are between poor and good and considered “fair”.

## Deer health

Deer health is “at target” for a majority of the WMUs (in green). WMUs 1B and 5D have more than 1.5 embryos per adult doe and are considered “above target” (in dark green). WMU 3D had less than 1.5 embryos per adult doe and is “below target” (in red).



## Citizen Advisory Committees

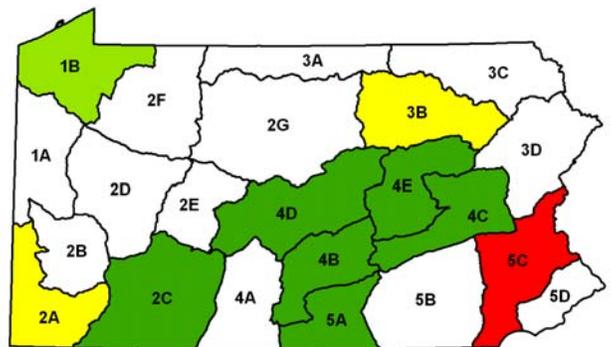
Citizen Advisory Committees have been completed in 10 WMUs. The remainder will be completed over the next three years.

CACs in WMUs 2C, 4B, 4C, 4D, 4E, and 5A (in green) recommended population increases.

CACs in WMUs 2A and 3B (in yellow) recommended populations remain stable.

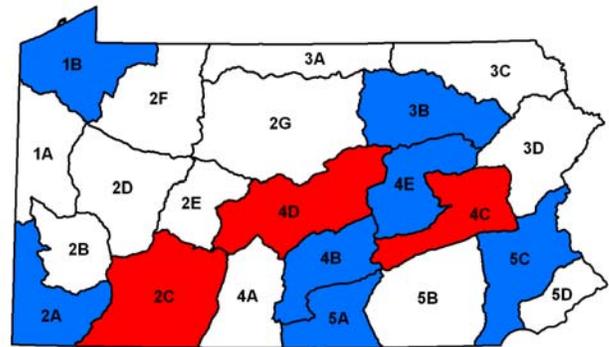
CACs in WMU 5C (in red) recommended a reduction in the deer population.

The CAC in WMU 1B (in light green) recommended a population increase *if* the forest habitat health measure improved. Since forest habitat health remains poor in this WMU, stabilizing the population is consistent with the CAC recommendation.



CAC recommendations are not the final word on WMU deer management decisions. CACs provide a recommendation to the Deer Section, which then considers the CAC recommendation in conjunction with deer and forest health measure data.

Deer Section recommendations will not always follow CAC recommendations. For example, if adult females are producing less than 1.5 embryos per doe or less than 70 percent of the forest plots have enough young trees to replace the current forest, then the Deer Section cannot recommend deer population increases. This situation has occurred in WMUs 2C, 4C, and 4D (in red). In seven of the 10 WMUs where CACs have been completed, the Deer Section has agreed with the CAC recommendation (WMUs in blue).



## Just the Data...

Below are forest regeneration and deer reproduction data used to assess WMU forest habitat health and deer health for the 2008-09 antlerless allocations.

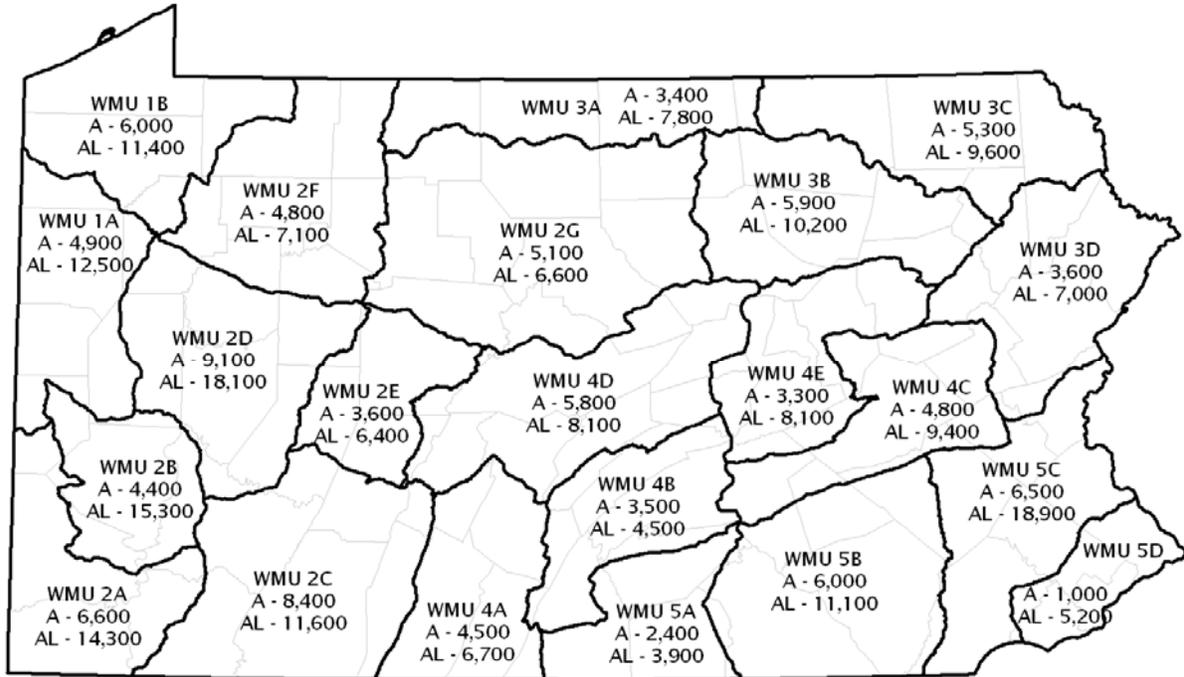
WMU	Percent of plots that have adequate regeneration	Forest Habitat Health Assessment	Embryos per Adult Female	Deer Health Assessment
1A	53%	FAIR	1.50	AT TARGET
1B	35%	POOR	1.69	ABOVE TARGET
2A	46%	FAIR	1.37	AT TARGET
2B	59%	FAIR	1.59	AT TARGET
2C	56%	FAIR	1.38	AT TARGET
2D	57%	FAIR	1.60	AT TARGET
2E	54%	FAIR	1.58	AT TARGET
2F	34%	POOR	1.39	AT TARGET
2G	42%	POOR	1.68	AT TARGET
3A	61%	FAIR	1.50	AT TARGET
3B	59%	FAIR	1.36	AT TARGET
3C	53%	FAIR	1.53	AT TARGET
3D	54%	FAIR	1.28	BELOW TARGET
4A	58%	FAIR	1.52	AT TARGET
4B	63%	GOOD	1.50	AT TARGET
4C	60%	FAIR	1.36	AT TARGET
4D	53%	FAIR	1.55	AT TARGET
4E	74%	GOOD	1.66	AT TARGET
5A	66%	FAIR	1.64	AT TARGET
5B	58%	FAIR	1.55	AT TARGET
5C	23%	POOR	1.60	AT TARGET
5D	No Data	--	1.71	ABOVE TARGET

### FAST FACT

*About three percent of Pennsylvania's does carry triplets.*

# 2007-08 Deer Harvests

## 2007-08 DEER HARVEST



ANTLERED DEER SYMBOL (A)		ANTLERLESS DEER SYMBOL (AL)	
WMU KNOWN.....	108,900	WMU KNOWN.....	213,800
WMU UNKNOWN.....	300	WMU UNKNOWN.....	70
TOTAL.....	109,200	TOTAL.....	213,870

TOTAL DEER HARVEST.....323,070

## The Rumor Report

### *Financial Paybacks and the Direction of Deer Management?*

We regularly hear allegations of “outside” interests influencing deer management recommendations. Alleged payoffs by timber and insurance companies top the list. In reality, deer management recommendations are based, not on payoffs from special interest groups, but on goals provided by groups with an interest in deer management. In July 2002, these groups, including the sportsmen groups below, met, identified, and agreed to deer management goals guiding the deer management program.

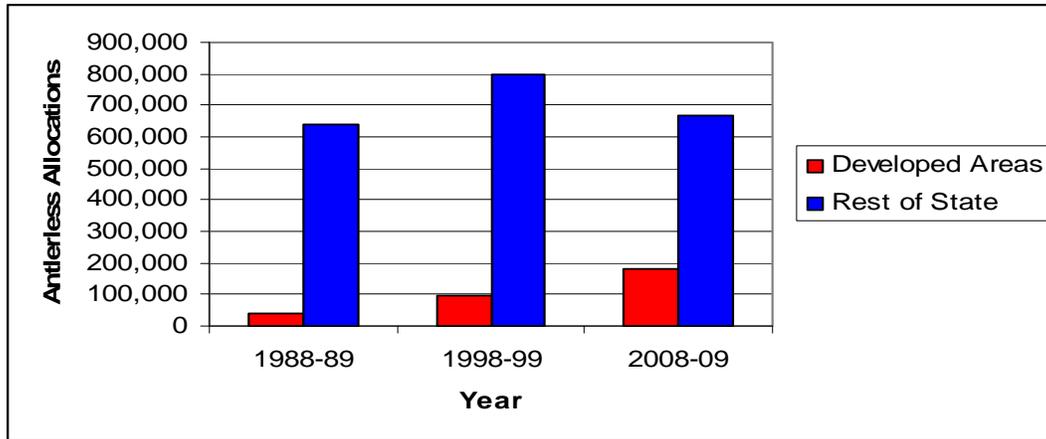
**Sportsmen organizations who identified deer management goals**

- Pennsylvania Federation of Sportsmen’s Clubs
- Unified Sportsmen of Pennsylvania
- Pennsylvania Deer Association
- United Bowhunters of Pennsylvania
- Quality Deer Management Association
- National Wild Turkey Federation

## A Look Back

### *Antlerless License Allocations 10 and 20 years ago versus Today*

When discussing antlerless license allocations, it is easiest to compare statewide numbers from year to year. However, management decisions are not based on statewide numbers. Management decisions are made for each wildlife management unit. The figure below demonstrates how statewide allocations have been distributed over the last few decades. Although, statewide allocations may be slightly higher than in the past, the distribution is different. Today, a higher percentage of annual antlerless allocations are designated for Pennsylvania’s most developed areas surrounding Pittsburgh and Philadelphia.



## You Don't Say...

### *Check Stations, A Better Alternative?*

**ISSUE:** Some believe check stations would be a better way to estimate the deer harvest than report cards.

**RESPONSE:** Check stations provide the same information as report cards – the number of deer reported by hunters – but for more cost and more inconvenience to hunters.

Check stations only provide the number of deer hunters report. And, just like with report cards, all hunters will not take a deer to a check station. As a result, an estimate of the total deer harvest would still be necessary.



Under today’s system, a successful deer hunter needs to take a couple of minutes, fill out a postage paid report card, and drop it in the mail.

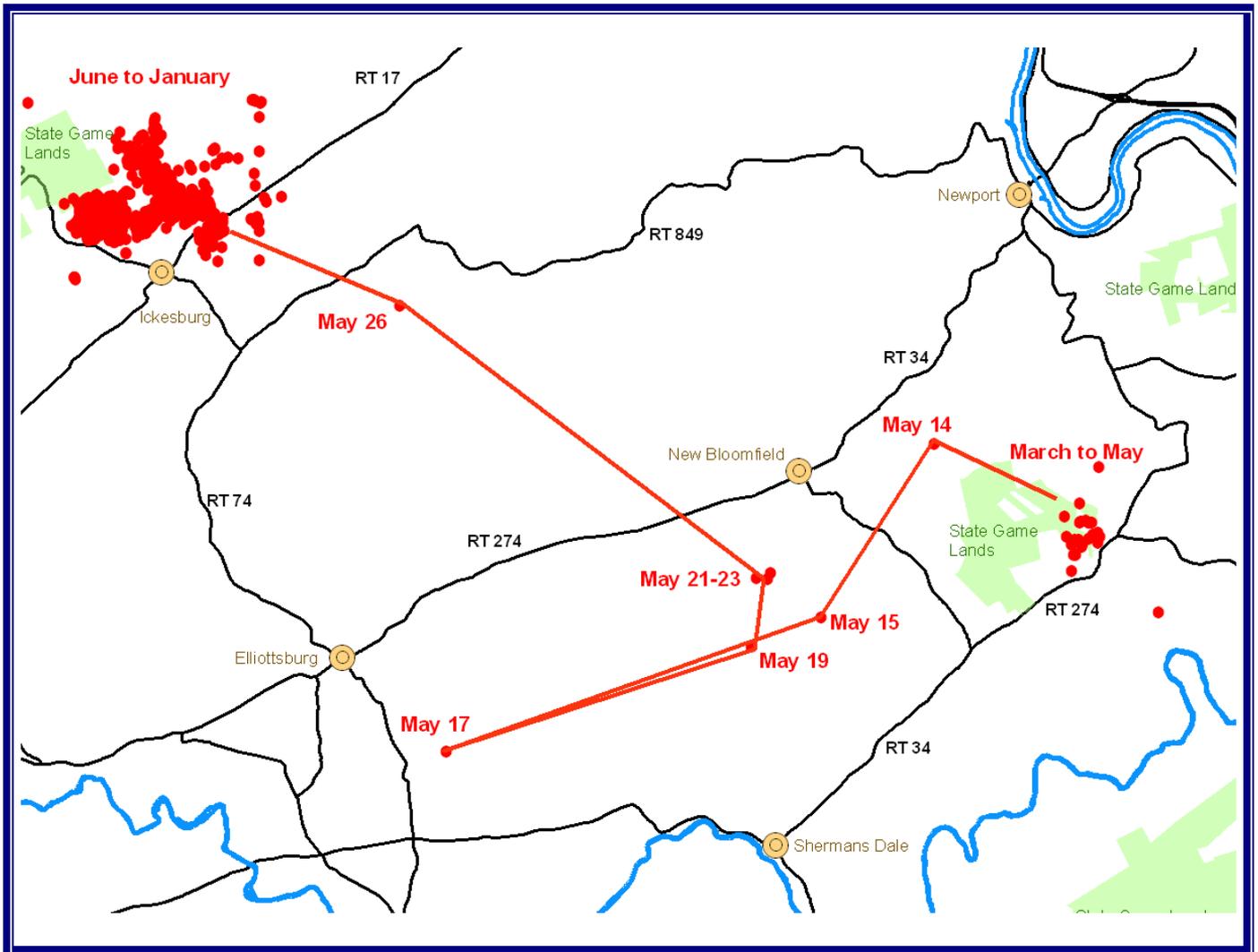
Compare this effort to loading up a deer, driving to a check station, waiting in line, filling out paperwork, and then returning to home or camp. Which is easier? Which is more convenient?

Despite the ease and simplicity of submitting a report card, less than 40 percent of successful deer hunters sent in report cards during the 2007-08 hunting seasons. Greater cooperation by successful deer hunters is the only “fix” needed to increase the data used in estimating Pennsylvania’s deer harvests.

## Observations From Penn's Woods

### *GPS radio collar and a long distance traveler*

As part of the Game Commission's deer research program, we use GPS radio collars to track deer movements. Once placed on a deer, GPS radio collars automatically record a deer's location using satellites. GPS collars store these locations until retrieved by Game Commission researchers. The following map details the travels of a 10-month-old female fawn that was captured on March 30, 2007 on State Game Lands 256. In mid-May, she left SGL 256 and over the course of the about two weeks, she traveled at least 24 miles. By the end of May, she had settled into another home range and remained there. As designed, her GPS radio collar dropped off on January 24, 2008 so we could retrieve it and download the locations.



Map displaying locations of female white-tailed deer wearing a GPS radio collar from March 2007 to January 2008.

## Research Nationwide

### *Acceptable Deer Management Strategies in Suburban Areas*

In an article titled, “Acceptance of deer management strategies by suburban homeowners and bowhunters” that was published in the *Journal of Wildlife Management* in 2007, researchers from Connecticut investigated homeowner and bowhunter attitudes toward lethal and nonlethal deer management strategies. They sent surveys to more than 150 bowhunters and 450 homeowners in Greenwich, Connecticut.

Bowhunters did not support a crossbow season during the regular archery season, but a majority did support a crossbow season outside the regular archery season. Bowhunters opposed crossbows because they believed they were too dangerous and provided no challenge or were too similar to gun hunting.

Hunting occurred on 10 percent of the homeowners’ properties and 74 percent of homeowners supported some type of lethal control to manage or reduce deer populations. Of the lethal control options, homeowners preferred bowhunting. Homeowner support for lethal control did not change if venison was donated to food charities.



Homeowner support of deer management strategies declined as the annual cost increased from \$0 to \$50-99 per household. If there was no cost to them, 79 percent of homeowners preferred birth control or trap and relocate (70 percent of homeowners) options, and they were willing to wait at least a year to see deer population reduction. However, if there was a cost, the time homeowners were willing to wait increased. Clearly, homeowner opinions about acceptable deer management options are influenced by costs.

Although contraceptives and trap and relocate appeal to the “don’t hurt the deer” side of the suburban deer debate, these options often have high price tags and limited effectiveness. Hunting remains the best low-cost option.

## In the Next Issue, September 2008

- Deer Management: the next 10 years
- What effect does the moon have on the rut?
- Bucks, Bulls, and Antler Restrictions