



Indiana DNR Division of Fish & Wildlife

A Review of Indiana Deer Management Goals: 2012-2016

In May 2017, the Indiana DNR, Division of Fish & Wildlife (DFW) worked with Indiana white-tailed deer stakeholder groups to review the previous five-year deer management goal adopted in 2012 and discuss a new management goal for the next five years.

From 2012-2016, the five-year deer management goal, was to “focus deer herd reduction in a strategically targeted manner to more adequately balance ecological, recreational, and economic needs of the citizens of Indiana.” At the time of the 2012 stakeholder review, increasing deer-related crop damage and deer-vehicle collisions had created an environment that could potentially threaten DNR’s statutory ability to manage Indiana’s deer herd. The plan included management strategies that extended and added hunting seasons, increased harvest limits, promoted venison donation programs, increased hunter access, included new equipment types, and created the license bundle. Metrics to evaluate the effectiveness of resulting changes on the deer population were included with the intent of reviewing the five-year management goal in 2017. Metrics that would indicate reductions had been successful included:

- 1) An annual harvest that is at least 60% antlerless in each county
- 2) A reduction in county antlerless quotas over time
- 3) Responses from landowner and deer hunter surveys that indicate a reduction in the deer population
- 4) A reduction in deer-vehicle collision (DVC) rates

Effectiveness of the 2012-2016 Management Strategies

Maintaining an annual deer harvest sex ratio of 60:40 F:M

To reduce the deer herd at the county level, a target doe harvest of at least 60% was established for each county. A decrease in the percent of female-to-male (F:M) deer harvest (i.e., less than 60% after a period of greater than 60%) was considered to be an indicator of a reduction in the doe population, which would lead to a decline in the overall deer population. High county bonus antlerless quotas and the Special Antlerless Firearms season were tools to provide opportunities to increase doe harvest in the county. However, the results of this management strategy were inconclusive, primarily because deer

populations in counties or groups of counties did not necessarily respond to a 60:40 F:M harvest ratio in the same fashion.

Reductions in county bonus antlerless quotas

The use of large county bonus antlerless quotas declined over the 5 year period, as indicated by a significant reduction in the number of does that could be harvested in each county. The number of counties with an antlerless quota of 8 dropped from a high of 45 counties in 2011 and 2012 to 23 counties in 2016 (Figure 1).

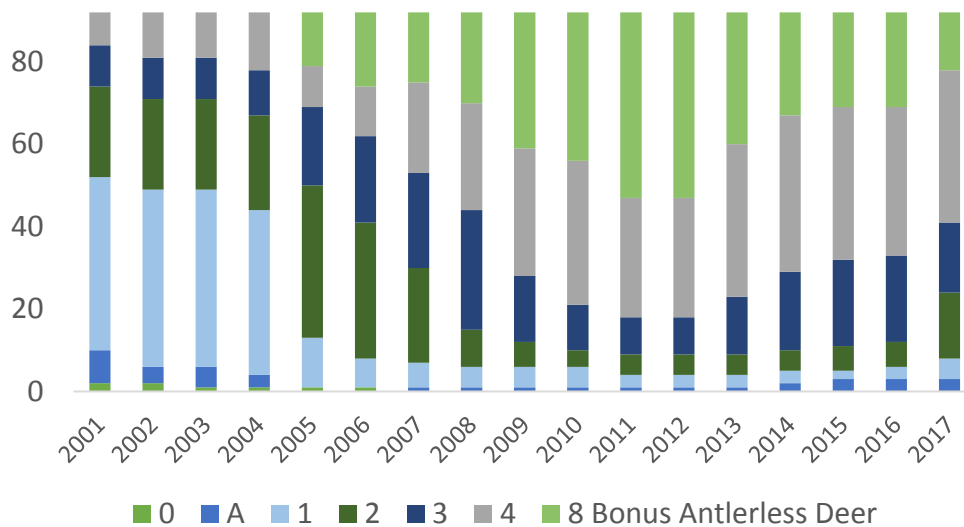


Figure 1. Number of counties by bonus antlerless quotas in Indiana, 2001 - 2017.

Monitoring landowner and deer hunter survey responses

Part of measuring the effectiveness of the 2012-2017 deer management goal was to survey hunters and farming landowners on topics for which responses serve as indices of the deer population. In general, trends in stakeholder observations and desires indicated a perceived lower deer population. When the five-year goal was evaluated in 2017, damage reported by landowners and the number of landowners desiring to see less deer declined from 2012 in many counties. At the same time, there was greater hunter dissatisfaction with statewide deer management and an increase in hunter opinion that there were fewer deer.

A reduction in deer-vehicle collision rates

Deer-vehicle collision records are maintained by the Indiana Department of Transportation (INDOT) and reported by local police and sheriff departments and the Indiana State Police. Although inconsistencies exist in data collection and in factors that affect the frequency of collisions with deer, DVCs are an independent measure that may be an indicator, in part, of trends in deer populations. Collisions are

examined on a county basis and are standardized by the number of miles driven in a given county, which can affect this metric if the number of miles changes substantially, such as when a new interstate section opens. Additional research is needed to determine if changes in DVCs align with other deer population indices. Although DVCs declined after highs in 2007 and 2009, the apparent decline during 2012-2017 was not statistically significant (Figure 2).

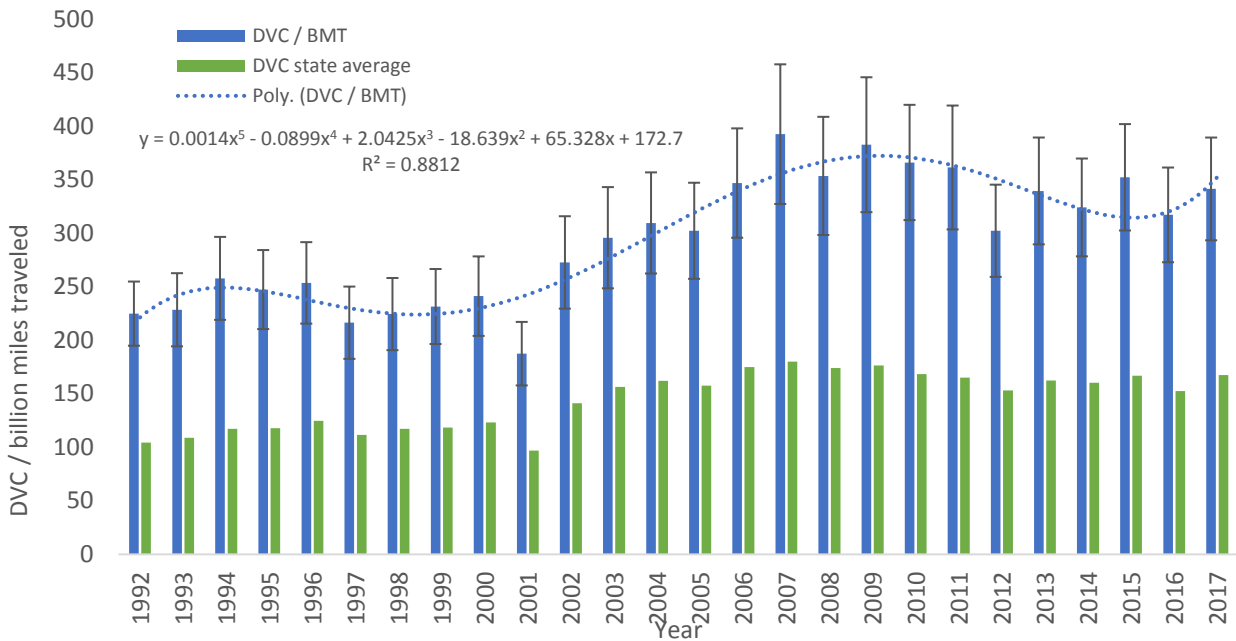


Figure 2. Deer-vehicle collisions (DVCs) and DVCs billion miles traveled (DVC/bmt) averaged by county in Indiana, 1992 - 2017.

Other factors used in evaluating success

Additional factors were also considered and measured in surveys such as opinions and use of a new hunting license and equipment type that were initiated as part of the 2012-2017 management goal (i.e., bundle license and the use of crossbows), awareness and use of deer donation programs, and the use of the Late Antlerless Firearm season. DNR also looked at changes in harvest by individual hunters. The results of many of these surveys and measurements can be found throughout the 2017-2018 Indiana White-tailed Deer Report. County level data for various measures are published in the County Deer Data section of that report.

Evaluation Summary

When all metrics were considered, it appeared the deer population had been reduced in many counties, but the magnitude of the decline was uncertain. In some counties, there appeared to be only a minor reduction to the population or none at all. When more measures and response variables were selected,

confounding factors emerged that made definitive analysis of the data and determining the size of the deer herd problematic.

The full summary of the review of the 2012-2016 Management Plan can be found in the 2017 Deer Report at https://www.in.gov/dnr/fishwild/files/fw-DeerSummaryReport_2017.pdf