

Landowner Wildlife Permits



Executive Summary

[HB1010](#) and [SB427](#) propose a change to current regulations regarding landowner deer and turkey permits. Specifically, this legislation would reduce the minimum land requirement from 20 acres to 5 acres for a landowner to be eligible for landowner permits. In 2020, the Missouri Department of Conservation (MDC) increased the resident landowner acreage requirement from 5 to 20 acres based feedback through public comment. Non-residents must own 75 contiguous acres to be eligible for landowner permits.

Currently, MDC provides resident landowners with up to six no-cost deer permits and up to three no-cost turkey permits each year to be used during the statewide deer and turkey hunting seasons. Non-resident landowners are eligible to receive up to two deer permits and three turkey permits each year.¹ Under current MDC regulations, landowners are required to submit property information in order to obtain landowner permits, however, the proposed legislation would remove this requirement.

Highlights

- Based on the most recent MDC reports, deer and turkey **populations are stable or increasing** in most Missouri counties. Hunters and landowners report about the right amount of deer in most of the state based on social perceptions.
- A biological sustainability **deer density in Missouri is approximately 1 deer per 18 to 25 acres**. Studies in other states have found that deer densities increase in exurban areas with smaller land parcels (5-10 acres) and less hunting pressure.
- Most U.S. states offer landowner permits in some capacity as an incentive to support habitat conservation on privately owned lands. Surrounding states (IL, KS, IA) provide no-cost landowner permits based on contiguous acres owned.

Limitations

- Because the landowner permit acreage change in Missouri went into effect in 2020, there is no information available to describe any potential impacts on harvest or hunter satisfaction.

Research Background

Deer and Turkey Populations in Missouri

Missouri white-tailed deer and wild turkey populations are reported annually by the Missouri Department of Conservation (MDC). Population status can be defined based on the total number of individuals (with models accounting for age and sex) or based on biologically sustainable and socially acceptable populations. For deer and turkey, the population model used by MDC takes into account survival, reproductive rates, and harvest data reported by hunters, and is further refined with ongoing research projects to monitor population dynamics.² Additionally, MDC surveys landowners and hunters each year to determine the social carrying capacity.

This science note was prepared by MOST Policy Initiative, Inc. a nonprofit organization aimed to improve the health, sustainability, and economic growth of Missouri communities by providing objective, non-partisan information to Missouri's decisionmakers. For more information, contact Dr. Rachel Owen, Director – rachel@mostpolicyinitiative.org. This was prepared on February 22, 2021.

In 2019, Missouri's total deer population was stable or increasing across most of the state (Figure 1). Based on survey responses from hunters and landowners, there were about the right amount of deer statewide except in a few counties, where stakeholders reported too few or too many deer. During the last decade, deer numbers have generally been increasing in most Missouri counties. Between 2000 and 2019, harvested deer (archery and firearms combined) trends were relatively stable with northern Missouri regions declining slightly and southern Missouri regions increasing slightly. Deer harvested are consistently lower than the total number of permits purchased and given at no-cost to landowners. During the 2019-2020 deer season, 31% of total permits were issued as landowner permits.³

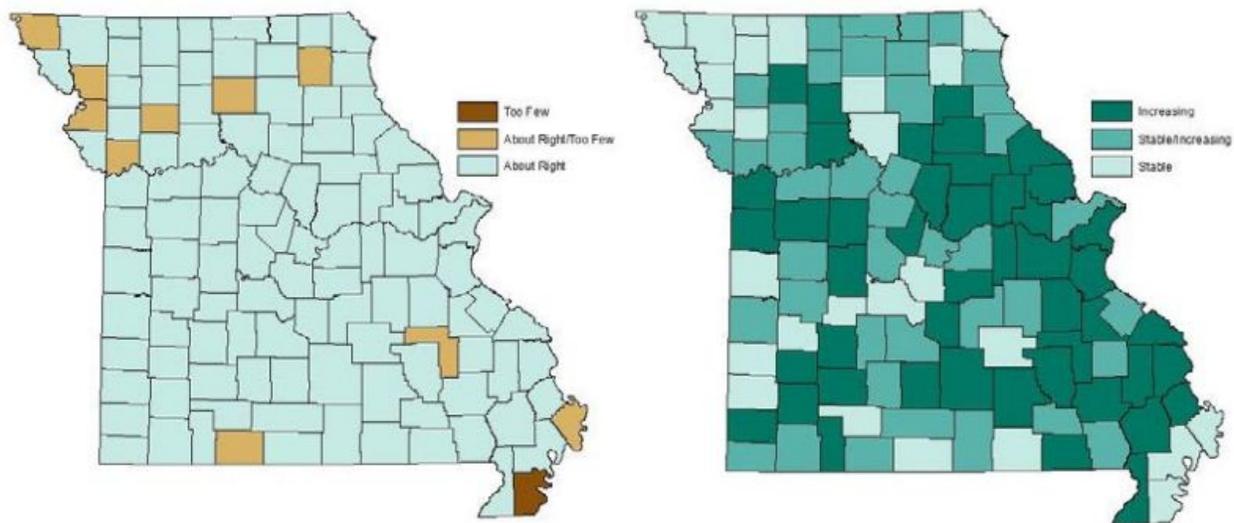


Figure 1. Social and biological carrying capacity for deer in 2019 (left) and total deer population in 2019 (right)²

Missouri's turkey population peaked in the 1990s and 2000s and has since declined to a stable level based on the biological carrying capacity across the state. Turkey populations tend to vary more than deer populations from year-to-year due to nest and poult (young turkeys) survival successes or failures that may occur for a variety of reasons, including predation and environmental factors.⁴ Similar to deer, turkey populations are estimated based on stakeholder surveys, telecheck data, and ongoing research to refine models. Each year, approximately 10% of the total turkey population is harvested during the spring hunting seasons.^{2,5}

Habitat Requirements and Ranges

Deer require a diversity of landscape features to provide adequate food, cover, and water throughout the year. Ideal deer habitat will contain a mix of forests, woodlands, pastures, croplands, and open areas. If certain habitat elements are not adequate, deer populations and their geographic range may be diminished.^{6,7} Healthy deer densities, based on biological carrying capacity in Missouri, range from 18 to 25 acres per deer.^{2,8}

Agricultural productivity (e.g., crop yields) may be directly related to deer population sizes in the Midwest due to an increased food supply for deer on the landscape. However, deer feeding on crops may also lead to more agricultural damage and negative social interactions of deer and

landowners.⁹ Studies have also found that deer density tends to increase on exurban landscapes where there are smaller parcels of land and less hunting opportunities.¹⁰

Turkey populations are dependent upon hen survival, nest success, and poult survival which are all influenced by habitat quality and quantity. Annual hen survival is only around 60% in Missouri.¹¹ Nest success requires adequate cover in April and May to protect the nests from predators (e.g., coyotes, raccoons, foxes, etc.) and other disturbances. In order for poults to survive, turkeys must have access to adequate food and cover through a combination of tall grass, trees, or shrubs and open spaces.¹¹

Landowner Permits by State

Most U.S. states have some form of landowner permits for harvesting wildlife. Similar to Missouri, several states allow landowners to obtain permits at a free or reduced rate based on the number of contiguous acres on their property (Table 1). Other states allot landowner permits through a lottery system, where a certain percentage of all hunting tags will be given to landowners by random selection from the landowner pool (e.g., CO). Many states do not allow non-resident landowners to obtain permits at a discounted or free rate. Like Missouri, most states limit landowner permits to individuals in the same household as the landowner (e.g., IL, KS, WY), however, some states allow landowners to sell or give away their permits to other individuals (e.g., UT, CO, NM). In a 2016 survey, MDC found that 35% of landowner permits distributed in Missouri were used improperly.²

State	Minimum Acres (for no-cost permits)	Other Notes
Illinois	39.5	Eligible for landowners and tenants
Iowa	2	Eligible for landowners and tenants, must register properties
Nebraska	NA	Landowners must purchase big game permits
Kansas	80	Eligible for landowners and tenants

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