

Missouri Elk Management Plan



MISSOURI DEPARTMENT OF CONSERVATION
(March 11, 2020)



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INTRODUCTION

Elk (*Cervus elaphus*) are a large, charismatic megafauna that were recently reintroduced to Missouri. While the distribution and number of elk in Missouri will never be that of white-tailed deer, they are still important to the citizens of Missouri. Balancing public viewing opportunities with limited recreational hunting opportunities and working to minimize conflicts with private landowners and other stakeholder groups are some of the challenges we face while managing elk in Missouri.

The elk management plan was developed to outline the components of Missouri's elk program and provide strategic direction for elk management in Missouri. This plan does not outline operational details of the elk management program. Elk habitat and population management will likely be very dynamic as the herd continues to expand in number and distribution, thus operational details (e.g., specific habitat management practices, proposed regulation changes) of plan implementation will be evaluated and implemented through time with appropriate processes.

This plan outlines three primary goals that incorporate the current priorities for elk management in Missouri: 1) Proactively manage for a biologically and socially balanced and healthy elk population within the defined elk restoration counties at levels acceptable for ecosystem health, agriculture, and recreational goals using science-based wildlife management practices; 2) Provide opportunities for all citizens to enjoy elk-related recreational activities (including hunting and wildlife viewing), and promote recreational elk hunting as the primary tool for achieving and maintaining elk population goals; 3) Provide information to the public about all aspects of elk biology and management in Missouri and create opportunities for additional public engagement in the decision-making process regarding the management of the elk resource.

HISTORY OF ELK IN MISSOURI

Decline of the Missouri Elk Herd

The eastern subspecies of elk (*Cervus elaphus canadensis*) once ranged throughout most of Missouri. Although, historically, elk were present in greatest numbers on the plains of Northern Missouri, during Henry Schoolcraft's 1818-1819 expedition through the Ozark Mountains of Missouri and Arkansas, sightings of elk or tracks of elk were noted on several occasions. With the arrival and settlement of Europeans, elk abundance and distribution gradually began to shrink – primarily due to overharvest and habitat conversion. Elk were no longer present in the St. Louis region by 1802, were thought to be gone from north Missouri by 1840, and many accounts list them absent in the Ozarks after 1840. By the late 1800s, elk were becoming scarce throughout Missouri and the last reported elk harvested in Missouri was killed in 1886 in Texas County. This scenario played out in a similar fashion throughout the range of the Eastern subspecies of elk, and before 1900 the subspecies was extinct.

STATUS OF ELK IN MISSOURI

Restoration of the Missouri Elk Herd

Almost immediately following extinction of the eastern subspecies of elk, attempts at restoring free-ranging elk populations in eastern North America were initiated. Some of these early attempts at restoration were successful, including the restoration attempts in Pennsylvania in 1913 and Michigan in 1915, but most failed due to poor translocation practices, low initial population sizes, and poaching. Renewed interest in elk restorations in eastern North America, primarily after 1980, have generally met with greater success, and there are currently (2019) free ranging elk populations in Arkansas, Kansas,

Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Carolina, North Dakota, Oklahoma, Ontario, Pennsylvania, South Dakota, Tennessee, Texas, Virginia, West Virginia, and Wisconsin.

Elk restoration was first considered in Missouri in 2000 when the department, prompted by requests from The Wild Elk Institute of Missouri – a citizen group affiliated with the Conservation Federation of Missouri, initiated an elk reintroduction feasibility study. That study concluded that elk restoration in Missouri was biologically and socially feasible in portions of the Ozarks, but due to concerns over Chronic Wasting Disease (CWD) and habitat availability, the Conservation Commission suspended consideration of elk restoration. The issue was revisited in 2010 based on encouragement from the Rocky Mountain Elk Foundation and continued interest from Missouri citizens and Conservation Commissioners. At the October 2010 Conservation Commission meeting, an updated elk restoration plan was presented, and the Commission voted to move forward with restoring a free-ranging elk population to Missouri. The 2010 Missouri Elk Restoration Plan identified a restoration zone within the boundaries of Carter, Shannon, and Reynolds counties. This area was chosen due to a large proportion of public land, low agriculture acreage, and low road density. Opportunities to improve elk habitat on public land were identified and implemented.

Southeast Kentucky was chosen as the source population for Missouri's elk restoration. Kentucky underwent an elk restoration effort between 1997 and 2002 and used elk populations in Arizona, Kansas, New Mexico, North Dakota, Oregon, and Utah as sources. The Missouri elk restoration program was initiated in the winter of 2010-2011, when 35 Rocky Mountain elk (*Cervus elaphus nelsoni*) were captured in southeastern Kentucky and transported to the Missouri Ozarks. An additional 35 and 39 elk were captured in the winters of 2011-2012 and 2012-2013, respectively, and released at the same site. Stringent health protocols were developed to ensure the well-being and health of translocated elk and to minimize the risk of bringing new pathogens into Missouri. The intent of the restoration effort is for the elk population to primarily range throughout 3 counties in the Missouri Ozarks: Shannon, Carter, and Reynolds. Although elk were more abundant during pre-settlement times in Northern Missouri, restoration in that portion of the state was deemed unfeasible due to the high likelihood of human-elk conflict on agricultural land.

Elk research has been ongoing since 2011. The ongoing research provides MDC with information on elk survival, reproduction, movements, and habitat use. The science-based information gained from these efforts helps MDC better manage Missouri's elk population and make sound management decisions. The current elk population estimate in 2019 is around 175 adult elk. The Conservation Commission approved 3 key benchmarks in 2013 which had to be met prior to initiating an elk hunt in Missouri. They are: 1) Approximately 200 elk in the population, 2) 10% or greater population growth for 3 consecutive years, and 3) a bull:cow ratio of at least 1 bull:4 cows.

DEPARTMENT ELK PROGRAM MISSION STATEMENT

The mission of the elk program is to use science-based wildlife management to maintain a biologically and socially balanced elk population, provide recreational opportunities, and minimize human-elk conflicts and the potential for negative impacts on ecosystem health.

GOALS AND OBJECTIVES

The *Missouri Elk Management Plan* has been developed to provide long-term strategic goals that direct management of free-ranging elk in Missouri. This plan presents a series of goals, objectives, and

strategies for managing Missouri's elk in the future. The goals of this plan should remain relatively constant over time, but the objectives and strategies may need to be altered over time as Missouri's elk population and conditions surrounding it change.

Goal 1. Elk Population Management – Proactively manage for a biologically and socially balanced and healthy elk population within the defined elk restoration counties at levels acceptable for ecosystem health, agriculture, and recreational goals using science-based wildlife management practices.

Science-based harvest quotas and appropriate harvest recommendations will be utilized as tools to help manage herd population dynamics within desired ranges. Population goals may change through time as the elk population grows, occupies differing amounts of public and private lands, and as public attitudes and perceptions change. Season timing and structure will likely change frequently during the early years of elk hunting as more information is gathered on elk response to hunting, hunter success rates, and changes in the elk population occur.

To date, the elk restoration effort has maintained strong public support locally and across the state. It is imperative to the continued success of the restoration effort to maintain this positive public attitude towards elk. The department will continue to work with local partners (governmental, nongovernmental, and private landowners) to promote habitat improvement projects that will benefit elk and other species native to Missouri. The department also will work promptly to resolve conflicts that arise through an integrated management approach. While recreational hunting is the preferred method for managing the elk population and associated elk-human conflicts, traditional hunting practices may not always be feasible or effective. Consequently, utilizing alternative methods to mitigate damage may be needed to maintain public support. The Wandering Elk Guidelines provide guidance for agency and citizen response to unwanted elk including provisions for lethal control when warranted. Current and future measures include or may include technical assistance to landowners experiencing elk damage and/or provisions for hunter harvest of elk outside the elk restoration zone counties. Public confusion regarding cervid diseases could impact public acceptance of the elk herd as well. It is important that the public has an understanding of the different diseases (e.g., brainworm and CWD) impacting elk, the department's response, and the implications of those threats to other wildlife, livestock, and humans.

Objective 1.1 – Establish elk population goals within the Elk Restoration Zone Counties with consideration of available habitat, recreational demand, elk movements, and the potential for elk-related damage.

Strategy 1.1.1. Evaluate current methods for establishing population goals, and investigate new methods that incorporate habitat characteristics, hunter satisfaction, human-elk conflicts, and other factors (e.g., land use, road density, public versus private land).

Strategy 1.1.2. Evaluate the current processes and explore alternative methods for obtaining stakeholder input for developing population goals and proposing changes to the management of the elk population.

Objective 1.2 – Assess and monitor the elk population annually using science-based techniques.

Strategy 1.2.1. Evaluate current and future data collection needs for population assessment and monitoring using science-based techniques (e.g., population modeling, aerial surveys) to accurately assess population trends using harvest data, hunter surveys, and other methods as appropriate.

Strategy 1.2.2. Use public input (e.g., hunters, landowners) to determine socially acceptable elk population levels. Season structure and permit allocation can be adjusted over time to meet the balance of biological and social carrying capacities.

Strategy 1.2.3. Develop and implement methods to monitor herd health and habitat parameters (including reproductive and survival rates, age distribution, physical condition, and vegetation monitoring) to ensure elk populations are in balance with available habitat.

Objective 1.3 – Establish effective harvest guidelines for management of elk on both public and private lands to meet population goals.

Strategy 1.3.1. Evaluate and modify (as needed) season timing, structure, and harvest quotas to meet goals for managing for balanced herd structure.

Strategy 1.3.2. Periodically evaluate the regulatory framework to ensure that regulations are simple, easily understood, and provide the flexibility necessary to achieve population levels required to meet management goals on both public and private lands.

Strategy 1.3.3. Monitor elk sightings outside of the restoration zone counties utilizing the Wandering Elk Guidelines and periodically evaluate the need for more liberal harvest opportunities for wandering elk.

Objective 1.4 – Ensure the maintenance of a healthy elk population and minimize the threat and impacts of diseases on the elk population.

Strategy 1.4.1. Continue to conduct monitoring of elk herd health and implementing surveillance programs for diseases (including CWD and brainworm) that pose a significant risk to the elk population and when possible promote changes in management practices (e.g., habitat management to minimize impacts of brainworm).

Strategy 1.4.2. Evaluate the need for additional surveillance of other diseases and develop monitoring programs where appropriate.

Strategy 1.4.3. Develop contingency plans to manage diseases in free-ranging and captive cervids, where possible, to prevent or minimize population impacts (e.g., CWD Management Plan).

Strategy 1.4.4. Regulate captive cervids in a manner that minimizes the risk for disease transmission with free-ranging elk.

Strategy 1.4.5. Collaborate with adjoining states and other wildlife professionals around the country to stay informed about new and emerging wildlife disease issues and respond appropriately to emerging threats.

Strategy 1.4.6. Minimize the risks from diseases that impact other wildlife species, humans, and livestock by educating the public about zoonotic disease risks and promoting management practices that minimize the risk of spread of infectious diseases.

Objective 1.5 – Manage for an elk population within the elk restoration zone counties, promote habitat improvements on targeted public and private lands, and minimize conflicts with stakeholders.

Strategy 1.5.1. Continue to implement elk-friendly habitat management practices on MDC lands and assist with coordination of partner agency elk habitat management practices.

Strategy 1.5.2. Continue working with existing partner agencies to explore new opportunities to provide quality elk habitat on public lands not owned and managed by MDC.

Strategy 1.5.3. Work with existing partner agencies to explore new opportunities to provide quality elk habitat on private lands.

Strategy 1.5.4. Continue to administer a suite of federal and state cost share programs in support of elk habitat management.

Strategy 1.5.5. Work with other partners and stakeholders to implement appropriate population management strategies on lands not owned or managed by MDC.

Strategy 1.5.6. Provide timely and consistent technical assistance on various approaches to management of elk-related damage as needed.

Strategy 1.5.7. Annually review elk issues and evaluate alternatives to minimize conflicts and meet population management goals in areas where traditional population management is constrained (for example Peck Ranch refuge, buffer counties).

Goal 2. Hunting and Wildlife Viewing – Provide opportunities for all citizens to enjoy elk-related recreational activities (including hunting and wildlife viewing), and promote recreational elk hunting as the primary tool for achieving and maintaining elk population goals.

Recreational hunting is the preferred method for managing elk populations in Missouri. Early elk hunting seasons will be structured to minimize disturbance during the peak of the breeding season to promote population growth. As the population grows, season timing may be adjusted to provide hunters with a greater opportunity to pursue elk during the rutting season. Elk regulations will be designed to be simple to understand. Initial elk seasons will be conservative with respect to permit numbers and season length until metrics such as hunter success and effort become better known. Elk hunting season structure will likely be dynamic over the first few years until these data can be collected.

As the elk herd expands over time in number and distribution, it may become necessary to address habituated elk or elk concentrating in unwanted locations. An annual review of the season structure could include implementation of specific managed hunts or regulations on state, federal, or private lands to address local elk issues and provide additional recreational opportunities when warranted (e.g., an early or late season antlerless elk hunt to address local damage concerns).

Given the relatively small range elk are likely to occupy in Missouri and the current population goal of 400-500 elk, it is unlikely that a large percentage of Missourians will have the opportunity to hunt elk in Missouri. Many Missourians have a desire to see elk in the wild, especially during the breeding season. To maximize public opportunities to view elk, the department will maintain public viewing opportunities, minimize road closures on department-managed areas when possible, and will work with other public agencies to provide additional elk viewing opportunities when warranted.

Objective 2.1 – Maintain an elk hunting season structure and regulations that achieve the elk population goals.

Strategy 2.1.1. Evaluate season structure, timing, and methods to maximize hunting opportunities consistent with population goals.

Strategy 2.1.2. Maintain a simple regulatory framework that provides a diversity of hunting opportunities and a quality hunting experience.

Strategy 2.1.3. Promote recreational hunting as the primary tool to manage the elk population and achieve population goals.

Objective 2.2 – Maintain a simple regulatory system that ensures a fair and equitable distribution of hunting opportunities (e.g., seasons, methods, and permits) on public and private lands and a quality hunting experience with adequate hunter success.

Strategy 2.2.1. Evaluate permit allocation to hunters and landowners annually and adjust as appropriate.

Strategy 2.2.2. Evaluate harvest rates in different portions of the season and, where appropriate, adjust season structure and permit allocation to provide additional opportunities.

Strategy 2.2.3. Use hunter surveys and harvest data to inform changes in the elk hunting regulations to address hunter success and satisfaction.

Strategy 2.2.4. Continue to obtain stakeholder input regarding population management goals and demographics of the elk population.

Strategy 2.2.5. Continue to coordinate with partners to implement appropriate population management strategies and to provide quality hunting opportunities on public lands.

Objective 2.3 – Maintain quality elk viewing opportunities on public lands.

Strategy 2.3.1. Maintain and promote elk driving tours and viewing opportunities on Peck Ranch Conservation Area and Current River Conservation Area.

Strategy 2.3.2. Collect stakeholder input on elk viewing opportunities to inform future actions.

Strategy 2.3.3. Work with public land management agencies to provide elk viewing opportunities.

Goal 3. Education, Communication, and Public Engagement – Provide information to the public about all aspects of elk biology and management in Missouri and create opportunities for additional public engagement in the decision-making process regarding the management of the elk resource. The public is very interested and directly affected by all aspects of elk management. Additionally, any discussion of elk hunting, or management is likely to elicit a strong response. Because of the diversity of stakeholders affected by elk management, it is critical that effective communication and engagement be a priority to ensure the long-term success of the elk management program. The department will implement strategies to engage the public, key stakeholders, and partner organizations to proactively address management issues.

Proper hunter preparation will be an important part of the elk hunt process. It will be imperative that citizens successfully drawing a tag are properly prepared to deal with a large carcass if successful. In the early era of elk hunts, this issue can be addressed through direct hunter contact and briefings prior to the season. As tag numbers and hunter participation increase over time, public outreach materials will be developed to help educate sportsmen about how to properly prepare for elk hunting and recovery of game.

Objective 3.1 – Clearly and effectively communicate elk management strategies to all stakeholders.

Strategy 3.1.1. Ensure that the elk management information provided to the public is science-based, socially acceptable, accurate, and relevant.

Strategy 3.1.2. Develop and implement an elk communication strategy that relays appropriate elk management information to the public and key stakeholders.

Strategy 3.1.3. Create methods for obtaining stakeholder input regarding population management goals and demographics of the elk population.

Strategy 3.1.4. Maintain stakeholder engagement in elk management decisions (surveys, public meetings/open houses, focus groups) and clearly communicate outcomes.

Strategy 3.1.5. Engage and support partners in education and outreach efforts.

Objective 3.2 – Ensure stakeholders are informed about department guidelines surrounding elk management in Missouri.

Strategy 3.2.1. Provide information that minimizes confusion regarding restoration elk, wandering elk, and captive elk.

Strategy 3.2.2. Provide information that creates realistic expectations to agency response to sick elk and conflict situations.

Strategy 3.2.3. Develop outreach material and hunter briefings to educate hunters on elk hunting and carcass handling and transport.

Objective 3.3 – Continue to value and promote the role of private landowners in the management of Missouri’s elk herd.

Strategy 3.3.1. Provide landowners with guidance on habitat management practices that benefit elk and ecosystem health.

Strategy 3.3.2. Provide landowners with technical assistance to resolve conflicts on their property involving elk.

