



# Missouri Black Bear Management Plan 2020 – 2030

## Missouri Department of Conservation

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Trail camera photo from the Missouri Black Bear Research Project. Howell County, 2017.

*Sara Park Fay*  
\_\_\_\_\_  
DIRECTOR

*5/15/20*  
\_\_\_\_\_  
DATE

*Mike Huber*  
\_\_\_\_\_  
DEPUTY DIRECTOR, RESOURCE MANAGEMENT

*5/15/20*  
\_\_\_\_\_  
DATE

*J. L. Sumner*  
\_\_\_\_\_  
SCIENCE BRANCH CHIEF

*April 17, 2020*  
\_\_\_\_\_  
DATE

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## **INTRODUCTION**

The black bear is an increasingly significant wildlife resource in Missouri and while they disappeared from the state for a number of years, black bears are native to Missouri and represent an important part of our ecosystem. The Missouri Department of Conservation (MDC) has authority and responsibility to maintain and manage the black bear population. As with many large wildlife species, black bear management presents a number of opportunities and challenges ranging from providing the public opportunities to enjoy and appreciate bears to minimizing and addressing human-bear conflicts that are certain to arise from a growing population.

The Black Bear Management Plan was developed cooperatively between MDC's Black Bear Task Force, and representatives from the Missouri Department of Natural Resources, National Park Service and U.S. Forest Service. This plan identifies critical components of a multifaceted approach to management of Missouri's black bear population and provides strategic direction for the MDC's black bear management program over the next 10 years. By clarifying the MDC's bear management goals and objectives, and seeking public input on those goals and objectives, this plan provides an opportunity for critical input from Missouri citizens on the future direction of black bear management in Missouri. Many strategies that are outlined in this plan are currently underway, but it also proposes new approaches to be evaluated and developed during implementation of this plan. This plan does not outline operational details (specific research proposals, methods for gathering public attitudes, regulatory frameworks, etc.), which will be implemented through established MDC processes.

Previous plans have focused on gaining an understanding of Missouri's black bear population, including determining a baseline population estimate, habitat use, and established range. Great strides have been made in this regard and it is now clear that Missouri has an established and growing black bear population. Sighting reports continue to increase and occur in new areas, a baseline population estimate was produced, and reproductive parameters have been collected to model population growth into the future. Missouri's black bear population is well established, growing in size, and expanding in range. MDC is experiencing a paradigm shift in black bear management from gaining base knowledge of a returning bear population to managing a growing and expanding bear population, including increased public awareness of bears, expanding bear distribution, increases in human-bear conflicts and increasing public desire for harvest opportunities.

## **HISTORY OF BLACK BEARS IN MISSOURI**

Black bears were historically abundant in Missouri, but were seemingly nonexistent by the early 1900s. Many early county histories contain notes and reports of the remarkable number of bears in all areas of the state. Bears were a staple item for early settlers and were widely used for food as well as for their fat and skins. In fact, bears were more commonly killed by pioneers and early travelers than any large mammal, other than deer (McKinley 1962). However, by the 1830s and 1840s, bears were rare in north Missouri, and by 1894, bears were reported to be almost extinct in the Ozarks. Schwarz (1920) reported the bear was still present in southeastern Missouri in 1920, and they were "occasionally seen in the Bootheel" until the flood of 1927 (Godsey 1933).

One of the last records of a verified wild bear in Missouri (during the early 1900s) came from this area, one killed in 1931 (Bennitt and Nagel 1937). McKinley (1962) reports no claims of bears being present in the Ozarks during the 1890s-1950s, other than rumors during the 1940s and 1950s. He acknowledged, however, that some rumors may have been reliable, and cites two incidents of bears killed in the Ozarks during the 1950s.

The Arkansas Game and Fish Commission initiated a black bear restoration program in 1959. During 1959-1967, 254 black bears were captured in Minnesota and Manitoba, Canada and released in the Ozark and Ouachita mountains of western Arkansas. Since that time the Arkansas population expanded in both size and distribution. Following the Arkansas reintroductions, sightings of black bear began to rise in Missouri, with some bears undoubtedly coming into Missouri from Arkansas.

From 1950 – 1972 there were 54 reported occurrences of bears in 27 counties in Missouri. In 1990, a request for sighting information published in the June Conservationist magazine resulted in 55 reports of sightings in 26 counties. Over the last 2 decades, reports have increased substantially. From 2000 – 2010, MDC received 512 bear reports in 75 counties. From 2011 – 2017 MDC received 1,341 bear reports in 87 counties. Reports are not verified, and likely include some percent that are misidentified, but in general, the distribution and number of bear reports is steadily increasing.

## **IMPORTANCE OF BLACK BEARS IN MISSOURI**

The black bear is a native species to Missouri and represents an important component of Missouri's natural biodiversity. Black bear play an important role in forest ecosystems as seed dispersers and aid in forest decomposition processes by breaking down logs and dead trees in search of food. Bears are valued by many for their ecosystem functions, presence on the landscape, bringing a sense of wildness to the state, and the recreational opportunities they can provide.

## **CURRENT STATUS OF BLACK BEARS IN MISSOURI**

Initial research to estimate the size of the Missouri bear population, which began in 2010, suggested a 2012 statewide estimated population of just under 300 bears. Additionally, genetic research indicated descendants of Missouri's original bear population likely survived in remote parts of Missouri's Ozarks. Based on bear sightings, and initial population monitoring, the range of black bears is expanding geographically. In order to model statewide bear numbers and estimate population trajectory, MDC began a project in 2015 to measure reproductive and survival rates of female bears in Missouri. Based on this research, the bear population is estimated to be between 540 – 840 bears statewide (2019 population estimate) and is growing at approximately 9% annually. Given the growing population, MDC seeks to provide opportunity for Missourians to utilize this resource through the establishment of a limited, and highly regulated black bear hunting season. In the future, as the black bear population increases and upon establishment of population benchmarks, regulated harvest will serve as an essential component of population management.

## **MDC BEAR PROGRAM MISSION STATEMENT**

Use science-based methods to manage a self-sustaining population of black bear, a native species, increase bear awareness, minimize human-bear conflict, and provide recreational opportunities for all Missourians.

## **DEFINITIONS**

**Manage (Management):** For the purposes of this plan, manage (management) includes, but is not limited to population regulation through hunting, public education, conservation and/or manipulation of habitat, and response to human-bear conflict.

**Human Dimensions:** The area of study focused on gaining understanding of how and why humans value natural resources, how humans want resources managed, and how humans affect or are affected by natural resource management decisions – Taken from: Human Dimensions of Wildlife Management in North America. Methods can involve public surveys, focus groups, or other means of collecting stakeholder input.

**Recreational Opportunities/Activities:** Include both consumptive (harvest) and non-consumptive (wildlife viewing, photography, and tracking) uses of wildlife (bears).

## **GOALS, OBJECTIVES AND STRATEGIES**

**Goal 1: Use science-based methods to manage a self-sustaining population of black bear, focusing on research and monitoring, population management, and habitat management.**

- Objective 1.1: Use science-based methods to understand and manage black bear populations at multiple scales.
  - Strategy 1.1.1: Conduct scientifically appropriate monitoring and evaluation of population growth including sex ratios and regional differences as appropriate.
  - Strategy 1.1.2: Use population modeling techniques to understand harvest-levels and other mortality factors impacts on the black bear population.
  - Strategy 1.1.3: Utilize sighting reports and other citizen science techniques to monitor black bear distribution.
  - Strategy 1.1.4: Utilize research techniques to monitor and better understand seasonal habitat use and barriers to movement.
- Objective 1.2: Use research to manage for biologically and socially acceptable black bear populations within Missouri and seek to maintain those numbers through regulated harvest.
  - Strategy 1.2.1: Establish population benchmarks to maintain the black bear population within biological and socially acceptable limits which may allow the population to increase, stabilize, or decrease.
  - Strategy 1.2.2: Utilize the most appropriate harvest methods, season timing, season length, and bag limits to meet modeled population benchmarks.

- Strategy 1.2.3: Use human dimensions to develop measures of social tolerance levels at multiple scales.
- Strategy 1.2.4: Use human dimensions to inform decisions related to black bear harvest which may include, but not be limited to factors such as season timing, structure, and methods.
- Objective 1.3: Utilize research to understand black bear habitat use at multiple scales to better inform management decisions.
  - Strategy 1.3.1: Develop black bear habitat Best Management Practices that can be utilized at multiple scales within Missouri.
  - Strategy 1.3.2: Utilize and leverage partnerships to promote and develop habitat management practices to benefit black bears in Missouri, including promotion of landscape connectivity.

**Goal 2: Increase statewide awareness of Missouri’s black bear population and management program through coordinated outreach and public education.**

- Objective 2.1: Implement a coordinated in-person outreach program at the statewide level and within targeted geographies.
  - Strategy 2.1.1: Incorporate bear information as part of current and future MDC programs, including but not limited to hunter education.
  - Strategy 2.1.2: Provide information at public meetings and events.
  - Strategy 2.1.3: Utilize in-person outreach with a proactive focus within targeted geographies to reach areas with new and emerging bear populations.
  - Strategy 2.1.4: Use state, federal, and NGO partnerships to promote consistent bear messaging through partner in-person outreach programs.
  - Strategy 2.1.5: Develop outreach to promote recreational opportunities related to black bear.
- Objective 2.2: Implement a coordinated multimedia outreach program at the statewide level and within targeted geographies.
  - Strategy 2.2.1: Utilize traditional and social media to promote consistent bear messages.
  - Strategy 2.2.2: Periodically update and evaluate the Black Bear Communication Plan.
  - Strategy 2.2.3: Examine, and expand when needed, existing signage on MDC and partner lands to include bear messages.
  - Strategy 2.2.4: Utilize existing MDC publications to include updated bear information.
  - Strategy 2.2.5: Explore the use of advertising and other outreach methodologies to further promote bear messages.
  - Strategy 2.2.6: Utilize multimedia outlets with a proactive focus within targeted geographies to reach areas with new and emerging bear populations.

- Strategy 2.2.7: Use state, federal, and NGO partnerships to promote consistent bear messaging through partner multimedia outreach.
- Objective 2.3: Evaluate effectiveness of MDC's black bear educational programs and outreach, and update as needed.
  - Strategy 2.3.1: Use human dimensions to gain an understanding of the public's existing knowledge of black bears, the black bear population, and MDC's bear messaging.
- Objective 2.4: Implement a hunter education program with information specific to black bear.
  - Strategy 2.4.1: Develop educational materials to inform hunters on black bear habitat use, harvest strategies, regulations including wanton waste, and proper field care of harvested animals.
  - Strategy 2.4.2: Develop field to fork materials related to black bear to showcase the multiple uses for harvested animals.
  - Strategy 2.4.3: Incorporate black bear information into existing hunter education programming.

**Goal 3: Minimize and address human-bear conflicts.**

- Objective 3.1: Actively promote proactive measures to prevent/minimize human-bear conflicts.
  - Strategy 3.1.1: Refine, adopt and communicate a consistent internal bear message.
  - Strategy 3.1.2: Continue to develop, improve, and modify as needed, black bear response guidelines for a consistent response to human-bear conflict across the state.
  - Strategy 3.1.3: Work with all appropriate staff for consistent interpretation of guidelines and provide education to MDC staff on what is typical and acceptable bear behavior.
  - Strategy 3.1.4: Utilize educational displays and messaging regarding bears near homes, bears while camping, bears and agriculture, harassing bears, and removing attractants to promote a proactive approach to minimizing human-bear conflicts.
  - Strategy 3.1.5: Work with partnering agencies, non-governmental organizations civic groups, communities, law enforcement agencies and local governments to ensure consistent messaging on ways to reduce human-bear conflicts.
  - Strategy 3.1.6: As the lead agency on bear management decisions, provide guidance to partner agencies, communities, law enforcement agencies and local governments on appropriate response to bear reports and ways to minimize human-bear conflicts.
  - Strategy 3.1.6: Use human dimensions to assess Missourians' opinions on the black bear population, including the level of understanding of bears, tolerance levels of nuisance activities and willingness to make changes to prevent conflicts.

- Strategy 3.1.7: Work with agricultural producers and agricultural organizations to provide education to minimize bear damage to agricultural commodities.
- Objective 3.2: Address human-bear conflicts.
  - Strategy 3.2.1: Ensure MDC staff understand and follow established bear response guidelines.
  - Strategy 3.2.2: Ensure appropriate staff are trained in the most up-to-date nuisance control, harassment, and capture techniques and provide a timely, and situationally appropriate response to all bear complaints, including but not limited to complaints in towns, damage to agricultural commodities, and bear sightings in or around public use areas.
  - Strategy 3.2.3: Work with all Branches of MDC and with partner agencies to provide appropriate and consistent responses during nuisance events.
  - Strategy 3.2.4: Maintain a trained and staffed Wildlife-Human Attack Response Team (WHART) in each region to respond to a wildlife/human attack.
  - Strategy 3.2.5: Provide guidance to the public and agency partners, communities, law enforcement agencies and local governments on black bear conflicts including education concerning bear behavior and agency response, education on measures to reduce human-bear conflict, site visits when appropriate, and the use of response tools when deemed appropriate by trained staff.