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# HABITAT WORKS: HOW PARTNERSHIPS AND HABITAT IMPROVEMENT HAVE RESTORED QUAIL POPULATIONS IN THE 2C QUAIL FOCUS AREA, MISSOURI

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## ABSTRACT

The Missouri Department of Conservation (MDC) began establishing Quail Focus Areas (QFAs) on private lands in 2004. The goal of QFAs was to bring groups of landowners together to manage bobwhite habitat on a larger scale in a targeted landscape. Through a variety of state, federal, and other partnership programs, habitat improvement efforts have resulted in large increases in northern bobwhite (*Colinus virginianus*; hereafter, bobwhite) numbers in the 2C QFA. In spring 2013, MDC staff and Quail Forever biologists began monitoring bobwhite and songbirds in a portion of the 2C QFA in Carroll County, Missouri, USA and in a control area (without habitat management for bobwhite). This effort is part of the Coordinated Implementation Plan developed by the National Bobwhite Technical Committee as a part of the National Bobwhite Conservation Initiative. The goal of the monitoring plan is to document whether quail habitat management can achieve sustainable bobwhite populations within 5–10 years. We selected a 2,100-ha portion of the 2C QFA where habitat management for quail has been conducted through efforts by landowners, MDC staff, and Quail Forever volunteers. Point-transect surveys were conducted at 48 250-m radius points in spring for bobwhite and songbirds and at 12 500-m radius points in fall for bobwhite coveys. Quail densities ranged from 0.18 quail/ha (95% credible interval [CrI] = 0.09–0.32) to 0.41 quail/ha (95% CrI = 0.30–0.57) in the focus area and from 0.04 quail/ha (95% CrI = 0.01–0.11) to 0.12 quail/ha (95% CrI = 0.06–0.20) in the control area from 2013–2019. We have also documented increases in grassland songbirds through monitoring efforts. Results show that dedicated management efforts were successful in increasing bobwhite density in the focus area.

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**Key words:** *Colinus virginianus*, focus area, Missouri, monitoring, northern bobwhite, point-transect surveys, private land

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