# Abstracts of Presented Wildlife and Fisheries Technical Papers

## Bobwhite Restoration On Private Lands: How Realistic Are NBCI Population Goals?

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*Abstract:* Historically, abundant northern bobwhite (hereafter bobwhite) populations were an accidental byproduct of broadly applied land-use practices. Over the recent decades, bobwhites have declined dramatically throughout their range due to large scale loss or degradation of habitat. The Northern Bobwhite Conservation Initiative (NBCI) is a habitat-based restoration plan designed to restore bobwhite populations on improvable lands to a density comparable to that during the baseline year of 1980. Regional and state bobwhite initiatives have further developed explicit population and habitat goals. In Mississippi, the 1980 fall population density on acreage deemed suitable for bobwhite habitat was 0.029 coveys/acre or 7 birds/20 acres. The Mississippi NBCI established short-term goals (5–10 years) of restoring bobwhite densities within select focal areas to 0.015 coveys/acre or 3 to 4 birds/20 acres. Myriad challenges remain in stepping down and delivering regional and state-level habitat goals. Of primary interest are two questions: 1) Are these goals achievable? and 2) What percentage of a landscape needs to be affected to produce these densities? To answer these questions, we developed a private lands monitoring program to evaluate the effects of landscape-level management on quail populations throughout Mississippi. Using distance sampling techniques, we monitored fall quail populations on four focal properties implementing a variety of conservation practices at varying intensities. We compared bobwhite densities on these properties to that in the surrounding landscape matrix under no bobwhite management and landscapes with low-levels (5%–10%), specifically those enrolled in the Conservation Reserve Program, Conservation Program-33 (CP33). In the absence of bobwhite management, 2007/2008 fall densities on agricultural lands within the Southeastern Coastal Plain averaged 1 covey/177 acres or 1 bobwhite/15 acres (assuming 12 bobwhites/covey). Addition of CP33 buffers affecting an average 8% of the landscape and 15% of the row-crop acreage more than tripled fall density to an average of 1 covey/54 acres or 1 bobwhite/4.5 acres. Bobwhite densities on the surveyed 5400-acre private property in Clay County, Mississippi, where 25% is maintained in a variety of conservation practices including CP33, averaged 1 covey/29 acres or 1 bobwhite/2.4 acres. Bobwhite densities on a 3200-acre private property in Panola County, Mississippi, where 75% of the land is actively managed for bobwhite, averaged 1 covey/19 acres or 1 bobwhite/1.6 acre. The Mississippi Alluvial Valley is characterized by intensive monoculture farming with little native herbaceous habitat. The baseline bobwhite densities in the absence of management average 1 covey/ 384.6 acre or 1 bobwhite/32 acres. The addition of CP33 field buffers almost tripled fall density to an average 1 covey/142.9 acres (1 bobwhite/11.9 acres). Bobwhite densities on a 6400-acre property in Coahoma County, Mississippi, where bobwhite are not a specific management objective but are a desirable byproduct of broadly applied conservation practices, averaged 1 covey/55.5 acres (1 bird/4.6 acres). Based on these outcomes, we conclude that the NBCI goals are reasonable and achievable, particularly in the Southeastern Coastal Plain. The Mississippi NBCI short-term goals are achievable by only targeting 8% of the landscape and 15% of row-crop acreage. Furthermore, the Mississippi NBCI long-term goals are achievable with strategic planning and broadly-applied comprehensive conservation management systems. As the number of managed properties expands within focal areas thus increasing the proportions of the larger landscape supporting bobwhite, populations are expected to further increase.

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