

**NBCI's**

# *Bobwhite Almanac*

*State of the Bobwhite 2017*



***Has Pittman—Robertson  
Really Helped the Cause?***

## **Conservation Spotlight:**

- *Arkansas' Bobwhite Renaissance*
- *Florida's Upland Ecosystem Restoration Project*
- *Missouri's Private Land Focal Areas*
- *South Carolina's Partnerships*

**NBCI's Farm  
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*John L. Seymour*

President

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Cover photo courtesy of @Lynda Richardson, [www.lyndarichardson.com](http://www.lyndarichardson.com). Bobwhite pair in the snow with ground cherry.

NBCI'S BOBWHITE ALMANAC/STATE OF THE BOBWHITE REPORT is an annual publication of the National Bobwhite Conservation Initiative (NBCI) to provide a range-wide snapshot of population, hunting and conservation status of the northern bobwhite, *Colinus virginianus*, as well as a sampling of major efforts underway to reverse the bobwhite decline. This report is made possible by the financial support of participating state agencies, the Federal Aid in Wildlife Restoration Program, the University of Tennessee, the Quail and Upland Game Alliance, the Joe Crafton Family Endowment for Quail Restoration, and Park Cities Quail.

NBCI is an initiative by and for the National Bobwhite Technical Committee—25 state wildlife management agencies, along with numerous conservation groups, research institutions and federal partners—to provide national leadership, coordination and capacity to catalyze large-scale, strategic restoration of native habitats as the long-term means to restore widespread populations of wild bobwhites and, consequently, other species dependent on native grassland habitat. NBCI is headquartered at the University of Tennessee Institute of Agriculture.

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NEAFWA—Northeast Association of Fish and Wildlife Agencies

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### ***NBCI: Leading, Leveraging, Enabling***

The National Bobwhite Conservation Initiative (NBCI) presents this 2017 Bobwhite Almanac, State of the Bobwhite report. What a great honor it is to help highlight accomplishments of a concerted effort among our outstanding NBCI staff, partners at the University of Tennessee, and all dedicated biologists, agencies, and non-government organizations.

Growing up as an ol' northern Illinois farm boy, it was rare to hear the whistle of bobwhites. Of course, it was much more common to hear the cackle of a ring-necked pheasant rooster. It was not until becoming a wildlife student at Eastern Kentucky University that I gained appreciation for "Gentleman Bob."

Fast forward many years, I find myself Chair of the NBCI Management Board and an impressive array of exciting additional partnerships with quail organizations, federal agencies, and other conservation allies. The challenges are many, but we have now built a solid NBCI foundation on which to grow, and future opportunities abound.

We have positioned the NBCI with a solid vision going forward—"Lead, Leverage, and Enable." It directs NBCI's focus on national leadership, around which our state and local partners, and others, can consistently rally. We can focus on leveraging other partnerships, funding opportunities, and the synergistic strengths of team work. Lastly, we can use our platform to present data, coordinate training, facilitate information exchange, and enable our greater allied interests to multiply our efforts.

Finally, let us not forget the bobwhite, and the native grassland habitat that supports this great symbol of rural America. That declining habitat also supports a multitude of songbirds, pollinators, and other priority wildlife species.

I encourage you to get involved, get inspired, and get dirty. This conservation need is much bigger than bobwhites. We have an opportunity to change how the land is managed for the benefit of today, and more importantly, for those of tomorrow.



## ***Bobwhite Community Standing Taller Than Ever!***

Greg Johnson, Commissioner of the Kentucky Department of Fish and Wildlife Resources and Chair of the NBCI Management Board, recently coined a phrase that concisely captures the essence of NBCI's core mission in the complex arena of bobwhite conservation: "Lead, leverage, and enable." His vision posits NBCI as the point of the nation's spear for wild bobwhite conservation—leading, leveraging, and enabling a growing state-based national movement of numerous partners, each with vital interdependent roles that contribute to the whole.

A mountain of expertise and experience is accumulated among the thousands of individuals who are dedicated and working hard to conserve bobwhites. NBCI aspires to capitalize on that collective expertise and empower it to greater achievements in restoring native grassland landscapes that support culturally, recreationally, economically, and ecologically valuable wildlife communities.

**Lead** – NBCI leadership at regional and national levels increases awareness, unity, and willingness to confront the bobwhite challenge and catalyzes solutions to address priority conservation needs.

- NBCI is shepherding the growing national effort to restore and maintain sustainable wild bobwhite hunting opportunities, built upon a national NBCI 2.0 conservation plan.
- NBCI's ambitious "Natives First" concept—establishing a grassland wildlife- and agriculture-friendly native vegetation standard across USDA programs—eventually will tilt the playing field in favor of bobwhites, grassland birds, and pollinators.

**Leverage** – NBCI leverages existing conservation capabilities to greater effect as a force multiplier by engaging and recruiting myriad partners willing to apply additional money, manpower, land, and influence to help restore bobwhite habitats and populations.

- NBCI's precedent-setting Coordinated Implementation Program (CIP) stimulates additional resources for bobwhite conservation by attracting habitat conservation partnerships with myriad federal, state, and local partners that are prepared to contribute their own land, management staff, and funding to the cause.
- A growing national bobwhite conservation movement of citizens, hunters, landowners, producers, businesses, and organizations is being catalyzed, launching from [www.bringbackbobwhites.org](http://www.bringbackbobwhites.org) and other NBCI capabilities.
- New bobwhite conservation funding opportunities are being engineered for partner-based habitat initiatives through coordinated multi-state collaborations.

**Enable** – NBCI offers technical tools, technical information, public outreach venues, and new or improved federal conservation programs that enable greater and more efficient bobwhite conservation action by many partners.

- Standardized techniques, tools, training, outcome/performance measures, data-driven feedback loops, and an information clearinghouse enable NBCI partners to continually improve bobwhite conservation.
- NBCI-catalyzed federal conservation programs, practices, and funding—for cropland, rangeland, pasture land, and forest lands—provide states and partners with funded and ready-to-use conservation opportunities.

The nation's bobwhite community stands taller now than ever thanks to these collective efforts and the commitment of the states and many other key players who share a bold conservation vision for restoring a beloved resource that needs our help.



*Don McKenzie*

*Director,  
National Bobwhite  
Conservation Initiative*





## **Quail Tracks:** *A brief but important update on quail activity from NBCI's state partners*

**ALABAMA** | The Alabama Department of Conservation and Natural Resources and the U.S. Forest Service recently signed an agreement establishing the Boggy Hollow Wildlife Management Area (WMA) as Alabama's first NBCI Quail Focal Area. This 7,000-acre tract lies in the southern portion of the Conecuh National Forest. The Conecuh is the southernmost national forest in Alabama and encompasses 84,000 acres between Andalusia, Alabama, and the Florida state line. Required covey point counts began this spring and regulations are in place for the 2017-2018 hunting season, with the focus on quail and small game. Deer hunting will be limited to archery only and allowed only on days when quail hunting is closed. Working with the local Conecuh Forest Service staff, the focus will be on timber thinning, reducing the size of prescribed burn units, and developing wildlife openings that benefit quail. Over time, plans are to establish similar areas on other national forests in Alabama, i.e., the Talladega National Forest and Bankhead National Forest.

landscapes AGFC has designated six wildlife management areas and partnering agency lands as quail emphasis areas (focal areas) where intensive habitat management will occur supported by an extensive budget. AGFC, Quail Forever (QF), and the Natural Resources Conservation Service (NRCS) have partnered to hire a QF farm bill biologist this year to provide additional technical assistance to private landowners in the state. Working Lands for Wildlife and Pollinator Initiatives were rolled out in January, which will supply \$600,000 for quail-friendly habitat implementation on private lands. NRCS received 194 applications and anticipates more funding from these initiatives in the following years, as interest is high. A proposal is being drafted to fund a Regional Conservation Partnership Program initiative to fund early-successional habitat work in the northern portion of the state, as well.

**ARKANSAS** | Interest in quail habitat restoration in Arkansas has been reinvigorated with support of the Arkansas Game and Fish Commission (AGFC) commissioners and top level administration. In January of this year, a new full-time quail program coordinator was hired. Soon after, AGFC staff invited several renowned guest speakers to educate 57 employees at a "Quail 101" training. Seven focal landscapes encompassing 37 counties throughout the state have been designated to concentrate resources, as well as to ensure successful population increases are achieved in a timely manner. Within several of these focal

**DELAWARE** | Cedar Swamp Wildlife Area (WA) in New Castle County has been officially designated as Delaware's first NBCI focal area. The Ted Harvey Conservation Area in Kent County has been designated as the accompanying reference area. Since its designation in 2016, the Division of Fish and Wildlife has conducted spring breeding bird (whistle call counts) and fall covey count surveys. Additionally, division staff conducted habitat surveys at both areas. Habitat restoration efforts at Cedar Swamp WA began in fall 2016. Management practices include: controlled burns, edge feathering, and the removal of 100+ acres of agricultural lands. The division plans to restore agricultural lands to early successional habitat and continue spring and fall surveys during the 2017 season.



**FLORIDA** | Florida Fish and Wildlife Conservation Commission (FWC) private lands biologists provided technical assistance and cost share opportunities to landowners, creating roughly 8,000 acres of new bobwhite habitat throughout the state—nearly doubling last year’s acreage total. FWC and its partners continue to implement favorable bobwhite management on over 200,000 acres of public land, providing for the long-term sustainability of not only bobwhites, but all associated early successional species. As a special note, Florida State Parks officially designated a 19,000-acre focal area on Kissimmee Prairie Preserve State Park to improve populations of bobwhites and other grassland species. This 54,000-acre preserve protects the largest remaining stretch of Florida dry prairie, home to an array of endangered plants and animals. While driving the five-mile-long road into the preserve, visitors can enjoy sweeping vistas of grasslands reminiscent of the Great Plains of the Midwest. The preserve offers excellent seasonal birding opportunities and is home to the endangered Florida Grasshopper Sparrow, as well as the Crested Caracara and Burrowing Owl.

**GEORGIA** | Nearly 1,000 additional acres were intensively managed on Bobwhite Quail Initiative Quail Focal Areas on wildlife management areas in southwest Georgia thanks to nearly \$50,000 in donations from the Florida-Georgia Quail Coalition, a coalition steered by Georgia Department of Natural Resources (GADNR), Florida Fish and Wildlife Commission, Quail Forever, and Tall Timbers Research Station. Most funds were donated by the Southwest Georgia Chapter of Quail Forever. GADNR continues to work with U.S. Forest Service staff to develop a quail management plan for a designated ~3,000+ acres on the Oconee Ranger District of the Chattahoochee-Oconee National Forest (the Oconee Quail Focal Area). This plan will enable managers to effectively focus resources toward prioritized management efforts targeted at restoring huntable densities of bobwhites on public land in the piedmont region of Georgia.

**ILLINOIS** | Illinois continues to add bobwhite habitat to the landscape through the USDA Conservation Reserve Program. As of January 2017, there were 63,900 acres of Upland Bird Habitat Buffers (CP-33), 23,900 acres of State Acres for Wildlife (SAFE/CP-38), and almost 86,000 acres of Pollinator Habitat (CP-42). This is an increase of over

35,000 acres of CP-42 since last June. The Farm Service Agency also announced that Illinois has been awarded an additional 15,000 acres of CP-38 to establish grassland and shrub land habitat.

**INDIANA** | Following an extended vacancy in the farmland game biologist position within the Indiana Division of Fish and Wildlife (IDWF) Science Program, northern bobwhite have returned to the forefront. IDFW personnel are finalizing a Regional Conservation Partnership Program (RCP) proposal aimed at establishing an NBCI focal area at Goose Pond Fish and Wildlife Area specifically intended to improve collaboration, management, and monitoring of bobwhites and other grassland songbird species. Additionally, the state re-implemented the bobwhite whistle call counts this June-July, which, due to personnel constraints, were not conducted in 2016. Additional efforts will target the development of strong working relationships with Indiana universities and conservation organizations to collaborate, fund, and execute informative, applied research on bobwhites and other upland game bird species.

**IOWA** | Iowa’s 2016 quail roadside count index increased for the fifth consecutive year and is now at its highest level since 1989. Iowa quail hunter numbers and harvest are both expected to be near decade-long highs following the 2016 hunting season. On the habitat side, Iowa was awarded the first ever rest-rotation CRP practice through the State Acres For Wildlife Enhancement (SAFE) program. Under this new practice, called Iowa Early Successional Quail Habitat SAFE, landowners are required to manage 25% of their CRP contract as early successional cover, mainly small grains. These early successional habitat patches must be disked and replanted every 3 years and should create ideal brood habitat across Iowa’s southern quail range. Iowa was awarded 40,000 acres for this project and landowners enrolled all 40,000 acres in about 20 business days.

**KANSAS** | The National Park Service and Nature Conservancy staff at Tallgrass Prairie National Preserve (TPNP) took a major step for bobwhites in 2016 when they contacted NBCI and the Kansas Department of Wildlife, Parks, and Tourism (KDWP) regarding establishment of an NBCI focus area. After initial meetings, it became



apparent that alternative priorities of the preserve would not allow for large-scale management changes to meet the minimum habitat criteria of a focus area; however, TPNP staff were still committed to improving the area for bobwhites. Working with the local KDWPT biologist and the state quail coordinator, TPNP staff developed a quail management plan for the preserve targeting a roughly 700-acre portion along a riparian area consisting of woody structure often lacking in the core of the Flint Hills. Within this area, efforts were made to find habitat management practices that would balance the other preserve priorities while improving habitat diversity on a scale that is meaningful to bobwhites.

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**KENTUCKY** | The Kentucky Department of Fish and Wildlife Resources worked collectively with its partners through the Kentucky Prescribed Fire Council to accomplish one of its major bobwhite restoration plan objectives. The council was able to get legislation passed to establish a Certified Prescribed Burn Boss Program. The new program offers a gateway for landowners and businesses to conduct prescribed burning just like government agencies. The program is a huge step towards regaining the state's prescribed fire culture and provides an opportunity for much needed capacity for applying fire to the land.

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**LOUISIANA** | Interest in bobwhites and bobwhite habitat continues to increase in Louisiana. With the help of NBCI, the Louisiana Department of Wildlife and Fisheries (LDWF) and the U.S. Forest Service have agreed to develop a quail focal area in the Kisatchie National Forest (KNF) in western Louisiana. Although this same area, located in the Vernon Unit of KNE, has been an emphasis area for quail since 2010, the area has now been expanded and established as an official 5,992-acre NBCI Focal Area. Work is underway, and the first monitoring activities are being conducted this year. Extensive habitat work for bobwhites also continues on Sandy Hollow Wildlife Management Area (WMA), a 4,000-acre WMA in southeast Louisiana. This year, approximately 1,800 acres were burned and an aggressive prescribed burning regime planned. Additionally, there are plans in place to treat approximately 1,500 acres with different methods of timber harvest over the next five years. Collectively, these efforts should continue to improve the bobwhite populations on the WMA as indicated by the summer and fall surveys. Additional partners have expressed support

and offered assistance in these projects and others, including both the Southwest Louisiana Chapter and the Atchafalaya Region Chapter of Quail Forever.

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**MARYLAND** | Quail are expected to benefit from a planned project to restore a rare natural plant community at Idylwild Wildlife Management Area in Maryland. These natural communities, called Inland Sand Dune and Ridge Woodlands, were once found on nutrient-poor sandy soils in the eastern region. They are characterized by a diversity of fire-dependent plant species, many of which are currently rare, threatened, or endangered. Maryland Department of Natural Resources (MDNR) is heavily thinning the closed-canopy pine-oak forests and returning frequent fire to the landscape. A 40-acre pilot project not only resulted in numerous rare plants, but also produced excellent habitat for quail and other wildlife. MDNR plans to expand the restoration work to 500 or more acres over the next 5+ years, which should help boost the low bobwhite population in the area.

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**MISSISSIPPI** | The Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) continues managing for quail and other wildlife resources on some wildlife management areas (WMAs) while providing private lands technical guidance. Timber thinning, brush management, and prescribed burning efforts continue on several WMAs. The MDWFP has refilled some administrative leadership positions with experienced biologists who have bobwhite management backgrounds and who may bring a keen vision for habitat management to the agency's administration. Their leadership and direction is expected to be of great benefit to Mississippi's ongoing quail conservation efforts.

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**MISSOURI** | The Missouri Department of Conservation's updated Strategic Guidance for Northern Bobwhite Recovery 2015-2025 emphasizes outreach, research and focused habitat restoration. The Department's quail and early-successional habitat management efforts continue to focus on increasing usable space through restoration of native habitats (prairies, savannas, and woodlands) on public lands, working with landowners to increase early-successional cover on working private lands and strengthening conservation partnerships. The department, in conjunction with the University of



Missouri, just completed the first season of a two-year chick survival and habitat use research project. This study is part of a larger 5-year research project investigating quail habitat use on grassland conservation areas, managed primarily with fire and conservation grazing, and more traditionally managed conservation areas, i.e., linear woody cover plantings, food plots, and nesting cover plantings. This project will be completed in the fall of 2018, but preliminary results continue to highlight the importance of well-managed grassland landscapes for quail reproduction. Covey break-up and pairing continue to occur sooner on grassland conservation areas when compared to more traditionally managed areas. A new Quail Focus Area (QFA) was recently established on private lands and the designation of a second NBCI Coordinated Implementation Program (CIP) Focal Area is under consideration. In addition, Missouri's Quail and Small Game Task Force is currently reviewing the state's Quail Emphasis Areas (QEAs) and QFAs to ensure they are located in areas that will utilize agency, partner, and private landowner resources most efficiently.

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**NEBRASKA** | Bobwhites are booming in Nebraska! Survey results for 2016 indicate that bobwhite abundance was 59% higher than the five-year average. Regional whistle counts were between 3 and 52% higher in most regions. Nebraska also had a successful hunting season in 2016-17, with harvest up 23% and the number of hunters up by 23% compared with the 2015/16 season. Anecdotal reports from hunters compared 2016 with the "good ol' days." Nebraska also appears to be becoming a quail-hunting destination; non-resident hunters increased 43% compared to 2015. With mild winter weather leading to increased over-winter survival, 2017 is poised to be a great production year, spring and summer weather permitting.

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**NEW JERSEY** | Translocation of 80 wild birds from Georgia to the New Jersey Pine Barrens, part of a multi-state research study overseen by Tall Timbers Research Station, entered its third and final year in 2017. Results of the first two years have been somewhat mixed, with good nest success and recruitment in Year 1 followed by poor nest success in Year 2, largely due to depredation by snakes. Winter weather, which has been generally mild the past two years, has not appeared to be a limiting factor. Birds without telemetry radios are commonly encountered with collared birds, presumably recruits from Years 1 or

2. Meanwhile, bobwhite populations in the southwestern portion of the state have declined below the level of detection. New Jersey Division of Fish and Wildlife is in the process of drafting a formal Recovery Plan (expected delivery December 2017).

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**NORTH CAROLINA** | For the second year, a graduate student at North Carolina State University under the advisement of Dr. Christopher Moorman, is collecting data on northern bobwhite at Fort Bragg Military Installation in the Sandhill region of North Carolina. Quail were captured during the winter months, equipped with radio transmitters, and tracked through the summer months to learn more about their habitat selection and nesting ecology. The primary research objectives are to determine bobwhite nest survival and nest-site selection in the presence of growing-season prescribed fire on a 3-year return interval. With a small sample size in the first field season, 2 nests (out of 14) were found to be burned during a growing-season prescribed fire. All 14 nests were located within units that were burned at least 2 years prior, putting these nests at a greater risk for being destroyed by prescribed fire that occurred on a 3-year return interval. A second field season is currently underway.

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**OHIO** | Habitat assessments, fall covey counts, and spring bird surveys have been completed for the first year at the Ohio Division of Wildlife's first NBCI Coordinated Implementation Program (CIP) quail focal area, the 10,000-acre Fallsville Quail Heritage Area in Highland County. Approximately 25% of the area is publicly owned. The state is also investigating a second potential quail focal area in southeastern Ohio on the Crown City Wildlife Area in Gallia and Lawrence counties.

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**OKLAHOMA** | Annual roadside surveys indicated that Oklahoma's bobwhite population was even stronger than the excellent season that was 2015/2016, although many hunters disagreed with this assessment after the season. Warm and dry conditions this winter created a perfect storm of difficult hunting conditions. Production during the summer of 2016 was about average across the state, with the exception of southwest Oklahoma. Southwest Oklahoma had a 67% increase over 2015. Southwest Oklahoma carried the production increase for the rest of the state. Provided rainfall and a mild



summer, Oklahoma is primed for another solid year of quail hunting. The Oklahoma Department of Wildlife Conservation continues to monitor the Cross Timbers Coordinated Implementation Program (CIP) Focal Area and two reference areas. Management consisted of seasonal grazing and prescribed burning in units that were due to be burned this year based on the fire return interval plan, and efforts seem promising for bobwhite habitat restoration here and on adjacent lands.

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**PENNSYLVANIA** | The mid-1800s in Pennsylvania saw an abundance of northern bobwhites with these native game birds found in every county of the state. Continual decline within their northern range saw a dramatic decrease over time as agricultural practices changed in some areas, and succession or development claimed others. By the beginning of the 21<sup>st</sup> century, it was unknown if any quail still remained, and in 2014 they were declared extirpated from the state. Managers within the Pennsylvania Game Commission prioritized quail restoration and created a statewide management plan to help guide future restoration and management of quail within the Commonwealth. To begin this process, biologists created a habitat model to assist with identifying any remaining suitable habitat within the state. Using this, and examining both public land areas and historical strongholds of quail, several sites were investigated with one rising to the top—Letterkenny Army Depot (LEAD), a munitions storage facility located in Chambersburg, Pennsylvania. The facility was one of the last locations where quail were known to exist in the state, and the habitat was found to hold great potential to manage for suitability. More importantly, LEAD's Natural Resources Department has also prioritized quail management as an important part of their Integrated Natural Resources Management Plan. Memoranda of Understanding with LEAD and Quail Forever, as well as a Focus Area Management Plan, are currently in the review process in order to cement this partnership as the inaugural bobwhite quail focus area in Pennsylvania. With continued guidance from additional partners such as NBCI, habitat management will begin in 2017, and managers will pursue partner states from which to translocate quail in the future.

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**SOUTH CAROLINA** | The South Carolina Bobwhite Initiative (SCBI) is running at full steam. The first four focal areas in the state are established, and the required

monitoring and habitat manipulation began in 2016. The focal areas are distributed around the state and have a direct footprint in 10 of the state's 46 counties. One focal area is on a U.S. Fish and Wildlife Service National Wildlife Refuge, one is on a U.S. Forest Service (USFS) National Forest, one is on a South Carolina Forestry Commission property and one is on South Carolina Department of Natural Resources (SCDNR) property. In an effort to assist landowners in the counties surrounding these properties, several new biologists have been hired. In the Indian Creek focal area, a partner biologist position was created when the USFS, Quail Forever, and the SCDNR agreed to work together to bring the first Quail Forever biologist to the state. The SCDNR also partnered with the Natural Resources Conservation Service to provide two additional Farm Bill biologists for the Carolina Sandhills focal area and the Oak Lea focal area. The SCBI is gaining "virtual" traction as well. The SCBI Facebook page ([www.facebook.com/scbobwhites](http://www.facebook.com/scbobwhites)) recently eclipsed 1,000 followers. This enables the initiative to quickly disseminate information or assistance opportunities to a wide variety of participants at once. Many of the page followers have become quite engaged on the Facebook page and in the field.

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**TENNESSEE** | The Tennessee Wildlife Resources Agency (TWRA) co-hosted the Joint National Bobwhite Technical Committee Annual Meeting and Eighth National Quail Symposium in Knoxville, Tennessee, this year. Arrangements for this major conference were a primary activity for the state's quail program and other staff and partners. TWRA is launching an agency Quail Team to guide statewide restoration, including working toward NBCI's Coordinated Implementation Program (CIP) for focal area establishment. Spring quail counts continued on Tennessee's four state bobwhite focus areas, each anchored by a wildlife management area. Spring counts on the focus areas include five species of songbirds in addition to bobwhites.

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**TEXAS** | If you took a ride across the Rolling Plains ecoregion today, it's hard to imagine the terrible conditions brought on by the 2010-2013 Southern United States drought that hit Texas and Oklahoma especially hard. In the semi-arid west, consecutive years of dry summer and winter conditions are especially problematic for short-lived birds like bobwhite because they rely on each year's crop of young to replenish the population. By the same token,



consecutive years of above average rainfall and lower than average summer temperatures can produce quail “boom” years. That’s exactly what happened in the Rolling Plains region, where bobwhite made a remarkable comeback after three years of great climatic conditions following three years of historic drought. That’s because there are millions of acres of rangelands in this region where the most common land use (livestock production) is generally compatible with quail. Good land stewardship and proper grazing are important to the persistence of these highly prized game birds, but even the best conservation efforts cannot overcome long-term exceptional drought. “People shouldn’t get the idea that if it just rains, we’ll have quail,” says Texas Parks and Wildlife biologist Robert Perez. “We still need sizable land areas of suitable habitat, so we can take full advantage of the rain when it comes.” Perhaps the best example of this is the 28K acre Matador Wildlife Management Area northeast of Lubbock where public hunters shot a record 10,555 bobwhites this past hunting season. That’s up from an all-time low of just 18 birds in 2012, in the middle of the drought. Matador manager Chip Ruthven says rainfall deserves much of the credit, but it’s also the payoff for many years of native grassland restoration using prescribed burns, rotational grazing, and brush control. Hunter dollars in the form of the state’s Upland Game Bird Stamp, federal grants, and NGO support have been leveraged for over a decade on the Matador WMA, resulting in prime bobwhite habitat.

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**VIRGINIA** | The Virginia Department of Game and Inland Fisheries Quail Team has unveiled a revision of the state’s quail plan, “Turning Back the Habitat Clock.” The revision represents the culmination of an exhaustive process that combined an analysis of efforts under the previous plan with partner and public input to create a road map for the future of bobwhite restoration. While quail remain the focus species, the revision recognizes that the loss of early successional habitat has had an impact on multiple species like songbirds, pollinators, and butterflies, and more diverse constituent groups can be engaged with the resources of multiple initiatives pooled to maximize chances for success for each effort. The plan identifies four major objectives: restoring and conserving early-successional habitats; promoting education for the conservation of early-successional habitats; restoring and conserving healthy populations of quail and early-successional species; and promoting recreation and enjoyment of early-successional ecosystems. Highlights of

the strategies developed to achieve these goals include: strengthening and expanding the technical assistance for private lands program; developing a Wildlife Management Area focused on early successional habitat management techniques and strategies; exploration of trap and transfer of quail into areas with depleted populations after habitat has been restored; and developing new ideas to promote upland gamebird hunting success and recruitment. The plan can be viewed at [www.bringbackbobwhites.org/download/virginia-setting-back-the-habitat-clock-virginias-quail-and-early-successional-species-recovery-initiative-10-year-revision-2017/](http://www.bringbackbobwhites.org/download/virginia-setting-back-the-habitat-clock-virginias-quail-and-early-successional-species-recovery-initiative-10-year-revision-2017/)

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**WEST VIRGINIA** | The West Virginia Division of Natural Resources (WVDNR) Wildlife Resource Section, as part of their early successional habitat management plan, is currently proposing a northern bobwhite habitat enhancement strategic plan for two wildlife management areas. Hillcrest Wildlife Management Area (~2,000 acres) is located in the northern panhandle, is currently managed for farm game, and has a self-sustaining ring-necked pheasant population. Bluestone Lake Wildlife Management Area (~18,000 acres) is mostly forested, but at one time had bobwhite in the rich agricultural bottomlands (~1,000 acres). The majority of the effort and expense will be focused on land clearing, reverting small woodlots back to wild herbaceous, warm-season grass and agricultural fields. The goal is to mimic the small farm mosaic landscape that existed in the early 1900s in West Virginia when bobwhite populations were at their highest. West Virginia historically only provided marginal habitat for bobwhite due to its forested mountain terrain and will never have large populations. However, if the habitat enhancement project goes as planned, WVDNR would like to eventually translocate wild birds to these two areas with the ultimate goal of producing self-sustaining populations.



### **2017 NBCI Fire Bird Conservation Award Recipients**

A military installation, a native seed company, a cranberry company, and a U.S. Fish and Wildlife Service national wildlife refuge were among recipients of the 2017 NBCI National Fire Bird Conservation Award during the annual meeting of the National Bobwhite Technical Committee (NBTC) in July in Knoxville, Tennessee. In addition, a private quail NGO was also honored this year with the NBCI Director's Fire Bird Award for its stalwart support of NBCI efforts related to Farm Bill programs.

Award recipients are nominated by the respective NBCI-member state's quail coordinator for their contributions to that state's efforts toward habitat-based restoration of wild bobwhite populations on a landscape scale. "NBCI provides this avenue for states to recognize and thank those making meaningful contributions to our science-based restoration agenda, and perhaps help encourage others to join their efforts," said NBCI Director Don McKenzie. "We need as many individuals, agencies, and organizations as possible actively contributing to this unified 25-state strategy."

The award's name symbolizes the historic reliance of bobwhites on fire in much of its range to maintain the landscape in an "early successional" stage, that is, in the native grasses, wildflowers, and "beneficial weeds" providing bobwhites with suitable habitat. Both wildfires and fires intentionally set by landowners to clear farm fields and woodlots have historically resulted in abundant habitat for bobwhites, as well as other wildlife. The term "fire bird" in relation to bobwhites was first coined by naturalist Herbert Stoddard, who researched bobwhites and worked to restore bobwhite habitat in the early 20th century.

Today, "prescribed" fire under controlled conditions by trained professionals has become an increasingly important tool for helping create and manage habitat for bobwhites, as well as a suite of songbirds, pollinators, and other wildlife that require early successional habitats to survive.

#### ***NBCI Director's National Fire Bird Conservation Award — Park Cities Quail***

For enabling NBCI's national advocacy program for bobwhite conservation policy, the Park Cities Quail (PCQ) chapter of the Quail Coalition earned the 2017 Director's National Fire Bird Conservation Award. The Dallas, Texas-area sportsmen's group invests most of its resources in the state, but demonstrates its larger vision by providing crucial support for NBCI's national leadership role in bobwhite conservation policy.

Non-federal funding, such as that provided by PCQ, is vital to enabling NBCI to pursue its full mission. Most NBCI funding is provided by states that contribute sportsmen's Pittman-Robertson (P-R) monies, which enable NBCI to raise its game on several priority goals. However, P-R funds are considered "federal" and thus are not allowed to be used for political advocacy. Without the past support from PCQ, NBCI would have to scale back its mission and ambitions.

Over the last three years, PCQ has invested a total of \$182,000 in NBCI's Agricultural Liaison position, staffed by Tom Franklin, who primarily works to improve private land habitats through federal farm conservation. PCQ recently announced its fourth year of support for NBCI, with a \$70,000 grant for fiscal year 2018. In providing the award, NBCI Director Don McKenzie noted, "Thanks to long-term support from Park Cities Quail, NBCI has been able to become prominently established as the only persistent presence in Washington, DC, that provides professional leadership, informed advocacy, and national coordination dedicated to bobwhite conservation, on behalf of all the states and our partner organizations." This federal policy leadership role is especially crucial during the period leading into the 2018 federal Farm Bill debate.



***NBCI Director Don McKenzie  
and Park Cities Quail members***



### **Alabama — Phillip Crow**

Phillip Crow of Andalusia reached out to Conecuh National Forest staff 20 years ago to assist, along with his friends, in disking and planting wildlife openings to benefit quail, including purchasing seed and fertilizer when federal funds evaporated. In 2005, he was instrumental in establishing the Conecuh Forest Chapter of Quail Forever, serving as president since its formation. The chapter has maintained more than 200 acres across 100 permanent wildlife openings on the forest, purchased \$50,000 in seed, lime, and fertilizer, and donated approximately \$100,000 in volunteer labor and equipment time. In addition to habitat work, the chapter, under Crow's leadership, has been an effective ambassador promoting quail hunting on the forest, generating local interest and involvement, and sharing knowledge of Conecuh opportunities across Alabama and other states. In 2015, Crow was instrumental in Quail Forever and the U.S. Forest Service formalizing their relationship with a Challenge Cost-Share Agreement, resulting in more effective use of combined resources and better strategic focus of joint management and marketing activities. The chapter also received the U.S. Forest Service's Regional Forester's Volunteer Award for its commitment to improving public land resources and recreational opportunities. More recently, Crow worked along Alabama's state quail coordinator, Mark Sasser, to travel and participate in meetings between the U.S. Forest Service and the Alabama Department of Conservation and Natural Resources that established a portion of the 84,000-acre Conecuh as the Boggy Hollow Wildlife Management Area (WMA). This new 7,000-acre WMA is Alabama's first NBCI Bobwhite Focal Area.

### **Arkansas — Rob Willey**

With more than 85% of Arkansas land being in private ownership, participation and interest in quail management programs by private landowners is essential to the successful revitalization of quail populations. However, examples of habitat restoration *must* be available and accessible for landowners to demonstrate habitat manipulation necessary for bobwhites' benefit. The Arkansas Game and Fish Commission (AGFC) recently identified Harold E. Alexander Spring River Wildlife Management Area (WMA) in Sharp County as a quail focal area for that purpose, based on the habitat management activities coordinated by AGFC Habitat Biologist Rob Willey since his assignment to the region in 2010. Willey has improved more than 1,200 acres of timber, taken out 260 acres of cedar, mulched 270 additional acres of cedar, and reclaimed 590 acres of open land, restoring and maintaining critical habitats—specifically woodland, savanna, and glades—that provide direct benefit to bobwhites and well as other species of greatest conservation need. He has also coordinated similar activities on Scott Henderson Gulf Mountain and Jamestown Independence County WMAs. Willey is an AGFC-certified firing boss, prescribes fire treatments, and participates in prescribed fire activities on WMAs and cooperative areas across northern Arkansas. He assisted in burns totaling 1,511 acres in the 2015-16 season and 3,084 acres during the 2016-17 season on the focal area, as well as 5,000 acres during those two years on other WMAs.

### **Delaware — Eric Ludwig**

With the responsibility of 20,000 acres of wildlife management area and all the habitat restoration occurring on the state's Cedar Swamp Wildlife Area Bobwhite Focal Area, Delaware Division of Fish and Wildlife Regional Manager Eric Ludwig coordinates with numerous state and private agencies to maximize his efforts. In the past year, he has planted 85 acres in annual and perennial food plots, 103 acres of grass/forb/wildflowers, conducted 153 acres of prescribed burns, 13 acres of timber thinning, 20 acres of fallow disking, 2,000 acres of chemical vegetation control (including invasive species spot spraying), and removal of 200 acres from agricultural lands lease to return to early successional habitat. He also arranged a donation of 3,000 pounds of wildflower seed for the Cedar Swamp focal area, a donation of 10,000 loblolly pines, and donations of sunflower seed. He arranges tree planting and invasive species removal workdays for volunteers, and also arranged the purchase of new equipment—a skid steer, two tractors, and a no-till drill—to assist with management activities.



## Achievements

### ***Kansas — Scott Thomasson***



***Left to right: KS State Quail Coordinator Jeff Prendergast and Scott Thomasson***

Kansas Department of Wildlife, Parks and Tourism Public Land Manager Scott Thomasson received the award for his upland bird habitat management of Smoky Hills Wildlife Area and Wilson Wildlife Area—12,800 acres in total—taking on the management of the latter with no additional full-time staff.

When Thomasson hit roadblocks to using patch-burn grazing within the greater prairie complex to provide suitable bobwhite habitat, he met with a grazing specialist to develop a new rotational grazing system that could produce a similar heterogeneity of patch-burn grazing. So impacts could be quantified, he worked with the state quail coordinator to adopt a monitoring protocol (NBCI’s focal area monitoring guidelines), including a reference area as a control. When he identified the need for training in executing the required fall covey counts involved, he handled the field logistics of hosting an NBCI training workshop for KDWPT staff and others. He continues to host annual training for staff and partners.

### ***Kentucky — John Seymour***

John Seymour of Roundstone Native Seed was honored for pioneering work in the native plant industry in Kentucky, including the championing of native ecotypes, innovating harvest techniques, developing creative seed cleaning methods, and active support of conservation and management of native plants in the state and beyond. Roundstone was an advocate for and key contractor on one of the state’s greatest bobwhite success stories, the establishment of over 100,000 acres of native grassland habitat in the Green River Conservation Reserve Enhancement Program. As the need to manage those acres became necessary, and the state’s prescribed fire laws prohibited the private sector from effectively participating, Roundstone became the leading voice for the establishment of a Certified Burn Boss Program through the Kentucky Prescribed Fire Council.

Seymour made several trips to the legislature to help ensure the bill’s passage in 2016. Roundstone is actively engaged in pollinator conservation, including partnerships with the Kentucky Department of Fish and Wildlife Resources, active participation in the development of the state’s Monarch Restoration Plan, and a critical partner on the Perryville Battlefield Grassland Restoration, planting 700 acres in one season, the single largest habitat restoration in KDFWR’s history.



***Left to right: KY State Quail Coordinator John Morgan and John Seymour***



### **Missouri — Tim Kavan and Brad Pobst**



**Left to right: MO State Quail Coordinator Dave Hoover, Brad Pobst, and Tim Kavan**

Missouri Department of Conservation Private Lands Biologists Tim Kavan and Brad Pobst are responsible for five of the most intensively farmed counties in the state. In the last three years, they have combined to write 110 contracts on 3,687 acres under the center pivot irrigation program, in which each 40-acre field averages eight acres of habitat for the combined four un-irrigated corners. They've made more than 600 site visits, over 300 technical assistance contacts, and have written over 300 plans for more than 50,000 acres of property that addressed 15,000 acres of management under various Farm Bill programs. They also made more than 400 site visits, 1,500 technical assistant contacts, and wrote 200 management plans totaling over 15,000 acres that did not involve Farm Bill programs.

The duo has also been active in outreach efforts, combining to conduct over 50 workshops and field days that reached an audience of 15,000, conducted more than 25 technical training sessions, 14 media interviews, provided a pollinator demonstration with the Delta Center, a youth pollinator demonstration with Monsanto, and numerous other presentations for various school, resource, and civic groups. They also conduct quail monitoring and provide expertise to Scott County Quail, Oak Ridge, and Sand Prairie quail focal areas.

### **New Jersey — William Haines, Jr.**

William Haines, Jr., president of the family-founded Pine Island Cranberry Company (1890) within southern New Jersey's 1.1 million acre Pinelands National Reserve, was honored for his longstanding dedication to protecting the environment, especially company lands. Haines contracted for a forest stewardship plan, which received state approval in 2005. The plan allowed implementation of forest practices, including prescribed burning, thinning, seed tree cuts and shortleaf pine plantings.

In 2011, Pine Island Cranberry was named the state's Outstanding Forest Steward by the state Department of Environmental Protection. Management activities there created an ideal location to research the efficacy of translocating wild bobwhites from southern states. The company's partners, including New Jersey Audubon, Tall Timbers Research Station, the University of Delaware, and the New Jersey Division of Fish and Wildlife, worked with the Georgia Department of Natural Resources to obtain 240 wild birds over a three-year period beginning in 2015 for release at Pine Island. Results, combined with similar projects at two sites in Maryland, may have broad implications for restoring bobwhites in Mid-Atlantic states where declines have been among the most dramatic across the bird's range, and will be pivotal to understanding the possibilities and limits of translocation as a population recovery tool.



## Achievements

### ***North Carolina — John Isenhour***

John Isenhour is a Technical Assistance Biologist with the North Carolina Wildlife Resources Commission. His quality of technical assistance to private landowners in the Piedmont region and his unique relationship of trust with the USDA Natural Resources Conservation Service (NRCS), which has resulted in a positive influence on federal conservation policy in the state, earned him the 2017 Fire Bird Award. One of Isenhour's private land clients won both the Governor's Conservation Achievement Award and the North Carolina Wildlife Resources Commission's Small Game Award. Additional private clients he advises are recognized as conservation leaders in their communities. He was recruited to serve as a member of the NRCS statewide advisory team developing recommendations to improve the effectiveness of NRCS's Environmental Quality Incentives Program (EQIP), the largest source of financial assistance for habitat conservation on private lands in the state, awarding nearly \$1 million annually for forested and non-forested habitat.

He aided in the development of EQIP forestry ranking criteria for the entire state, helping wildlife-friendly criteria become an integral part of the ranking process. His knowledge of and influence on Farm Bill programs and policies puts him in high demand to provide training and coaching for landowners, Commission, and NRCS staff. "Perhaps one of (his) greatest successes has been his ability to enter the agricultural and forestry community and convince landowners that making a profit can be accomplished while also providing wildlife habitat," according to his nomination.

### ***Oklahoma — Laura McIver and Quail Forever***

Quail Forever Regional Representative Laura McIver and the Oklahoma Quail Forever chapters (Tall Grass Heritage, North Fork, Indian Territory, Cherokee Strip, and Central Oklahoma) were recognized for their contribution of more than \$75,000 to address critical resource concerns and improve quail habitat quantity and quality. A few examples include: the removal of 50 acres of Old World bluestem and replacement with native grass in the Packsaddle Wildlife Management Area, along with the removal of 3.77 miles of fencing; purchase of a tree saw attachment for wildlife management areas in the southwest region; the purchase of an offset disc for Cross Timbers Wildlife Management Area to maintain fire lines; two v-cutter attachments, transfer pump and water tender to be shared within the wildlife manage districts; a V-cutter grapple bucket attachment and the completion of a portable fire suppression skid unit to help control eastern red cedar encroachment in the Cooper and Fort Supply wildlife management areas; burn equipment for the Beaver Wildlife Management Area quail research project; the purchase of 12,500 sand plum seedlings to replace fescue and bermudagrass in the Cross Timbers Wildlife Management area; purchase and outfitting of prescribed burn trailers for the state's Prescribed Burning Association for conducting burns statewide through local burn associations; purchase of a disk harrow for the Honobia Creek and Three Rivers management areas; and purchase of a trailer to haul equipment for habitat manipulation at the Grady County and Lexington management areas.

### ***Pennsylvania — Letterkenny Army Depot***

Some of the last known sightings of wild bobwhites in Pennsylvania were at the Letterkenny Army Depot, a munitions storage facility in the heart of historical Pennsylvania quail country. As the Pennsylvania Game Commission searched for a willing partner with the appropriate resources to help bring bobwhites back to the state, Letterkenny stepped up with their own Integrated Natural Resources Management Plan, which identified bobwhites as an important species. And one plan objective is to create and implement a bobwhite quail management plan. Currently in the process of completing a long-term agreement with the game commission, the depot will soon launch its first prescribed fire program to improve habitat conditions for bobwhites and other species.



## ***South Carolina — Carolina Sandhills National Wildlife Refuge***

The U.S. Fish and Wildlife Service’s Carolina Sandhills National Wildlife Refuge and its staff took Fire Bird honors for aggressive involvement in and support of a state bobwhite focal area—the Carolina Sandhills Bobwhite Focal Area—on refuge lands. Refuge staff have played integral roles in the state’s bobwhite efforts, with Refuge Manager Lyne Askins serving on the South Carolina Quail Council, and Refuge Biologist Nancy Jordan participating on the South Carolina Quail Council Technical Committee, as well as developing a five-year plan for the focal area and helping monitor both the focal area and the required reference area, which is also within the refuge. New hedgerows now break up several expansive fields, management protocols for several timber stands have been changed, required burns have been implemented, and winter disking completed, all by refuge staff or retirees. “The South Carolina Bobwhite Initiative is very excited (the refuge) chose to be a part of the initiative and are extremely grateful for the amount of time, effort, and fervor they have exhibited in implementing the practices, protocols, and changes in management that have occurred since the Carolina Sandhills National Wildlife Refuge focal area was established,” said Michael Hook, state quail coordinator with the South Carolina Department of Natural Resources.

## ***Tennessee — Tennessee Wildlife Resources Agency Forest Management Work Unit***



***Left to right: TN State Quail Coordinator Roger Applegate, Brian Chandler, and TWRA Chief of Wildlife and Forestry Mark Gudlin***

Over the past decades, the Tennessee Wildlife Resources Agency (TWRA) Forest Management Work Unit has made significant contributions to the creation of early successional habitats and grassland restoration, with 6,000 acres of woodland and savanna restored on the Cumberland Plateau. The unit burns 2,000-plus acres per year, primarily related to the restoration of wild bobwhites. Recently, timber sales have been completed on three of four of the state’s “quail anchor areas,” creating or improving more than 1,000 acres of new quail habitat, and smaller scale timber harvests throughout the state have led to increased woodland, barren, glade, and savanna habitat creation. The TWRA Forest Management Work Unit consists of Brian Chandler, Forest Management Program Leader; Dwayne Robinson, Wildlife Forester 3; Karl Kilmer, Wildlife Forester 2; Justin Hallett, Wildlife Forester 1; Bobby Buttram, Wildlife Forestry Tech 1; Lucas Hadden, Wildlife Forester 1; Justin Walden, Wildlife Forester 2; Kessler Yoder, Wildlife Forester 1; and Wes Tilley, Wildlife Forestry Tech 1.

## ***Virginia — Jay Howell***

A member of the Virginia Department of Inland Game and Fisheries quail team since 2010, Jay Howell was instrumental in the development of NBCI’s Coordinated Implementation Program (CIP) for bobwhite focal areas. Howell helped lead the state to be one of the first to develop a pilot CIP focal area project and continues to lead those efforts. He has used innovative techniques in helping the state reach its bird and habitat monitoring goals, including the use of a drone to obtain “real time” aerial photos of habitat survey points, allowing a more accurate delineation of habitat polygons (patches) prior to field analysis and greatly speeding up field surveys. Howell also developed new monitoring protocols in the assessment of bobwhite focal regions and landscapes, and developed an Access-based time accounting system to allow the state to quickly generate reports on its efforts. Additionally, he served as the chair of the National Bobwhite Technical Committee’s Science subcommittee for two years.



***Left to right: VA State Quail Coordinator Marc Puckett and Jay Howell***



## Four Honored for Quail Achievements During Joint Quail Conference

By John Doty | National Bobwhite Conservation Initiative

The NBTC and NBCI honored four individuals, one in memoriam, for their significant contributions to quail conservation over their careers during the recent Joint Quail Conference in Knoxville, Tennessee. Dr. Leonard “Lenny” A. Brennan and Dr. L. Wes Burger received the National Quail Symposium Award of Excellence. Dr. Robert “Bob” J. Robel was honored with the symposium’s In Memoriam recognition. William T. “Bill” White received the National Bobwhite Technical Committee (NBTC) Leadership Award

### Dr. Leonard “Lenny” A. Brennan

Dr. Lenny Brennan was awarded the National Quail Symposium Award of Excellence. Currently a professor and endowed chair for quail research at Caesar Kleberg Wildlife Research Institute and Department of Animal and Wildlife Sciences at Texas A&M University-Kingsville, Dr. Brennan previously served as director of research at Tall Timbers Research Station in Florida. His career contributions include his leadership on the first-ever national quail strategy in 1992, his editorship of *The Journal of Wildlife Management*, *The Wildlife Society Bulletin* and the award-winning book, *Texas Quails: Ecology and Management*, as well as various editing roles in the proceedings of Quail 4, Quail 7, and Quail 8. He also served in leadership positions on the steering committees of the Southeast Quail Study Group and the NBTC, as well as authoring or co-authoring more than 180 scientific publications and more than 100 extension and popular articles. In 2016, Dr. Brennan received the NBTC Outstanding Achievement Award.



Left to right: Dr. Lenny Brennan  
and NBTC Science Subcommittee  
Vice Chair Dr. Kelly Reyna

### Dr. Wes L. Burger

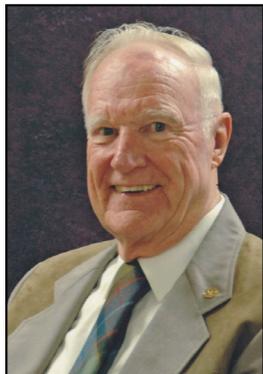


Left to right: Dr. Wes Burger and  
NBTC Science Subcommittee Chair  
Beth Emmerich

Dr. Wes Burger was awarded the National Quail Symposium Award of Excellence. Currently associate director of the Mississippi State University (MSU) Forest and Wildlife Research Center and the Mississippi Agricultural and Forestry Experiment Station in Starkville, Dr. Burger was previously a research and teaching professor at MSU and did graduate work studying bobwhites in Missouri. Career contributions to bobwhite conservation include his leadership of the Natural Resources Conservation Service’s (NRCS) Bobwhite Restoration Project and National Conservation Practice 33 (CP-33) monitoring program, his roles with the steering committees of the Southeast Quail Study Group and the NBTC, the Midwest Bobwhite Research Initiative, the Ames Plantation Quail Task Force, Tall Timbers Research Station, the NRCS Conservation Effects Assessment Project and the North American Bird Conservation Initiative. He authored or co-authored 14 book chapters, 52 symposia proceedings and 90 peer-reviewed scientific publications, with much of it focused on bobwhite ecology and management.



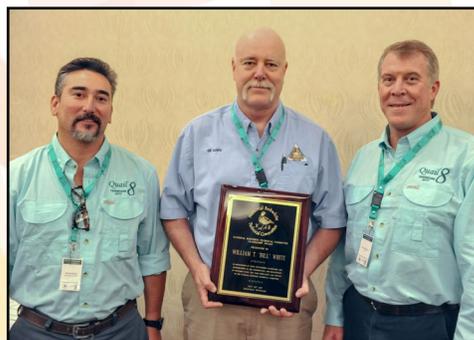
### ***Dr. Robert “Bob” J. Robel***



Dr. Bob Robel was honored with the National Quail Symposium In Memoriam recognition. Dr. Robel (1933-2013), who was a professor emeritus at Kansas State University when he died, was honored for his research on upland game birds, especially bobwhites and prairie chickens. In his 50 years on the university's Division of Biology faculty, Dr. Robel mentored hundreds of students who are now in the wildlife field. Results of his and his students' research have appeared in more than 250 peer-reviewed publications. His many career honors include the University of Idaho Centennial Distinguished Alumni Award and induction into the Alumni Hall of Fame, Utah State University College of Natural Resources Alumni Association Lifetime Achievement Award, Kansas Governor's Conservationist of the Year Award, Kansas Outdoor Writers Association Proud Kansan Award, and the Kansas Chapter of The Wildlife Society's Outstanding Professional Award.

### ***William “Bill” T. White***

Bill White was awarded the NBTC Leadership Award. White, a Missouri Department of Conservation biologist, has spent his career working on bobwhite restoration and monitoring efforts in Missouri, starting in 1988 as one of seven pilot area biologists before becoming an area biologist and then Private Land Programs supervisor, leading MDC efforts with the U.S. Department of Agriculture and Farm Bill programs. Among his accomplishments were attracting more than \$100 million in additional USDA program payments and cost-share to Missouri landowners through new Farm Bill practices and programs, leading national committees and working groups in the development of the 2008 Farm Bill and assisting in the development of CP-33, SAFE and CSP targeted for Missouri bobwhites. As Private Land Services chief/Ozark Unit, he led efforts in quail habitat restoration on private land and provided training to hundreds of department staff and partners, with 1,500 attending his Quail 101 workshop. He has also written dozens of popular articles on quail and habitat management practices for newspapers and magazines. In 2015, Field and Stream magazine dubbed White and his family the “First Family of Quail” in a story titled “First Family of Quail: Reviving the Bobwhite and Saving the Sport They Love.” Today, White leads division efforts in the adoption of new technologies, including use of mobile work stations to increase the efficiency of field staff, developing training webinars and landowner “how-to” videos.



***Left to right: NBTC Chair-Elect Robert Perez, Bill White, and NBCI Director Don McKenzie***



**Pittman–Robertson**

## **Sportsmen-Funded Experiment Creates Bobwhite Conservation Milestone**

*By Don McKenzie | National Bobwhite Conservation Initiative*

The verdict is in: the grand bobwhite conservation experiment has passed muster. The first many-state effort to pool sportsmen's dollars to create a national conservation capability for a declining upland game bird has added value and accelerated progress.

In 2014, the U.S. Fish and Wildlife Service (USFWS) Wildlife and Sport Fish Restoration (WSFR) Program worked with the National Bobwhite Conservation Initiative (NBCI), the University of Tennessee (UT), and 25 states to develop a new financial mechanism for willing states to contribute federal Pittman-Robertson (P-R) excise tax funds to UT in support of the NBCI. UT provided the required 25% non-federal match for P-R funds on behalf of the 15 participating states, while the NBCI Management Board and the National Bobwhite Technical Committee (NBTC) provided oversight, guidance, and technical support to NBCI's professional staff.

In August 2017, NBCI issued a detailed report highlighting accomplishments and progress for the three-year trial period. Some of the notable achievements during that period include:

- ***The documentary "Bobwhites on the Brink"***

NBCI sponsored production of a five-part public television documentary series by the syndicated program This American Land. The bobwhite series began airing August 2016, highlighting bobwhite problems and solutions, featuring various states' efforts and the NBCI: [www.bringbackbobwhites.org/category/the-bobwhite-library/videos/](http://www.bringbackbobwhites.org/category/the-bobwhite-library/videos/).

- ***The first centralized national bobwhite databases***

NBCI developed and operates the nation's first central bobwhite habitat and population data repository at UT, providing reliable and secure national databases for quail conservation. NBCI staff will manage, analyze, and report results of the data.

- ***The Coordinated Implementation Program (CIP)***

The CIP is NBCI's flagship focal area project inspired by (1) decades of disappointment with results of

poorly designed/executed quail focal areas by many states, and (2) the pressing need for NBCI and states to demonstrate compelling successes in linking habitat restoration objectives to increasing bobwhite and songbird populations. The CIP provides a negotiated set of standards and protocols for designing, executing and documenting results of bobwhite/grassland bird focal areas. By summer 2018, 19 states are establishing or implementing 21 CIP focal areas.

- ***Pivot corner eligibility in the Continuous Conservation Reserve Program (CRP)***

NBCI conceived and determinedly led the national effort to secure USDA Farm Service Agency (FSA) approval for automatic enrollment of unirrigated pivot corners in the Continuous CRP's CP-33 Habitat Buffers for Upland Birds practice. The pivot corners practice was approved by FSA in January 2015, with 250,000 acres allocated to it, a \$250 million quail habitat value. More than 50,000 acres of new habitat has been created so far as a result, helping reconnect quail and cropland.



***Bobwhite habitat being cultivated in center pivot corners as part of the CP-33 Habitat Buffers for Upland Birds practice. Photo by Missouri Department of Conservation.***

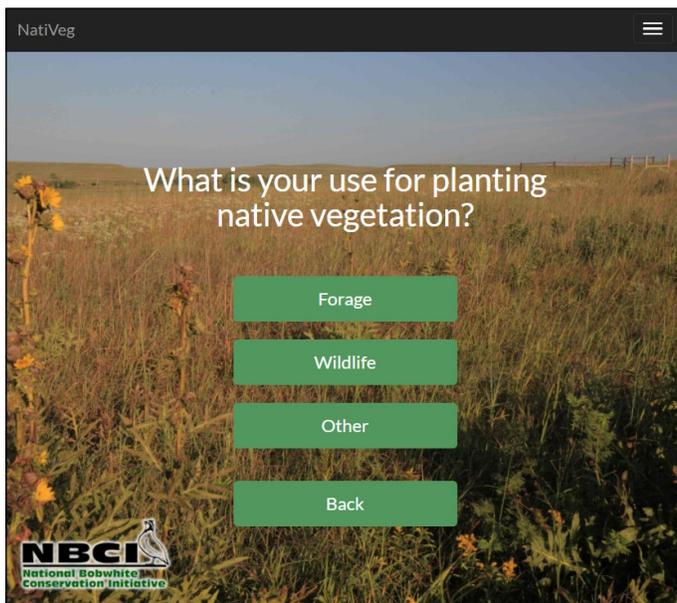


- **NBCI's "Bobwhite Almanac, State of the Bobwhite" annual reports**

These unique new reports have become the go-to source of comprehensive information on the 25-state effort to restore wild bobwhites on a landscape scale. Each year, the publication has included more pages, larger print runs, and a more strategic level of distribution to target audiences.

- **National leadership in promoting native vegetation for conservation**

- NBCI's game-changing "Natives First" concept would establish an across-the-board default reliance by the USDA on native vegetation for conservation practices—instead of the traditional use of aggressive exotics—for the first time ever. This profound idea has achieved national recognition, is attracting a growing coalition of support, and is starting to overcome longstanding institutional inertia.
- NBCI's 2016 mobile website, NatiVeg—collaboratively developed with the NBTC and the USDA Natural Resources Conservation Service (NRCS)—helps resource managers and landowners determine native vegetation species adaptability to a specific location. For more information: [www.quailcount.org/NatiVeg](http://www.quailcount.org/NatiVeg).



- **Two NRCS Working Lands for Wildlife 2.0 regional bobwhite projects**

The elevated national profile and urgency instilled for bobwhite restoration by NBCI convinced NRCS to

approve two major habitat projects, even without the species being considered for listing as imperiled:

- "Bobwhites in Grasslands" is an eight-state, 150,000-acre project to convert fescue pastures to native grass forages and establish appropriate grazing management.
- "Bobwhite Quail Southern Pine Savanna Restoration" is a six-state effort to encourage accelerated thinning and frequent burning of 82,000 acres of pine forests for understory habitat restoration.

- **A national communications campaign for bobwhite conservation**

The first-ever strategic communications campaign for bobwhite conservation is in development by NBCI with assistance of a professional marketing/communications firm to increase public understanding and support for managing early successional habitats.

- **New, capable partners are stepping up to help**

In addition to longstanding federal partners such as USDA's FSA and NRCS, NBCI is forging valuable relationships with the National Park Service (NPS) and the U.S. Forest Service (USFS). Following the heralded Pea Ridge National Military Park bobwhite focal area in Arkansas, a formal national agreement between NBCI and the NPS paved the way to eventually establish bobwhite focal areas on numerous NPS units across the 25 NBCI states. Likewise, the USFS is promoting and supporting quail focal areas on national forests in several southern states, with Midwestern states now becoming interested in participating.

- **The nation's first State Bobwhite Leadership Workshop**

NBCI convened this milestone 2016 gathering of state wildlife agency leaders at Shaker Village, Kentucky, with support of the Kentucky Department of Fish and Wildlife Resources, to evaluate NBCI progress with the P-R funding, to determine the desired future of the NBCI and the bobwhite conservation movement, and to develop a strategy for continuing funding support from the states.

- **Historic number of active state quail initiatives**

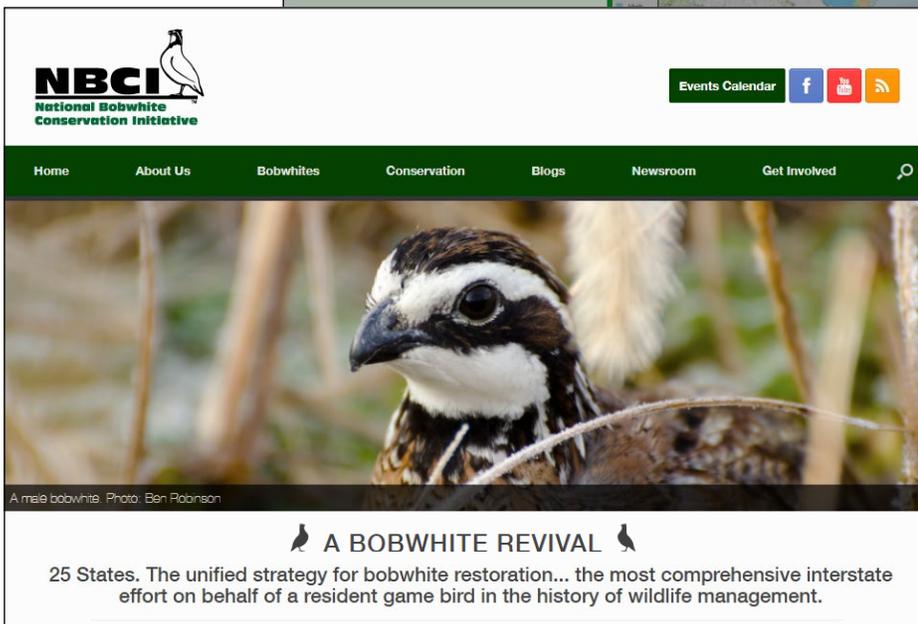
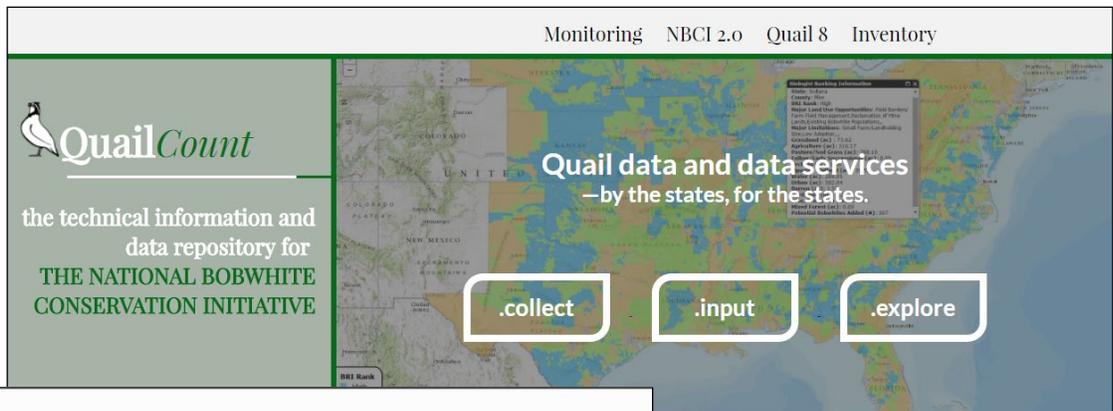
When the original NBCI was published in 2002, only two states had significant bobwhite initiatives—Georgia and North Carolina. By 2017, about 21 states are actively developing or implementing more aggressive quail initiatives, in collaboration with the NBCI and NBTC, as well as with numerous other partners.



• **A pair of comprehensive bobwhite conservation websites:**

- [www.bringbackbobwhites.org](http://www.bringbackbobwhites.org), NBCI's public website, has developed into a comprehensive clearinghouse for bobwhite information in a user-friendly format. The website not only provides each state wildlife agency quail coordinator name and contact information, but also features each state's logo, which serves as a link to the state website.
- [www.quailcount.org](http://www.quailcount.org), NBCI's technical database-linked website, is designed and housed on the UT network primarily for use by state technicians and management partners as the foundation for technical and data management services to the 25 NBTC states and partners. This site houses the NBCI databases, provides secure data management and analysis, and allows access by authorized users to many technical services and information sources.

If not for the NBCI, P-R funding from the states, and the national bobwhite movement behind it all, very little of the progress summarized here would have been likely over the last three years. The states recently have validated this historic three-year P-R funded experiment by renewing pledges of funding support for another five years to allow the NBCI to continue leading, leveraging, and enabling the nation's bobwhite community to do more and better native grassland habitat and bird restoration work.



**“QuailCount is a big step in collaboration** among the 25 NBCI state agencies and conservation partners, bringing together technical information, research findings, bobwhite/bird monitoring, habitat evaluation, data analysis and spatially-based conservation planning, for use by biologists. It will help biologists learn faster, and will provide validation **for successful bobwhite restoration.”**

Don McKenzie, NBCI Director

[www.quailcount.org](http://www.quailcount.org)

[www.bringbackbobwhites.org](http://www.bringbackbobwhites.org)



# ARKANSAS

## ***Bobwhite Renaissance Sweeps “The Natural State”***

*By John Doty | National Bobwhite Conservation Initiative*

The bobwhite is front and center in Arkansas with the Arkansas Game and Fish Commission (AGFC) stepping forward with staff and budget, including a proposal for a quail hunting stamp, to support wild bobwhite restoration.

Arkansas already has an official NBCI Bobwhite Focal Area in partnership with Pea Ridge National Military Park, the first focal area on National Park Service (NPS) property and the genesis of a national agreement between NBCI and the NPS for the two to work cooperatively with the respective states on other NPS properties, as appropriate. Both the Arkansas National Guard’s Fort Chaffee Maneuver Training Center and the Shortleaf Pine-Bluestem Area of the Ouachita National Forest demonstrate large acreages of habitat managed for bobwhites, as well.

Marcus Asher, the state’s full-time quail program coordinator, says the pace is fast and furious. AGFC hosted a Quail 101 workshop for potential partners with 15 different entities represented. The agency quickly moved on the formation of the Interagency Quail Committee to bring those potential partners to the table for coordination of efforts and resources. Committee members include:

- Steven Fowler (AGFC), chairman,
- Ted Zawislak (AGFC), vice-chairman,
- Marcus Asher (AGFC),
- Don McKenzie (NBCI),
- Amanda Mathis (Natural Resources Conservation Service [NRCS]),
- Joe Fox (Arkansas Forestry Commission),
- Keith Weaver (U.S. Fish and Wildlife Service [USFWS]),
- Becky McPeake (University of Arkansas Extension Service),
- Joe Krystofik (USFWS Partners Program),
- Bill Holliman (Arkansas Natural Heritage Commission),
- Chris McLeland (Quail Forever),
- Terry Gentry (U.S. Army Corps of Engineers),
- Trey Buckner (Arkansas Wildlife Federation),
- Cherie Hamilton (U.S. Forest Service [USFS]),
- Matt Anderson (USFS),
- Clay Van Horn (USFS), and
- Doug Zollner (The Nature Conservancy).

A \$1.6 million budget has been set aside for management on state wildlife management areas and on partner



***Staff from various partnering organizations welcome landowners to “The Battle for the Bobwhite” Field Day at Pea Ridge National Military Park in Garfield, AR.***



***NBCI Director Don McKenzie gives a presentation on bobwhite habitat to “The Battle for the Bobwhite” Field Day attendees.***



# Conservation Spotlight

agency lands. Matching funds from the NRCS have been secured to hire seven private lands biologists in partnership with Quail Forever to help carry the load. Private land habitat restoration funding includes \$400,000 from the federal Working Lands for Wildlife program (194 applications), with another \$400,000 for next year based on the program’s popularity with Arkansas landowners. Another \$700,000 may come from the NRCS’s Regional Conservation Partnership Program.

The state has identified seven “focal landscapes,” roughly one in each of the state’s eco-regions (Figures 1 and 2). Selection of focal landscapes was based on habitat type and the amount of publicly-owned land that was located within the counties comprising the different focal landscapes. In addition, wildlife management areas (WMAs) within these focal landscapes were designated as “quail emphasis areas” to target resources for the best chance of success:

- Harold Alexander WMA (5,204 acres)
- Hope Uplands WMA (2,115 acres)
- Jack Mountain WMA (1,500 of 18,274 acres to be managed for quail)
- Little Bayou WMA (1,284 acres)
- Mud Creek WMA (1,023 acres)
- Stone Prairie WMA (989 acres).

Work is underway at Little Bayou with 760 acres of clearcuts or heavy thinning, at Mud Creek with removal of fescue, sericea lespedeza, and old field restoration, and at Harold Alexander WMA with timber thinning and old field restoration.

Asher says there is a great deal of enthusiasm for the state’s new commitment, as potential partners step forward, private landowner meetings are at capacity, and he and other biologists are fielding numerous phone calls from residents who are “wanting to see quail back.”

To view Arkansas’ Strategic Quail Management Plan on the NBCI website, visit: [www.bringbackbobwhites.org/download/arkansas-strategic-quail-plan-2015/](http://www.bringbackbobwhites.org/download/arkansas-strategic-quail-plan-2015/).

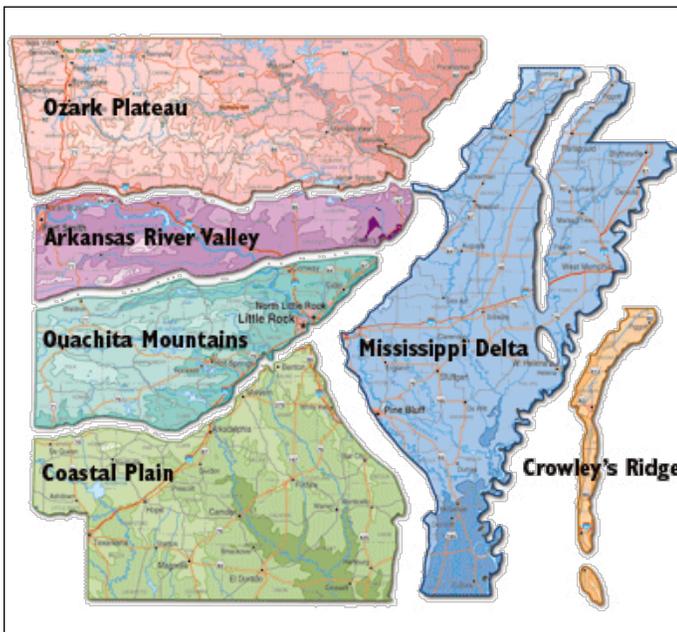


Figure 1. Eco-regions of Arkansas.

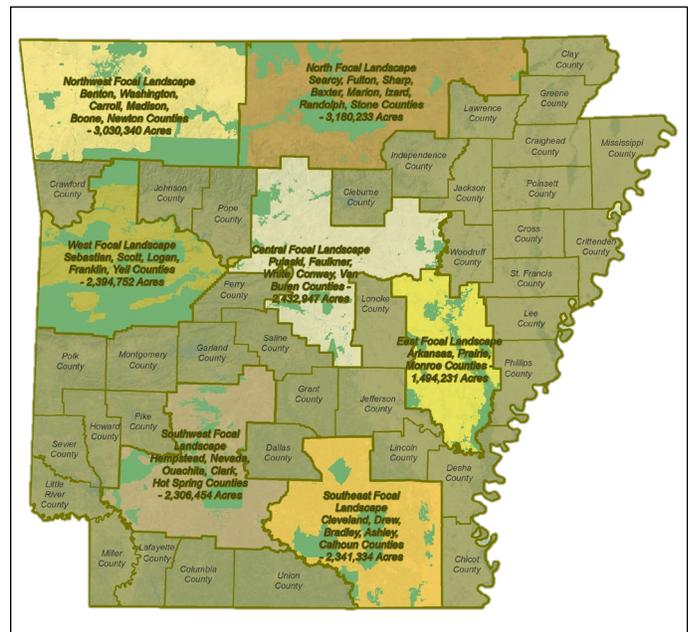


Figure 2. Arkansas’ focal landscapes, identified by AGFC.



# FLORIDA

## *The Upland Ecosystem Restoration Project Making a Difference in “The Sunshine State”*

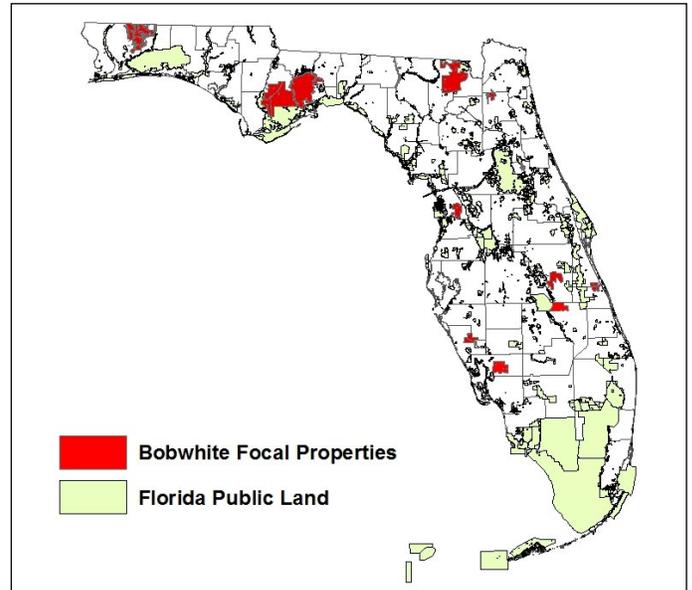
By Greg Hagan | Florida Fish and Wildlife Conservation Commission

Unlike most southeastern states, Florida is blessed with over five million acres of public land (Figure 1), with approximately 1.2 million acres potentially suitable for bobwhite management and restoration. However, like many states, management of these habitats has often lacked attention and experienced decades of incompatible fire management, resulting in habitat fragmentation and steep declines of bobwhites and other fire-dependent wildlife species. Historically, public land managers struggled to meet prescribed burning goals due to budget constraints or other agency priorities. Given the logistical and economic constraints faced by managers, and due to Florida’s rapidly changing landscape, most public land management agencies burned large areas on a 3-5 year frequency as part of a fuel reduction paradigm. The combination of low fire frequency and large scale burning is often deleterious to early successional habitat and the wildlife species dependent upon them.

Fortunately, there is hope as we look to the future. Florida’s State Wildlife Action Plan (2005) recognizes one of its highest priorities is to maximize conservation benefits of public lands by implementing new and enhanced cooperative management actions (e.g., increasing capacity and resources for prescribed fire, coordination of management efforts, and species and habitat monitoring).



**Roller chopping dense saw palmetto on Three Lakes WMA. Photo by Greg Hagan.**



**Figure 1. Public land bobwhite focal properties in Florida.**

A successful example of such cooperation is the Upland Ecosystem Restoration Project (UERP). Begun in 2006, UERP has become an integral partner with the state’s four primary land management agencies (Florida Forest Service, Florida Park Service, Florida Fish and Wildlife Conservation Commission, and the U.S. Forest Service), as well as a vital component for bobwhite restoration and management. Guided by a steering committee comprised of agency leaders and Tall Timbers Research Station, UERP has successfully engaged its partners to address targeted land management practices and changing management philosophy towards restoration of early successional habitats.

The primary mission of UERP is to prioritize, design, and implement on-the-ground management to improve populations of bobwhites and other declining fire-dependent wildlife species on public lands throughout Florida. Specific objectives of UERP are to: 1) increase populations of bobwhites on targeted landscapes to huntable levels (1 bird/3 acres); 2) increase fire frequency



## Conservation Spotlight

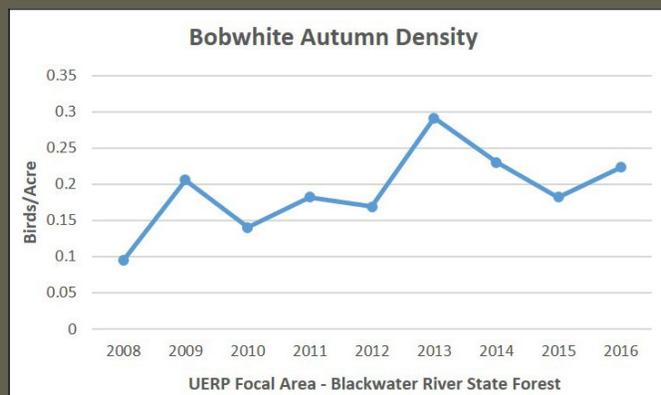
(1-2 years) on these targeted landscapes; 3) increase land management practices (timber harvests, roller chopping, hardwood reduction); and 4) establish long-term monitoring to assess success. In addition to on-the-ground management, what makes UERP truly unique is it provides a statewide view of the issues, facilitates communication within and among agencies, and its partners share a common vision and dedication for managing, enhancing, and restoring Florida's early successional habitat.

Under the steering committee's guidance, Florida has over 190,000 acres of public land under favorable management for bobwhites and other grassland species (Figure 1), providing for the long-term sustainability of not only bobwhites but all associated species. Moreover, UERP has had a significant impact on increasing capacity and resources for prescribed fire. In fact, Florida leads the nation in the application of prescribed fire. In an average year, the Florida Forest Service will issue over

100,000 burn authorizations allowing landowners and state and federal agencies to conduct prescribed burning on an average of 2 million acres each year. Most importantly, a large percentage of these acres are burned on a 1-3 year frequency in an effort to maximize the early successional habitat that bobwhites require. Working with our public land managers and researchers at Tall Timbers, custom-fit plans have been developed for each UERP focal landscape under the guides of applying frequent fire (regardless of season), increasing other land management practices, and setting population goals—a model that has proven very effective. Since its conception, approximately half of all UERP acreage is burned annually. Moreover, in pursuit of greater habitat diversity, additional management techniques are often undertaken. For example, in mesic flatwood landscapes with high saw palmetto density, roller chopping is used initially to quickly create early successional habitat

### Figure 2. Blackwater River State Forest Bobwhite Focal Area

Established in 2008, the 15,890 acre UERP focal area on Blackwater River State Forest is located in the Florida panhandle (Santa Rosa and Okaloosa Counties) and is part of the largest longleaf pine ecosystem in existence (in combination with Eglin Air Force Base and Conecuh National Forest in Alabama). Fall covey call counts were conducted in October 2008 to obtain a baseline bobwhite population estimate. The results showed approximately 1 bird/10.50 acres—well below population goals. Increased land management began immediately, centered around frequent fire (winter and summer burns), thinning overstocked pine stands, and select hardwood reduction in the uplands. As a result, within five years (2013) fall covey call counts estimated the bobwhite population at 1 bird/3.43 acres—just shy of population goals. As noted in the graph, population estimates have been somewhat cyclical. This has been a common occurrence on UERP focal properties that started with low baseline population estimates.



***As land management practices increased, bobwhite populations increased to just shy of population goals in five years. Photo by Greg Hagan.***



that can be maintained by frequent fire. In upland pine landscapes, timber thinning and select hardwood reduction (mechanical and chemical) is often used to create more diverse bobwhite habitat by allowing more sunlight to reach the forest floor.

With the majority of UERP focal properties under the same management philosophy and all having similar objectives, two examples of success are provided here (Figures 2 and 3, Blackwater River State Forest and Three Lakes Wildlife Management Area [WMA]). Both focal areas are similar in size but are different in habitat type, landscape context, and initial baseline bobwhite populations.

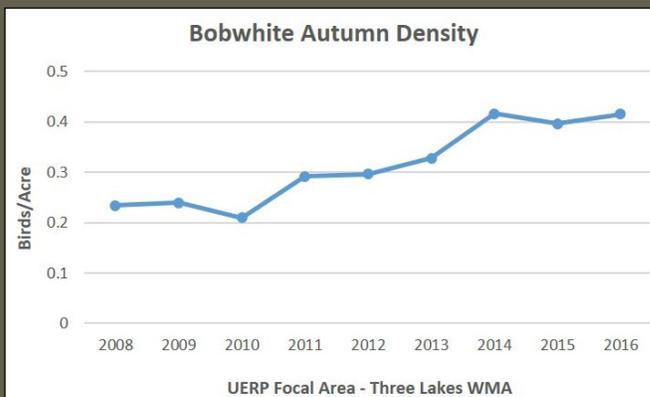
UERP’s success has not been any single management practice, but rather the consistent application of all practices combined. Despite prolonged periods of unpredictable weather, logistical, and fiscal constraints, Florida’s public land managers found a way to get the job done. Without doubt, their commitment and dedication to restoring Florida’s early successional habitats have been key components of success.



**Covey Rise – Apalachicola National Forest UERP Focal Area. Photo by Shane Wellendorf.**

**Figure 3. Three Lakes WMA Bobwhite Focal Area**

Also established in 2008, the 15,522 acre UERP focal area on Three Lakes WMA is located in central Florida (Osceola County) and is comprised primarily of mesic flatwoods, wet prairie, and dome swamps. The surrounding landscape is dominated by improved pasture for cattle production and other mixed use agriculture. Initial baseline bobwhite population estimates showed a sustainable 1 bird/4.28 acres. Nevertheless, increased land management was implemented, centered around frequent fire (winter and summer burns), roller chopping of dense saw palmetto, and select thinning of overstocked pine stands. As of 2016, the fall population was estimated at 1 bird/ 2.41 acres – slightly above population goals. In addition, this population has not experienced the cyclical population trends of areas that started with lower baseline numbers.



**Bobwhite populations increased and exceeded population goals in five years. Photo by Greg Hagan.**



# MISSOURI

## Private Land Quail Focal Areas Make a Difference

By Bill White and Dave Hoover | Missouri Department of Conservation

Missouri is a national leader in northern bobwhite recovery on private land, being the first in the nation to establish a complex of private and public land quail focal areas (QFA) in the 1990s. The Missouri Department of Conservation's (MDC) 2003 Strategic Guidance for Northern Bobwhite Recovery built upon the original focal area process and set the stage for revising the QFA program.

Many of the original QFAs were too large to effectively cover with existing staff and programs. In many cases, landowner interest was focused on deer and turkey, not quail, and the interest in developing and maintaining early successional habitat was not there. The Department adopted the QFA concept to concentrate staff and program funding on a landscape scale to make a positive difference in both bobwhite habitat and bird abundance. The QFA program has resulted in millions of dollars in state and federal funding for targeted habitat restoration

and a growing number of landowners who understand what quail need to thrive.

The Missouri Quail and Grassland Bird Technical Committee developed its monitoring protocol in 2006, modeled after the national CP-33 monitoring piloted in Missouri. The Knox County Bee Ridge QFA (BRQFA) was the first to conduct monitoring and also served as the model for the NBCI monitoring effort adopted by other quail states. Monitoring efforts within the BRQFA represent the longest-running surveys in Missouri to measure quail response to habitat management on private lands. The surveys compare bird numbers in the focus area with bird numbers in an adjacent control area where little to no habitat improvements have been made (Figure 1).

In all years surveyed, bird numbers in the QFA were greater than in the control area. In January of 2011, a snowstorm,

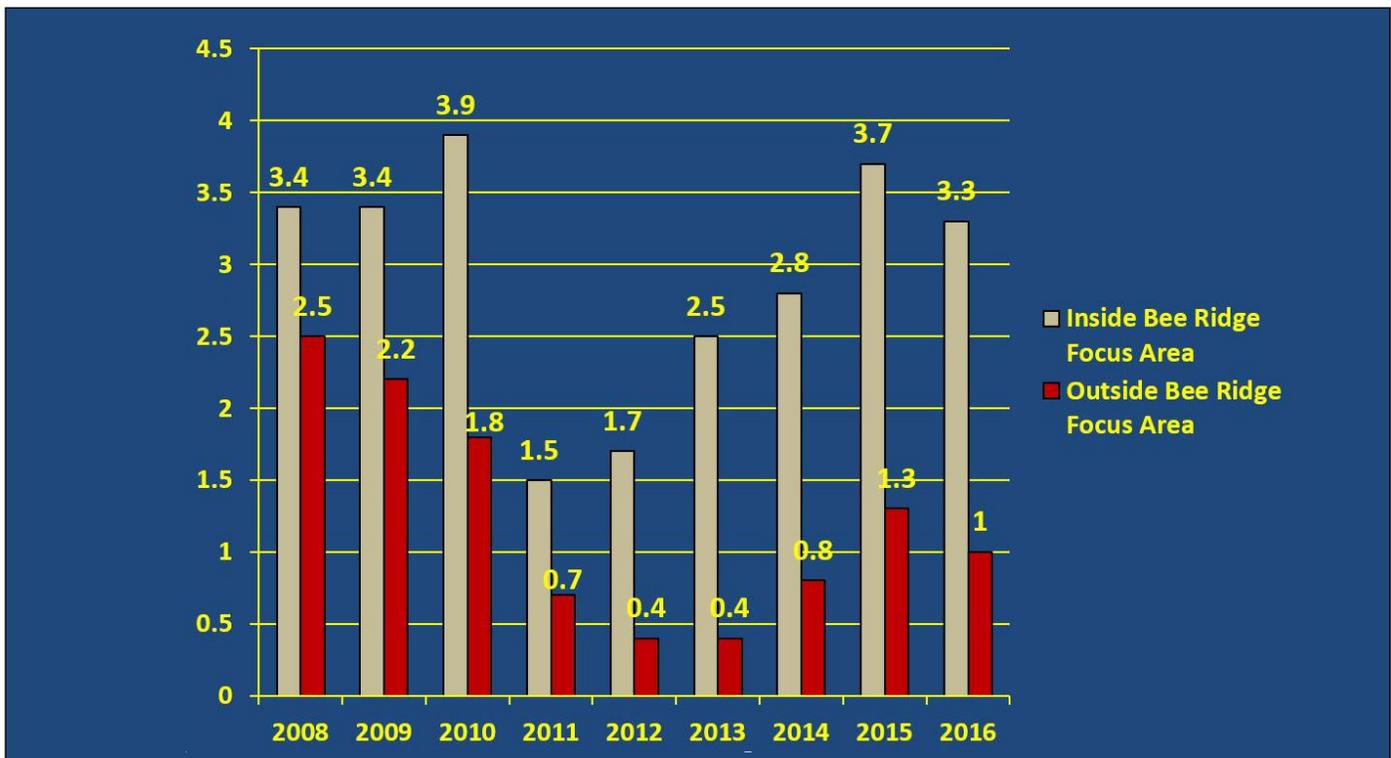


Figure 1. Average number of calling coveys (non-adjusted) heard per survey point in Knox County Bee Ridge QFA compared to control area.



followed by sub-zero temperatures, ice, and additional snow reduced bird numbers in both the QFA and control area. The QFA bird numbers, however, remained higher than the control area. Bird numbers have recovered in the QFA, but not in the control.

For the first time since the surveys were initiated, bird numbers in both the QFA and control increased in two consecutive years, 2014 and 2015. Those increases were likely due to excellent brood-rearing conditions due to dry weather in 2014 and millions of acres of unplanted croplands in 2015. The 2016 drop in bird numbers in both the QFA and control area is likely due to a total absence of idle croplands in the same area, when compared to 2015. Brood surveys confirmed production was down nearly 35% from 2015 to 2016, 8.9 to 5.8 chicks per adult respectively. Habitat improvement and monitoring efforts in the BRQFA are led by MDC Private Land Conservationist (PLC) John Pinkowski and local landowners.

**Carroll County QFA**

In 2013, the department volunteered to be one of six pilot states to test the NBCI focal area concept and monitoring protocol. The Carroll County QFA (2C QFA) was selected as Missouri’s pilot NBCI focal area because it met the acreage criteria of the NBCI Coordinated Implementation Program (NBCI CIP) protocol (Figure 2). A nearly 42% increase occurred in the 2C QFA fall quail population from 2013 to 2014. The 2014 increase is likely due to successive dry summers facilitating a good hatch and brood survival. The 63% increase in 2015 in the QFA is attributed to abundant brood cover created by the idled cropland previously mentioned.

Nesting seasons for much of the last 20 years have been cool and wet in Missouri and have been noted by University of Missouri climatologists as the wettest on record. Excessive rainfall typically causes a drop in the fall quail population. In 2015, the dampening effect, typically seen from excessive rainfall in late spring and early

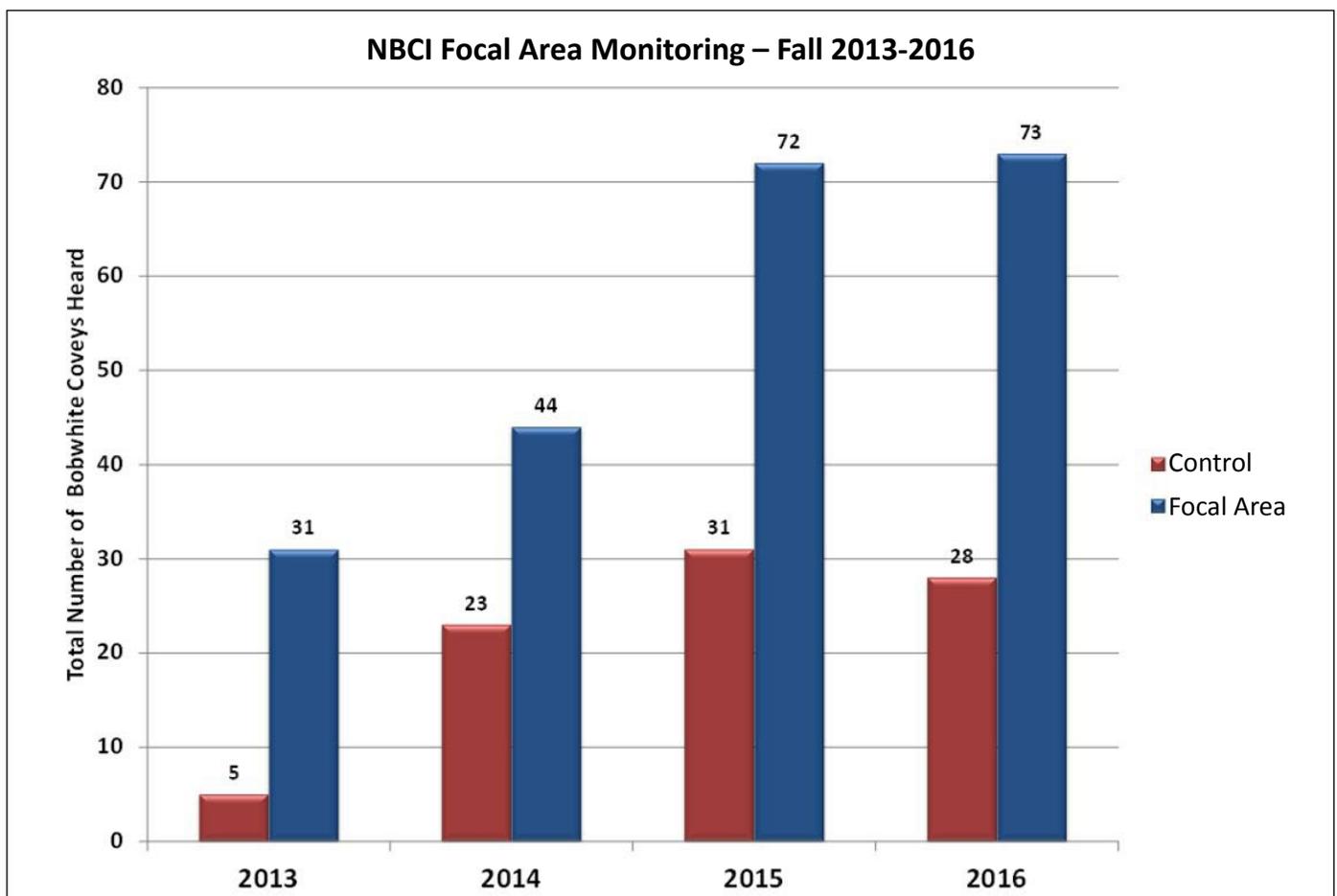


Figure 2. Total coveys heard calling in 2C NBCI CIP focal area and adjacent reference area.



# Conservation Spotlight

summer, was overcome by the abundance of ideal brood-rearing cover on the landscape through July. Even the quail population within the control area increased. The increase in quail numbers within the QFA was maintained in 2016; however, the population in the control dropped 10%, likely a result of the total absence of idle cropland acres in 2016. Declines within the control area may have dropped even more, but new quail and pollinator plantings are working their way into the control area and likely preventing further decline.

In addition to quail, several species of songbirds are also monitored within NBCI focal areas. June of 2016 marked the fourth year of spring breeding bird monitoring within the 2C QFA. Spring populations of all birds surveyed within the 2C QFA were higher than bird populations in the control area (Figure 3).

Note that all bird numbers increased in the control for the first time in 2015. Local department staff believe this is due to the large amount of unplanted cropland that was

available for brood-rearing and feeding due to the wet summer. The drop in quail numbers within the focus area in 2015 is also being attributed to the wet spring, which prevented any haying through the June survey period, presumably keeping more birds on nests and hatching more early nests leading to fewer males singing. Surveys in 2016 produced mixed results, likely due to a return to normal cropping practices and subsequent loss of brood-rearing and feeding habitat that was present in 2015.

MDC PLC Lee Metcalf and the 2C Quail Forever (QF) Chapter have led most of the habitat development within this QFA, including nearly 24 miles of edge development in the past year. Partners in the effort include the 2C QF chapter, Natural Resources Conservation Service, and Farm Service Agency.

The NBCI CIP focal area monitoring also includes a habitat evaluation component. Habitat monitoring was conducted in 2016, and staff will be correlating bird survey and habitat evaluation data during the coming year.

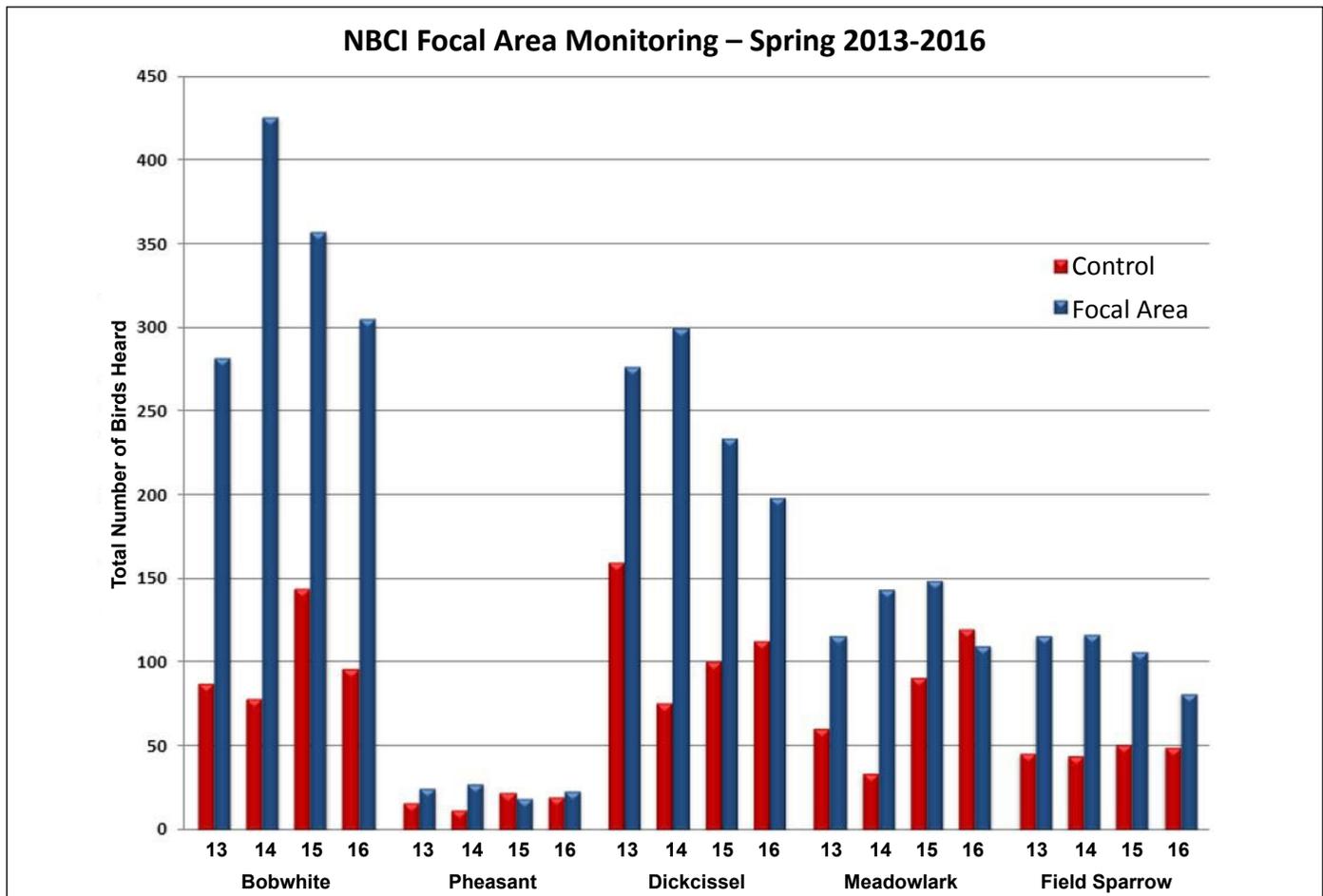


Figure 3. Spring quail and songbird monitoring results from 2C QFA and control area 2013-2016.



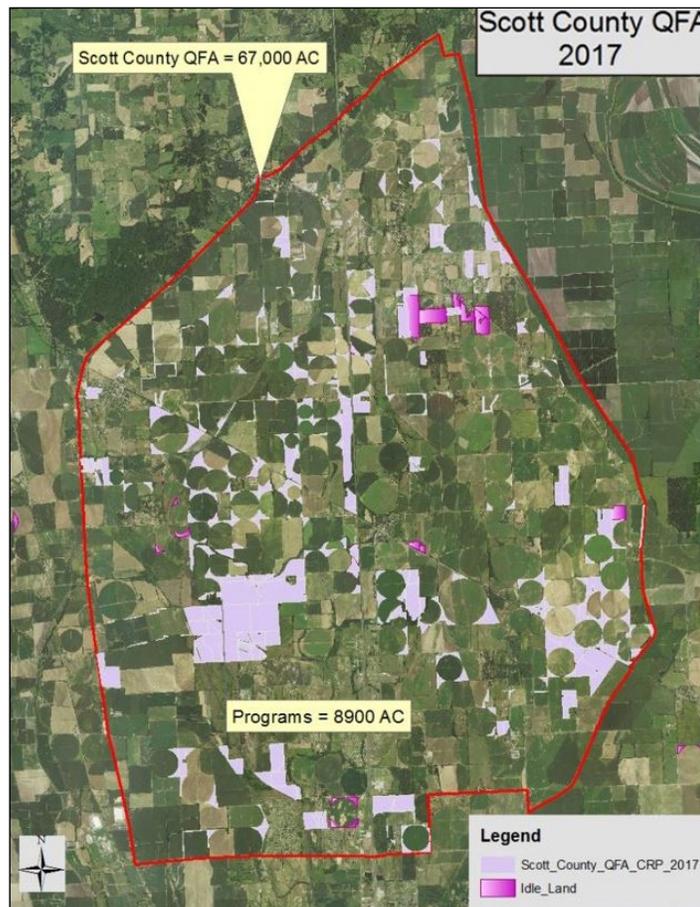
**Scott County QFA**

The Scott County QFA (SCQFA) is located in southeast Missouri (Figure 4) and is the direct result of a partnership involving MDC PLC Brad Pobst, local QF Farm Bill Biologist Lora Dirnberger, the USDA, and members of the Bootheel Bobwhites Chapter of QF.

Fall monitoring results since 2013 show higher quail numbers within the focus area than in the nearby control area (Figure 5). The 50% increase in fall SCQFA quail numbers since 2014 in both the focus area and control were likely the result of favorable weather during hatching and brood-rearing, and an emphasis on light disking and prescribed burning. Fall quail numbers in the QFA in 2016

were nearly three times more than the control. At least one survey point in the QFA had up to 10 coveys calling.

Just as in the BRQFA and 2C QFA, the SCQFA conducted breeding bird monitoring in addition to fall quail covey counts. The 2015 spring breeding bird surveys for the SCQFA showed declines for all species in the control compared to 2014 (Figure 6). The 2015 results showed substantially higher bird numbers for all species (except the Eastern Meadowlark) in the focus area than in the control area. The 2016 survey results are varied, but bird numbers in the QFA are still well above numbers in the control for three of the four species surveyed.



**Figure 4. Scott County Quail Focus Area boundary and CRP enrollment.**



# Conservation Spotlight

## Continuous Conservation Reserve Program SAFE Monitoring

The USDA Farm Service Agency requires the department to monitor wildlife on Continuous Conservation Reserve Program (CRP) SAFE CP-38 proposals. For the Bobwhite Quail SAFE CP-38, a simple spring breeding bird survey of a CP-38 farm is compared to a nearby CP-2 native warm-season grass planting. Plantings for CP-2 contracts are typically much less diverse and less intensively-managed than plantings for CP-38 contracts, which require a diverse mix of native wildflowers and grasses.

The surveys were initiated in 2012 after the CP-38 field was established. Figure 7 shows the CP-38 site has more total quail calling in the spring than the CP-2 planting. While the 2015 surveys showed a dramatic increase in quail numbers in the CP-2 site, the CP-38 site still had 25% more quail calling. In 2016, an older CP-1 cool-season grass field was added to the survey to further reinforce the advantages of the Bobwhite Quail SAFE CP-38 plantings.

## Conclusion

These monitoring efforts are important from the standpoint of encouraging local landowners and staff to continue or increase habitat restoration efforts. It also sells other hunters, the general public, and interested landowners on the QFA concept of focused management and landscape scale change. For example, additional QFAs have organized after seeing the results in the KCQFA. With assistance from cooperating landowners and partners, Missouri has demonstrated that the QFA concept does work to successfully restore bobwhite populations. It also benefits a suite of other species that depend on the same habitats as bobwhites, not only our declining grassland birds, but also rabbits, monarchs, and pollinators.

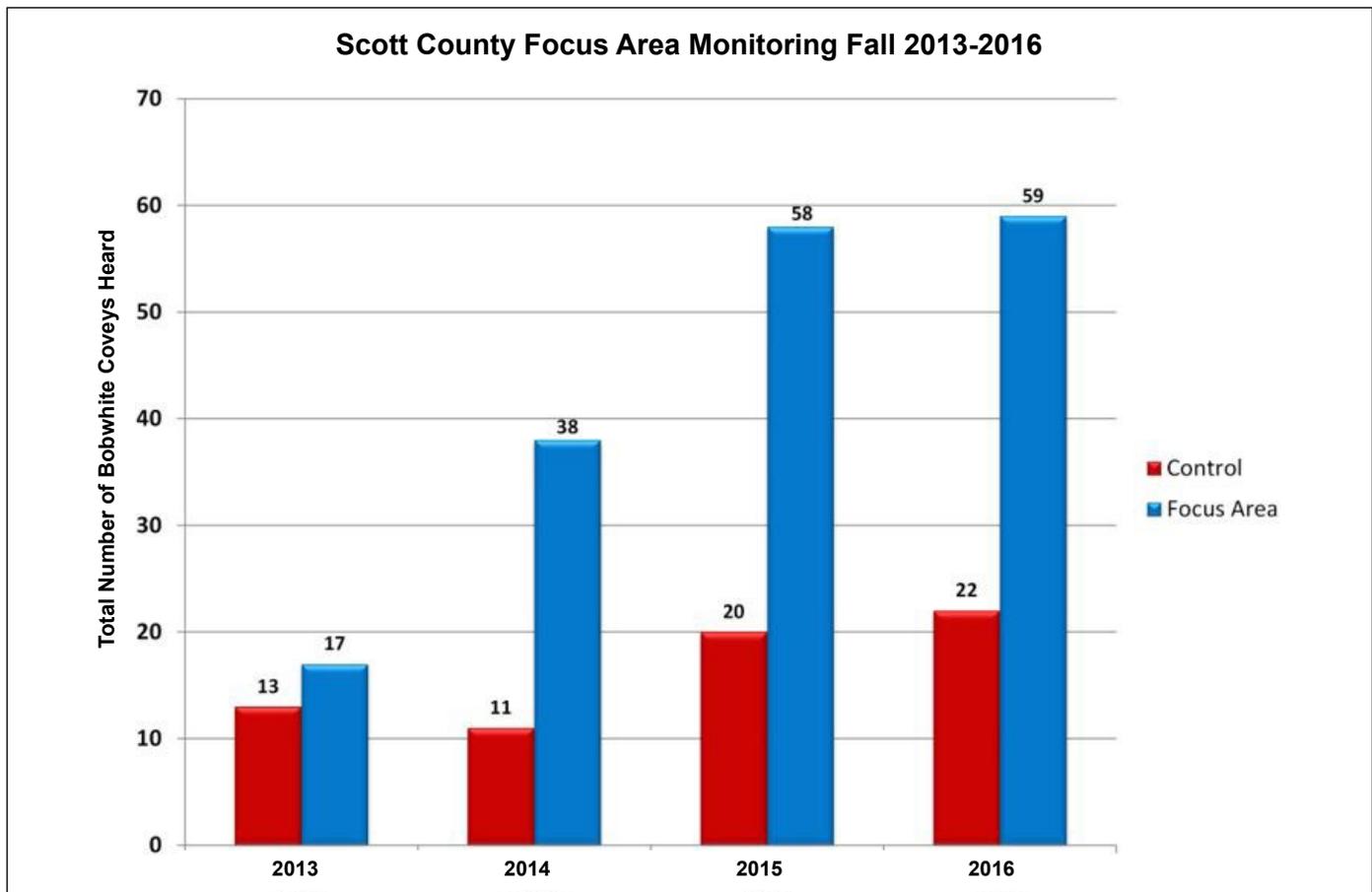


Figure 5. Total number of bobwhite coveys heard during fall covey counts in the SCQFA and control area 2013-2016.



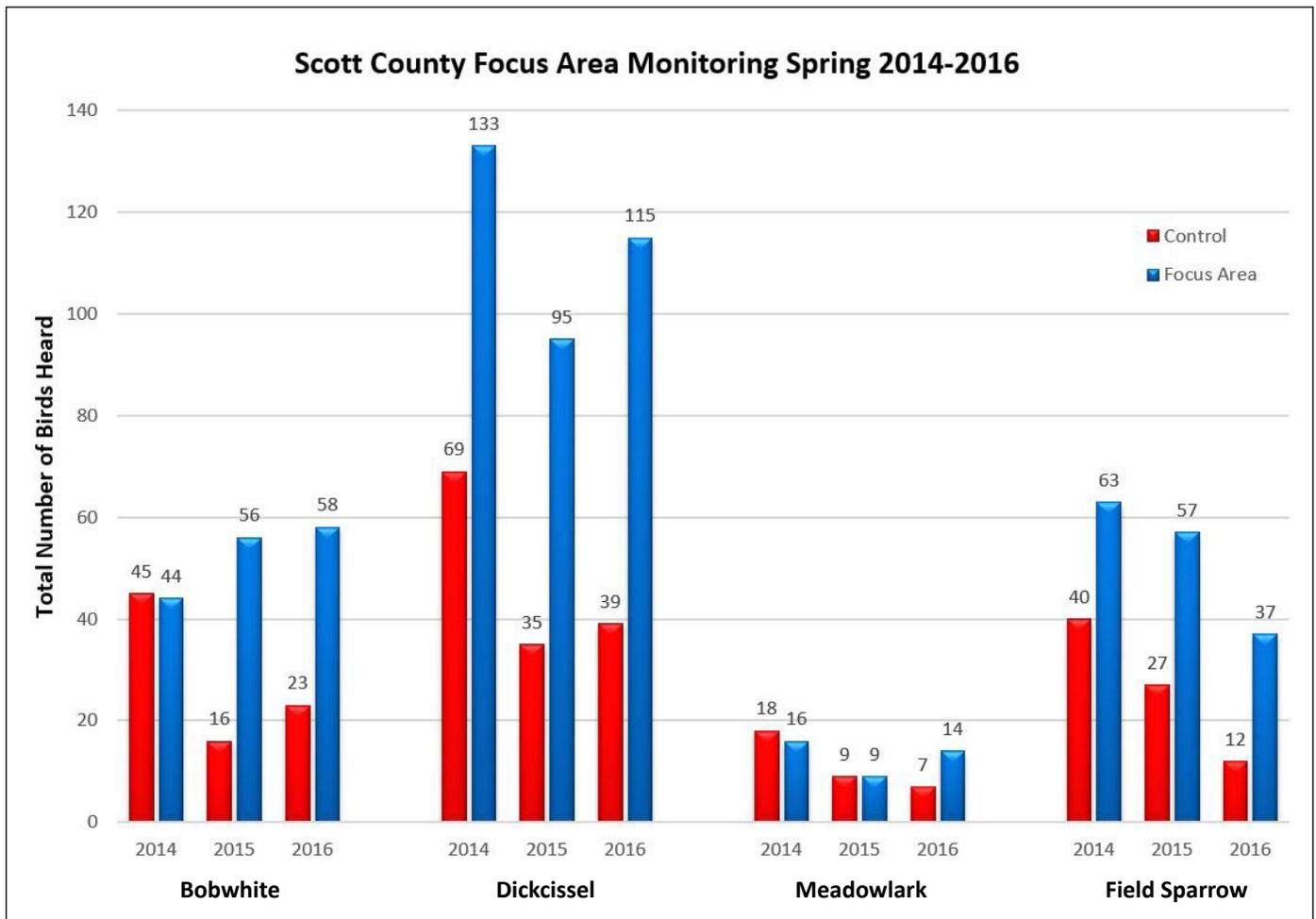


Figure 6. Spring songbird survey results for the SCQFA and control area 2014-2016.

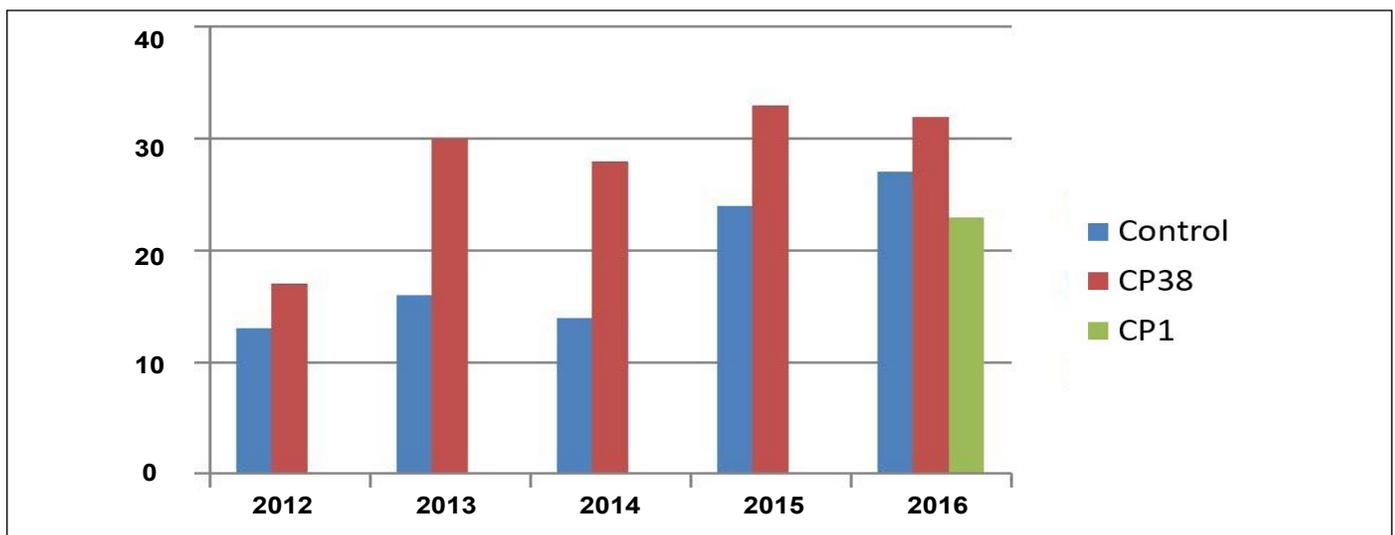


Figure 7. Number of male bobwhites heard calling during spring surveys in CP-2 (control), CRP CP-38, and CP-1 plantings 2012-2016.



# SOUTH CAROLINA

## Partnerships Key in State's Push to Revive Bobwhites to Early '80s Level

By Steve Chapman | National Bobwhite Conservation Initiative

With the formation of the South Carolina Quail Council (SCQC) in 2014, state and federal agencies, conservation groups, sportsmen, and landowners came together with a goal of planning and implementing a statewide recovery of bobwhites. The South Carolina Quail Initiative ([www.dnr.sc.gov/quail/](http://www.dnr.sc.gov/quail/)), created in 2015, is based on a plan written by the South Carolina Department of Natural Resources (SCDNR), supported by NBCI, and directed by the SCQC, whose goal is to restore bobwhites to early 1980's levels.

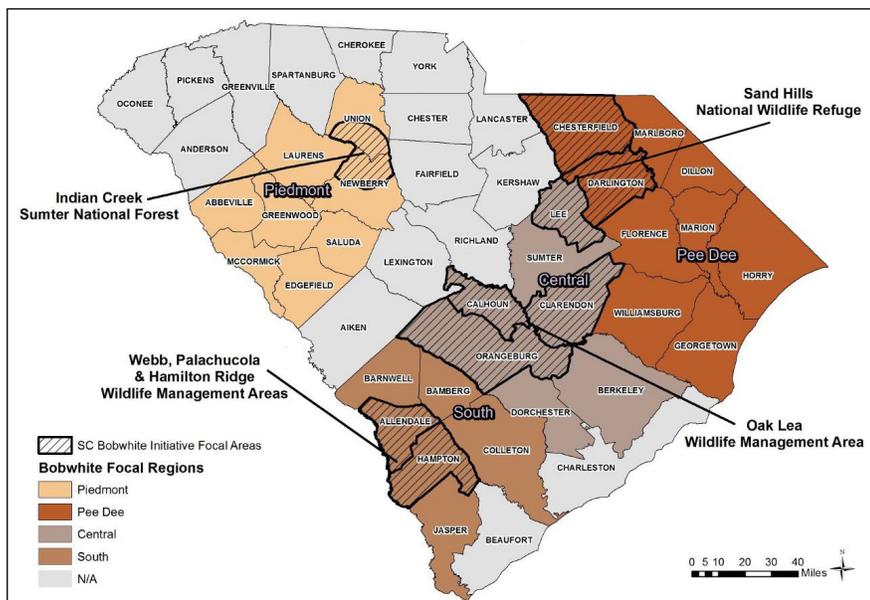
State biologists identified four "focal regions" as having the best opportunity to increase populations quickly. Within each focal region, focal areas have been identified where work and resources will be targeted (map below).

One area receiving a lot of energy and focus—along with results—is the Indian Creek Woodland Savanna Restoration Project Partnership in Union and Newberry counties. This partnership, which originated in 2004 and expanded in 2014, is engaging state and federal agencies and local communities in the restoration of native grass-dominated open woodlands, savannas, and grasslands using an "all lands" approach.

The partnership has taken advantage of a Joint Chiefs Restoration Landscape Project grant to fund work on both Enoree District of the Sumter National Forest and private lands within the project area. Private lands work has been funded through the Environmental Quality Incentives Program (EQIP). Partners include the U.S. Forest Service (USFS), the Natural Resources Conservation Service (NRCS), the South Carolina Forestry Commission, the SCDNR, the National Wild Turkey Federation, Duke Energy, Quail Forever, and the Newberry Soil and Water Conservation District. The landscape for this initiative, according to a 2016 report for the Joint Chiefs project, encompasses 56,000 acres, which include 52% on national forest lands and 48% in private ownership. Through this project, over 300 private landowners have been reached in Newberry and Union Counties. Because of this successful partnership and the help of Quail Forever, a biologist was hired in the fall of 2016 to assist with work on USFS and private lands.

On the national forest lands within this project, covey counts have been completed every year since 2006, with the exception of 2013. In 2006, five coveys were counted at 18 points (estimated to be 1 bird per 94 acres). The latest covey count, in 2016, found 22 coveys on 22 points (estimated to be 1 bird per 18 acres, Figure 1). This increase in coveys on the project is attributed to changes in on-the-ground management practices.

Tree thinnings within the project have increased in number and intensity. Heavier thinnings, which allow more sunlight to reach the forest floor and create opportunity for the desired cover and food sources required for bobwhites, are continuing. Prescribed burning has always been an important part of the management program on the Enoree Ranger District, but not at the scale



and frequency needed to maintain the proper habitat structure needed for bobwhite restoration.

Prescribed fires within the project have historically been carried out across burn units of 1,500-2,000 acres. Recently, with the assistance of Jordan Nanney, Quail Forever biologist, burn units have been broken down into smaller areas of 150-200 acres. Plans are to burn these areas more frequently—every two to three years. By burning more often and in smaller units, the partners are able to create areas with varying types of plant structure required to maintain and increase bobwhite populations (Figures 2 and 3). One area that has been burned recently received a mastication treatment before the prescribed burn, which removed the mid-story hardwoods, making it easier to control them in the future.

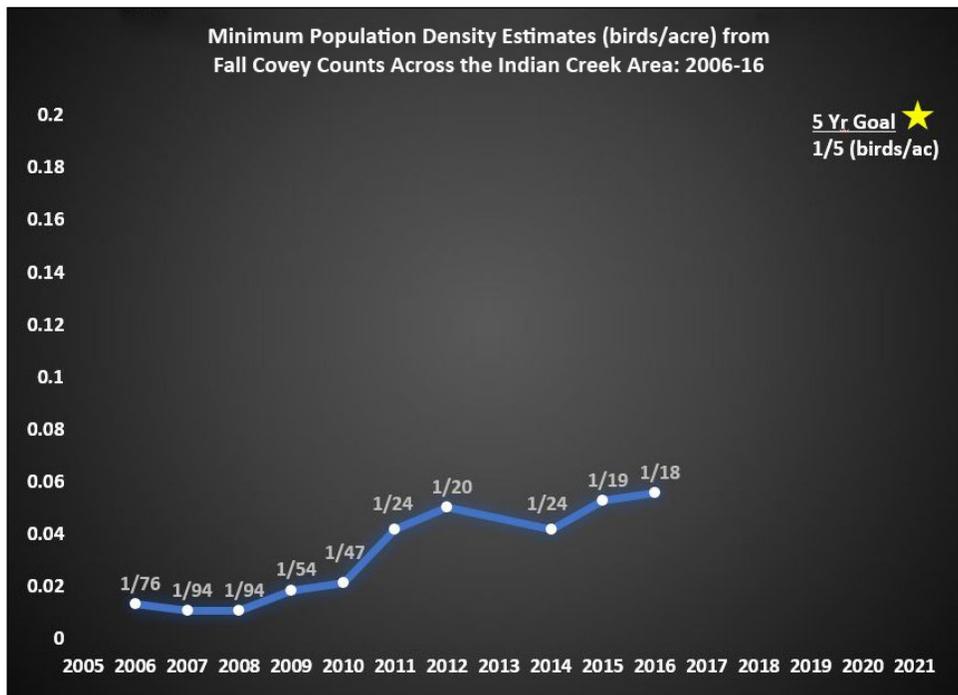
South Carolina’s first official NBCI Coordinated Implementation Program (CIP) focal area lies within a portion of the Indian Creek project on the Enoree Ranger District. In 2016, NBCI worked with the USFS Southern Region office to secure \$100,000 for work on focal areas within national forest on the Oconee National Forest in Georgia and the Sumter National Forest in South Carolina, \$30,000 of which was used on the Indian Creek Focal area. According to Michael Hook, SCDNR small game

coordinator, anywhere within the Indian Creek project could have been chosen as an NBCI CIP Focal Area due to the great habitat and the increase in the numbers of bobwhites and other grassland/shrub-land birds. The CIP focal area is where habitat work had been neglected, was in need of improvement, and where bobwhite numbers were low compared to other areas within the project.

Recently, SCDNR, with the assistance of NBCI, wrote and submitted a proposal to the USFS Southern Region office



**Jordan Nanney speaking to field day participants, many of them private landowners, pointing out the beneficial grasses, forbs, and other plants that have responded to recent prescribed burning on the Indian Creek project.**



**Figure 1. 2006-16 fall covey counts at Indian Creek Woodland Savanna Landscape Restoration Project Partnership.**

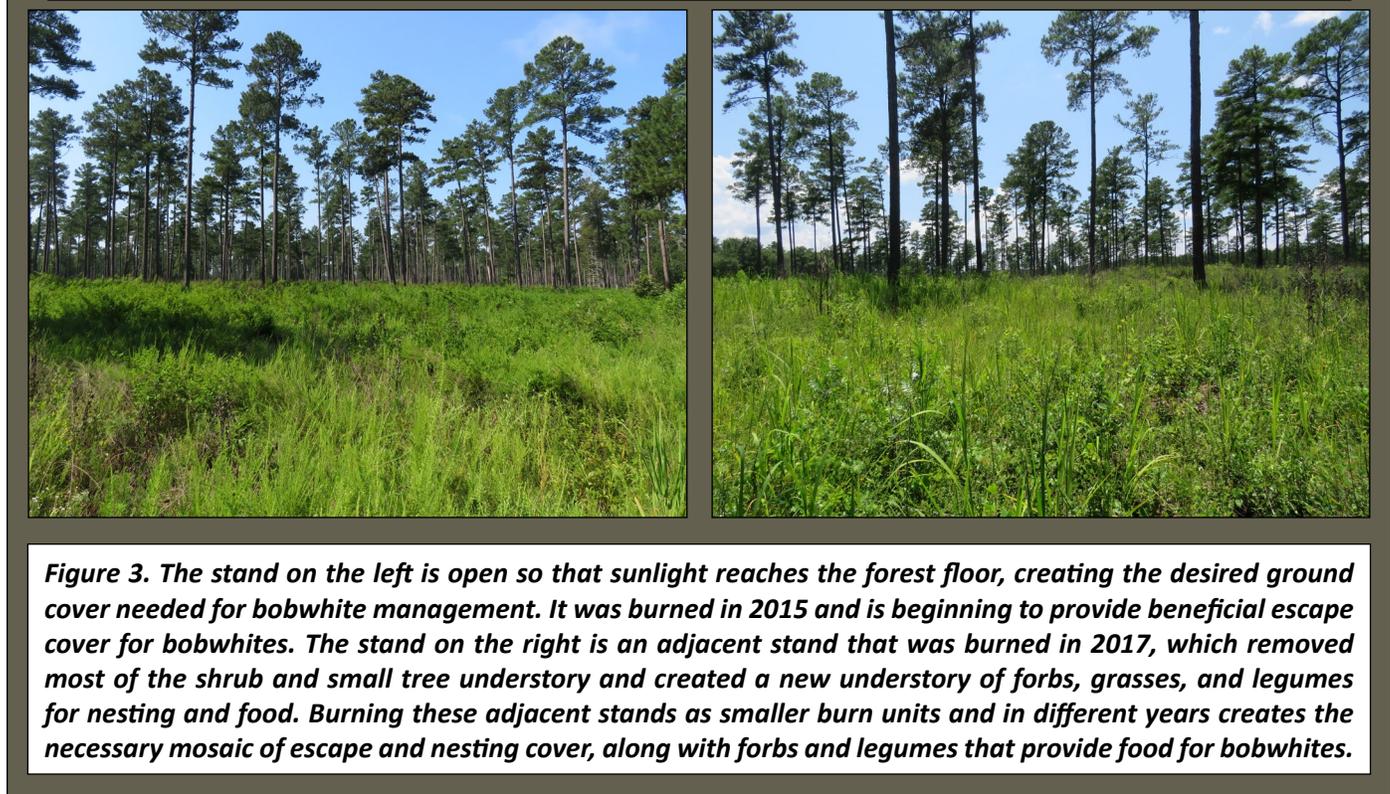
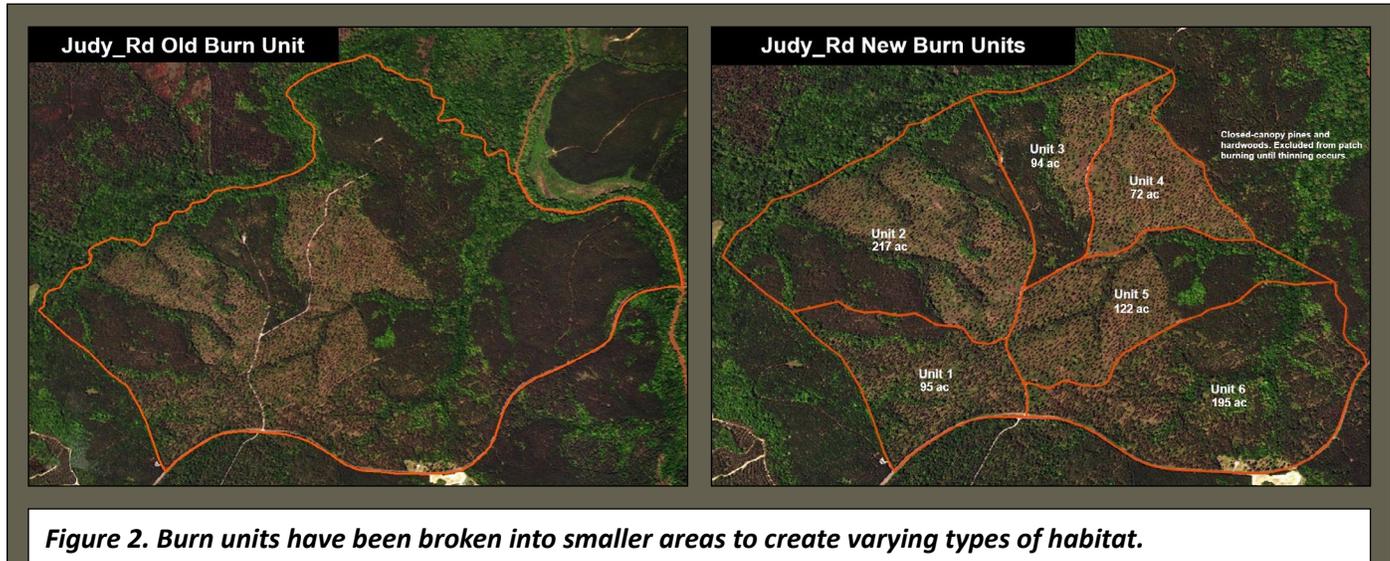


## Conservation Spotlight

for improving and creating bobwhite habitat on private lands which are adjacent to or within close proximity of national forests in South Carolina. This \$100,000 grant, along with the required match, will allow SCDNR to provide cost-share assistance to private landowners for prescribed burning, fire breaks, mid-story hardwood control, planting of native grasses, forbs, legumes and shrubs, winter disking, and pre-commercial thinning.

Landowner education programs will also be included as part of this grant opportunity. SCDNR is finalizing plans for this program and will be providing additional information soon.

The work and partnerships to restore bobwhites in South Carolina is just an example of what can be done when partners rally around a common and worthy cause.



## NBCI an Active Participant in Farm Bill Discussions

By Tom Franklin | National Bobwhite Conservation Initiative

The Farm Bill unquestionably provides the most important opportunity to establish bobwhite habitat on the nation's private lands. The current Farm Bill allocates \$57.6 billion over 10 years (2014-2023) to conservation of soil, water, and wildlife through its Conservation Title. Granted, not all of this benefits quail directly, but much of it does. Programs like the Natural Resources Conservation Service (NRCS) Environmental Quality Incentives Program may provide quality early successional habitat (ESH). And the Farm Service Agency's (FSA) Conservation Reserve Program (CRP), which currently conserves 24 million acres, provides ESH through practices like Habitat Buffers for Upland Birds (CP-33). These programs are proven bobwhite habitat creators.

The Farm Bill is reconsidered by Congress every five years and is due to expire in 2018. Updating the current bill, last passed in 2014, provides an opportunity to make it even better for quail and other wildlife. The debate on Capitol Hill is already underway. And the quail community, working through NBCI, state wildlife agencies, Park Cities Quail, and other partners, is stepping up to the challenge to advance bobwhite conservation on private lands.

The NBCI is weighing in with its recommendations that were prepared in cooperation with the National Bobwhite Technical Committee. We are sharing these ideas with congressional policy makers to explain why native grassland habitat protection and restoration practices in the Farm Bill are necessary to stem the precipitous decline



**The Farm Bill provides funding for proven quail-friendly practices like CP-33, Habitat Buffers for Upland Birds.**

in bobwhite populations and how quail, other wildlife, pollinators, and water quality can benefit from them.

The NBCI's top three priorities for quail habitat protection, restoration, and management that we are advocating are:

- 1. Natives First** – NBCI's signature, game-changing initiative would establish a native vegetation standard as the default choice for all USDA conservation programs. If authorized, Natives First would end the longstanding USDA practice of subsidizing invasive exotic forages and other introduced vegetation, such as bermudagrass, KR bluestem, and other old-world bluestems.
- 2. Short-term rotational CRP** – Another NBCI innovation, this concept would establish a higher-habitat disturbance variant of CRP that would foster higher quality quail habitat over a longer portion of CRP contracts. This concept would also render obsolete the insufficiently implemented "mid-contract management" provisions of many CRP contracts. We are building on the early successional quail habitat practice established recently in Iowa via the State Acres for Wildlife Practice (SAFE) that is approved for 40,000 acres. The Iowa project is designed to restore early successional habitat where it will be the most beneficial for bobwhite by restoring top quality winter, nesting, and brooding habitats.
- 3. Forest thinning/burning incentives** – Across the majority of bobwhite range, forest management provides some of the best bobwhite habitat restoration opportunity. Because the cultural traditions of active forest management and prescribed burning have been suppressed over recent decades, incentives are needed to help restore the practices. More than any other organization in Washington, DC, NBCI promotes aggressive forest thinning followed by frequent prescribed fire to create ideal bobwhite savanna habitat in forested landscapes.

The NBCI is spreading the word about bobwhite needs in the Farm Bill. On June 30, 2017, NBCI hosted its second-ever Congressional Tour of quail habitat management, aimed at informing government decision makers about the Farm Bill policies needed to achieve quality habitat restoration for quail, grassland birds, and pollinators.



# Advocacy

Congressional staff, wildlife conservation organizations, and USDA officials participated in the tour at Chino Farms on the Eastern Shore of Maryland, the site of the state's highest bobwhite density. There was a high degree of unity about the value of native grassland restoration enabled by Farm Bill programs. This tour signaled NBCI's early entry into the Farm Bill debate. We also have submitted our bobwhite conservation priorities officially to the U.S.

Senate Agriculture Committee and worked closely with our Texas quail conservationist colleagues to present testimony at a U.S. House of Representatives Agriculture Committee listening session in San Angelo, TX, on July 31.

Stay tuned to [www.bringbackbobwhites.org](http://www.bringbackbobwhites.org) for more information as we continue leading the national advocacy for quail conservation in the Farm Bill.



**NBCI hosted, with the help of partners, a Congressional staff tour of Chino Farms in Maryland, where participants saw how bobwhite habitat could be integrated into working lands. Photo by Jef Hodges.**



**Former NRCS Chief Jason Weller at roll-out of Working Lands For Wildlife (WLFW) 2.0, announcing Bobwhites in Grasslands and Bobwhites in Pine Savanna WLFW projects.**



**Left to right: Former NRCS Chief Weller with NBCI staff Tom Franklin and Jef Hodges.**



## Can Livestock Be the Answer to Bobwhite Recovery?

By Jef Hodges | National Bobwhite Conservation Initiative

MIG, MOB, AMP, patch-burn graze, Merrill and Savory, regenerative, holistic, continuous and rotational, complimentary, short-duration, high-intensity, low frequency, controlled and strip, creep, first-last, ultra-high stock density—all are terms used to identify grazing systems or approaches. Can any of these be used to create bobwhite habitat?

Grazing and bobwhites traditionally have not been considered compatible east of the Great Plains. However, when you look at rangeland throughout the Great Plains and in Florida, where native vegetation still exists, the two are very compatible. In fact, they are synonymous, provided the grazing is done correctly. So why is there such a disparity between regions?



**Cattle on tall fescue pasture. Photo by Jef Hodges.**

I would argue that culture has a lot to do with it—the culture of non-native vegetation vs. native vegetation, fire suppression vs. prescribed fire, secondary income production vs. primary income production, family tradition and other cultural factors.

When you look at some of the all-too-common examples of grazing outside of the Great Plains and Florida, it is easy to see how one would reason that grazing and bobwhites are in conflict with each other, and how legions of well-intended conservationists would deduce that grazing should be excluded from quail management. Unfortunately, in that concern, we have unwittingly contributed to the decline of bobwhites. A major component of the bobwhite's

evolutionary basis has been largely ignored through the exclusion of grazing in otherwise assumed bobwhite habitat. Just as the bobwhite has been deemed the fire bird due to its positive response to fire, it could equally be called the graze bird because of its dependence upon the disturbance, vegetative structure, and ecosystem function uniquely provided by grazing.

If grazing is to be part of bobwhite management and recovery in the short-term, we necessarily must rely on native grasses. Not that non-native grasses can't provide grazing/bobwhite benefit, we merely don't have the research available to tell us how to do it. We must rely upon the best information available at this time, and that is native grasses, primarily native warm-season grasses. So, to put all of this into context, when I refer to grazing, I am implying grazing native warm-season grasses. (Native forbs as well as native cool-season grasses can also be components of a grazing mixture.)

Bobwhites use a wide range of habitat niches from “bare ground” through shrubby cover, and prescribed grazing can help create those niches (Figure 1). Regardless of the grazing approach, appropriate vegetation structure is ultimately the key to providing bobwhite habitat. But it must be recognized that the appropriate structure is simply not possible with certain forage species, regardless of the management approach. It is inconceivable that bermudagrass can ever be bobwhite habitat or that tall fescue can provide year-round habitat. I say that about tall fescue with the caveat that I know, as do many of you, bobwhites DO occur in fescue-dominated landscapes, though at suppressed numbers. However, the research identifying how they are using that habitat and what components are contributing to their survival in those landscapes does not exist. It seems feasible they are nesting in ungrazed or deferred tall fescue, then abandoning those areas for their other habitat needs during the rest of the year.

Similarly, grazing other introduced cool-season forages under certain circumstances could provide habitat components necessary for bobwhites, but research has not been conducted to identify those circumstances. We can surmise approaches and practices that might work for non-native cool-season forages, but those assumptions



must be taken at face-value, and application must be purely experimental until more can be learned.

With all the different approaches to grazing outlined in the opening paragraph, plus many others, it is impossible to provide specifics for each approach. But there are some key considerations to keep in mind when implementing any grazing management strategy for bobwhites.

First, we need to identify what bobwhite habitat looks like. The NBCI 2.0 provides some specifics:

- Nesting habitat: basketball-sized clumps of bunchgrass, 10-20% taller than other surrounding grasses, scattered at random across the area, >600 and <1,200 clumps per acre
- Brood habitat: rich in insects on or near the ground, numerous patches of, or contiguous bare ground (interstitial bare ground between the clumps of grasses, under shrub mottes, etc.), overhead canopy providing screening cover
- Escape/Loafing habitat: shrubs or stiff stemmed forbs 3-10 feet tall, minimum 5 ft. canopy diameter for loafing – 20 ft. for escape, 10-30% of the landscape

NBCI has established a focal area habitat classification system as part of the NBCI Coordinated Implementation Program to standardize what constitutes bobwhite habitat across the range. The key for open habitats with herbaceous cover with less than 33% shrub/woody cover (pasture and rangeland) identifies bobwhite habitat as vegetation height maintained at >8 inches for >50% of the year, with 25-75% bare ground and appropriate access to protective cover within 50 meters.

As complex as it sounds, combining these metrics under grazing is not as difficult as it might seem. Using appropriate stocking density and forage canopy height trigger points as starting and stopping cues, most of those metrics can be met. The key is in grazing system management and using the livestock to meet those habitat metrics, the advantage of which is that livestock, when stocked appropriately, will variably utilize a pasture or paddock creating the structural diversity desired, with good interspersions. No other management approach can create the same structural diversity as well interspersed.

From the livestock side, native warm-season grass forages can provide palatable, nutritious forage during the summer months when introduced cool-season grasses are in a slump (Figure 2), allowing animals to maintain or increase their average daily gain throughout the summer months. This summer forage also allows producers who have endophyte-infected tall fescue an alternative forage during the time of year when endophyte toxins are most concentrated in tall fescue, thus mediating the effects of fescue toxicosis. Grazing native warm-season forage during the summer allows the cool-season forages to rest, which can also be stockpiled for grazing later in the year and carry grazing further into the year, reducing the need for fed hay.

From the producer side, a study conducted by the University of Tennessee Center for Native Grasslands Management showed native forages resulted in the lowest cost per pound of gain when compared to other warm-season forages, required lower inputs to realize maximum production, and even at higher establishment costs, were quicker to pay off the investment than bermudagrass or Sudex.

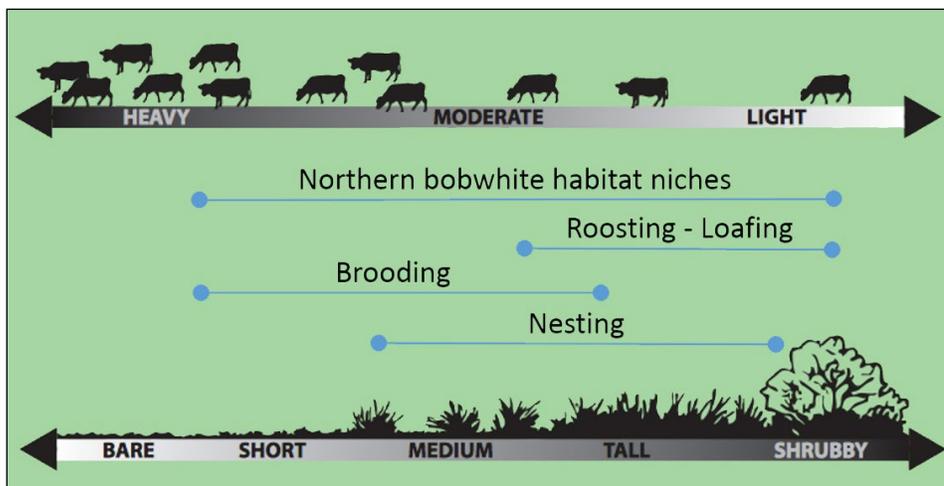


Figure 1. Modified Knopf diagram.



Under current and predicted future social pressures, as demand for food grows, it is highly unlikely that agricultural row-crop ground will provide any net new acres of bobwhite habitat. In fact, it is highly likely it will result in a net loss from conversion. One possible exception is federal cropland retirement or set-aside programs, but those acres are likely to be a small percentage of total acres and subject to cyclical whims of the Farm Bill, thus not stable. Our greatest opportunities for net new acres of bobwhite habitat are in active forest management (thinning and burning) and grazing lands.

Imagine the possibility. According to the USDA Natural Resources Inventory, there are roughly 91 million acres of pasture in just the 25 NBCI states. Now, consider the idea that if we could get one third of that converted to native forage under bobwhite-friendly prescribed grazing (which is the percentage we commonly recommend for a complimentary cool-season/warm-season grazing system), that would equate to roughly 30 million acres of new bobwhite habitat, greater than the current nationwide CRP enrollment. Even if we were to fall shy of a third and only convert 10%, that would still be 9 million new acres.

We can't just ignore rangeland though. Pressure on rangeland through woody encroachment, overgrazing, and non-native species invasion is threatening that landscape. We must preserve and protect what we have, encourage woody control, discourage planting of non-native forage grasses, and promote prescribed grazing. As reported this year by Texas Parks and Wildlife Department, prescribed grazing in the Rolling Plains, approaching 1 million acres, is providing landscape-scale habitat for bobwhites (page 75).

In recent years, bobwhite habitat has been relegated to field borders, old fields, odd and idle areas, and the occasional whole field enrollment in a Farm Bill program. As bobwhite biologists and enthusiasts, it is our fault. We've promoted it that way. Unfortunately, the scraps of habitat created this way have had limited impact. Until we can tie bobwhite habitat to working lands, advances will come painstakingly slowly, if at all. Prescribed grazing on working lands offers one of our greatest hopes yet of restoring this iconic species.

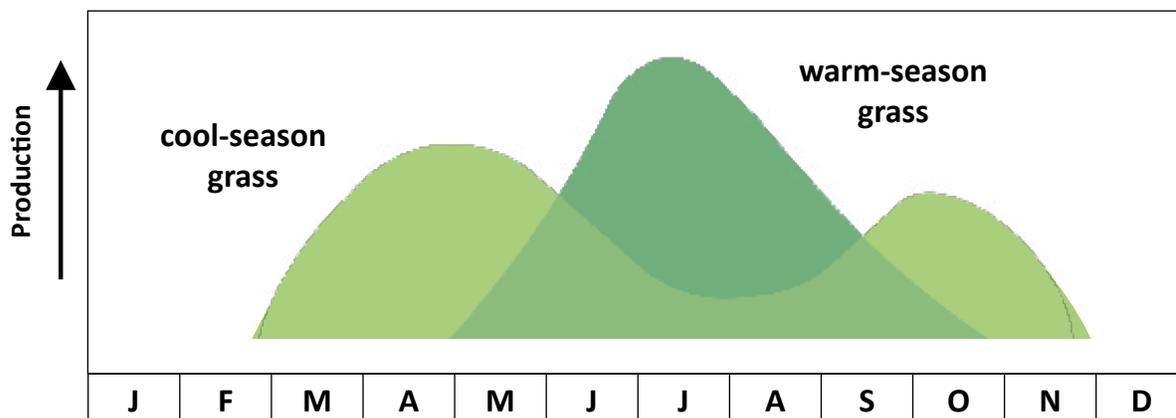


Figure 2. Cool-season grass/warm-season grass production curve.





### ***Now is the Time to Join the Natives First Coalition***

The U.S. Department of Agriculture (USDA) offers technical and financial assistance to landowners to implement soil, water, and wildlife conservation practices, including planting forage and implementing prescribed grazing. NBCI is leading an effort for USDA to create a native vegetation standard for these practices, called Natives First, where a preference would be given to native vegetation.

Discussions are underway for the 2018 Farm Bill, where Natives First could have a profound impact on applied conservation. A single Farm Bill program can make a big impact on the 25 NBCI states; in 2009-14, the Environmental Quality Incentives Program (EQIP) enrolled nearly 1.9 million acres annually (excluding fish and wildlife practices). In 2014, EQIP enrolled an estimated 1.25 million acres in introduced grasses. A Natives First policy could mean that a large portion of those acres would have been planted to native vegetation.

Part of the strategy for advancing the Natives First proposal is to develop a broad-based coalition of supporters to provide a unified voice for the idea of preferentially using native vegetation in all USDA technical and financial assistance programs. NBCI is asking that you or your organization join the Natives First Coalition to help promote the proposal and become part of the team endorsing the concept to USDA. To read and comment on the Natives First proposal or join the Coalition, go to: [www.bringbackbobwhites.org/conservation/natives-first/](http://www.bringbackbobwhites.org/conservation/natives-first/).



**Quail 8 Highlights****NBCI Information Network Build-Out Progressing***By Tom Dailey | National Bobwhite Conservation Initiative*

An exponential increase in technical resources and services for quail conservation occurred the last week of July 2017, as part of the NBCI Information Network build-out. Three products with national impact include publication of the *Proceedings of the 8th National Quail Symposium*, publication of the new e-journal *NBCI National Quail Symposium Proceedings*, and the Joint Quail Conference.

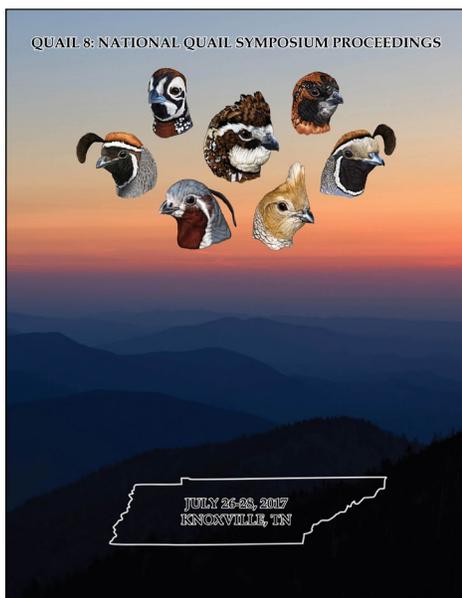
The Joint Quail Conference, held July 24-28, 2017, in Knoxville, Tennessee, included the 23rd Annual National Bobwhite Technical Committee (NBTC) meeting and the 8th National Quail Symposium (Quail 8). Hosted by NBCI, NBTC, Tennessee Wildlife Resources Agency, and the University of Tennessee, financial contributions were also provided by the Federal Aid in Wildlife Restoration Program, United States Department of Agriculture Natural Resources Conservation Service, Caesar Kleberg Wildlife Research Institute, Tall Timbers Research Station and Land Conservancy, Quail Forever, Texas Tech Quail Tech Alliance, Mississippi State University/Forest and Wildlife Research Center, Rolling Plains Quail Research Ranch, and the University of North Texas Quail Program. Private conservation and hunting product companies also provided funding and displayed their products. More sponsor information is published on NBCI's technical web

site, [www.quailcount.org](http://www.quailcount.org). The proceedings of the NBTC meeting are published at a later date, and highlights are provided elsewhere in the Almanac.

Quail 8 is part of the National Quail Symposia Series, held every 5 years at locations around the country, and was the impetus for publication of the new technical products. NBCI began leadership of the Symposia coincident with Quail 7 in Tucson, Arizona, in 2012. The Symposia covers all wild quail in the United States, Central America, and Canada, and has long been supported by Midwestern and eastern state wildlife agency associations. In 2016, the Symposia was designated a sanctioned technical workshop by the Western Association of Fish and Wildlife Agencies.



Quail 8, held in the northern bobwhite range in Tennessee, provided unprecedented opportunity for professional quail enthusiasts to learn, face-to-face with other professionals, the latest in research and management findings. To quote NBCI Facebook, "Possibly the greatest collection of quail talent ever assembled in one location!" Quail 8 participants included many university students, field biologists, administrators, leading university researchers,



**A group of Quail 8 attendees participate in a quail eyeworm removal workshop at UT College of Veterinary Medicine. Photo by Dr. Allison Watson.**



and several scientists who are now heads of departments and institutes. Quail 8's 93 presentations included case studies of quail population response to habitat, bobwhite translocations, a workshop on eyeworms, and the future of the endangered masked bobwhite of Arizona and Mexico. Over 300 quail enthusiasts attended, from as far west as California, south to Mexico, and from most of the range of the northern bobwhite.

The Quail 8 proceedings was published to ensure that technical information shared at the conference is widely and permanently available. The proceedings included 432 pages of technical information, recognition of hosts, editors and sponsors, and Symposia Awards of Excellence for Dr. Leonard A. Brennan and Dr. L. Wes Burger. Also, In Memoriam recognition of Dr. Robert Robel of Kansas State University, which, at the awards ceremony was delivered by Dr. Nova Silvy, one of Dr. Robel's first students.

To purchase National Quail Symposium Proceedings, visit the University of Tennessee Online Marketplace at: [www.secure.touchnet.com/C21610\\_ustores/web/index.jsp](http://www.secure.touchnet.com/C21610_ustores/web/index.jsp). To locate previous symposia proceedings, select UTIA Publications > Wildlife and Fisheries from the homepage, or type "quail" in the search bar.

The launch of the new e-journal, *NBCI National Quail Symposium Proceedings*, was announced at Quail 8 by NBCI and University of Tennessee Libraries. The e-journal is published in an easy-to-search format, and the Proceedings serve as the "Consumer Reports" of the

quail world, with all contributions peer-reviewed. The old proceedings are coming back to life—the e-journal includes proceedings of the First and Second National Bobwhite Quail Symposia, and Quail III, IV, V, VI, and VII. Quail 8 will be published by fall 2017 and will include presentations recorded live at the 8th National Quail Symposium. *NBCI National Quail Symposium Proceedings* is part of the Digital Commons Network™ (bepress™), and is hosted by University of Tennessee Libraries.

The e-journal puts quail science at the fingertips of the public. Citizen scientists can learn about quail conservation. For quail hunters, there are research publications on hunting, bird-dog efficiency, and quail behavior. To access the e-journal, visit: [www.trace.tennessee.edu/nqsp/](http://www.trace.tennessee.edu/nqsp/), or NBCI's technical website, [www.quailcount.org](http://www.quailcount.org).

This historic build-out of the NBCI Information Network was implemented by a small army of individuals and sponsors, recognized in the Acknowledgments section in the Quail 8 proceedings. Their contribution of time was supported by Allen Press, Inc., NBCI, NBTC Science Subcommittee, NBTC Steering Committee, Tennessee Wildlife Resource Agency, and University of Tennessee—Libraries, Forest, Wildlife and Fisheries Department, and UT Information Technology Services.



**Roger Applegate addresses a crowd of Quail 8 attendees.  
Photo by John Doty.**





**Attendees of the Joint Quail Conference enjoying four days of networking and 93 oral and poster presentations in what is arguably the largest collection in history of quail enthusiasts, biologists, and researchers. Photos by Jef Hodges.**



## Habitat Management Shows Its Worth: NBCI Coordinated Implementation Program Sees Steady Growth

By Tom Dailey and Molly Foley | National Bobwhite Conservation Initiative

*“Continuous census is the yardstick of success or failure in conservation.” (Aldo Leopold 1933, Game Management)*

Range-wide demand for bobwhite population restoration success led to a new national standard in 2014, the NBCI Coordinated Implementation Program (NBCI CIP). NBCI CIP aims to demonstrate success—an abundance of bobwhites—relatively quickly, with annual breeding bird and fall bobwhite covey monitoring, habitat monitoring in years 1, 5, and 10, and major habitat and covey abundance benchmarks in years 5 and 10.

**A preliminary crude tally of calling male bobwhite during the breeding season reveals a marked benefit from habitat, with 61% more bobwhites heard on NBCI CIP Focal Areas than on Reference Areas**

Following publication of NBCI CIP in 2014, NBCI launched a full-service technical website for state agencies and partners in 2016, [www.quailcount.org](http://www.quailcount.org), meeting the state agency desire for centralized and secure data entry, management, analysis, and reporting. Technical tools essential for implementing an NBCI CIP are also housed there, and updates on progress were previously reported by feature articles in 2015 and 2016 Bobwhite Almanacs.

Participation in NBCI CIP has grown steadily, including:

- Six pilot projects in 2013 (Georgia Department of Natural Resources, Iowa Department of Natural Resources, Kentucky Department of Fish and Wildlife Resources, Missouri Department of Conservation, Texas Parks and Wildlife Department/Oaks and Prairies Joint Venture, and Virginia Department of Game and Inland Fisheries);
- Eight new projects enrolled in the NBCI database (bird and covey data submitted by spring 2017) (Delaware Division of Fish and Wildlife, Georgia Department of Natural Resources second focal area, Iowa Department of Natural Resources second focal area, Nebraska Game and Parks Commission, New Jersey Division of Fish and Wildlife, Ohio Division of Wildlife,

Oklahoma Department of Wildlife Conservation/Oaks and Prairies Joint Venture, and South Carolina Department of Natural Resources/United States Forest Service); and

- Eight CIPs in development (Alabama Division of Wildlife and Freshwater Fisheries/United States Forest Service, Arkansas Game and Fish Commission/Pea Ridge National Military Park–National Park Service; Georgia Department of Natural Resources/United States Forest Service, Illinois Department of Natural Resources, Indiana Division of Fish and Wildlife, Louisiana Department of Wildlife and Fisheries/United States Forest Service, Missouri Department of Conservation second focal area, and Pennsylvania Game Commission/Letterkenny Army Depot).

Enrolled NBCI CIP Focal Areas range in size from 1,694 (Delaware NBCI Cedar Swamp Focal Area) to 27,238 (Texas NBCI Austin County Focal Area) acres and average 8,616 acres. As a preliminary measurement of habitat improvement, 12 state coordinators reported 25,784 acres of habitat management for 13 NBCI CIP Focal Areas, either those enrolled or in development (Figure 1). These data are reported in detail in the NBCI Habitat Management Inventory, page 71.

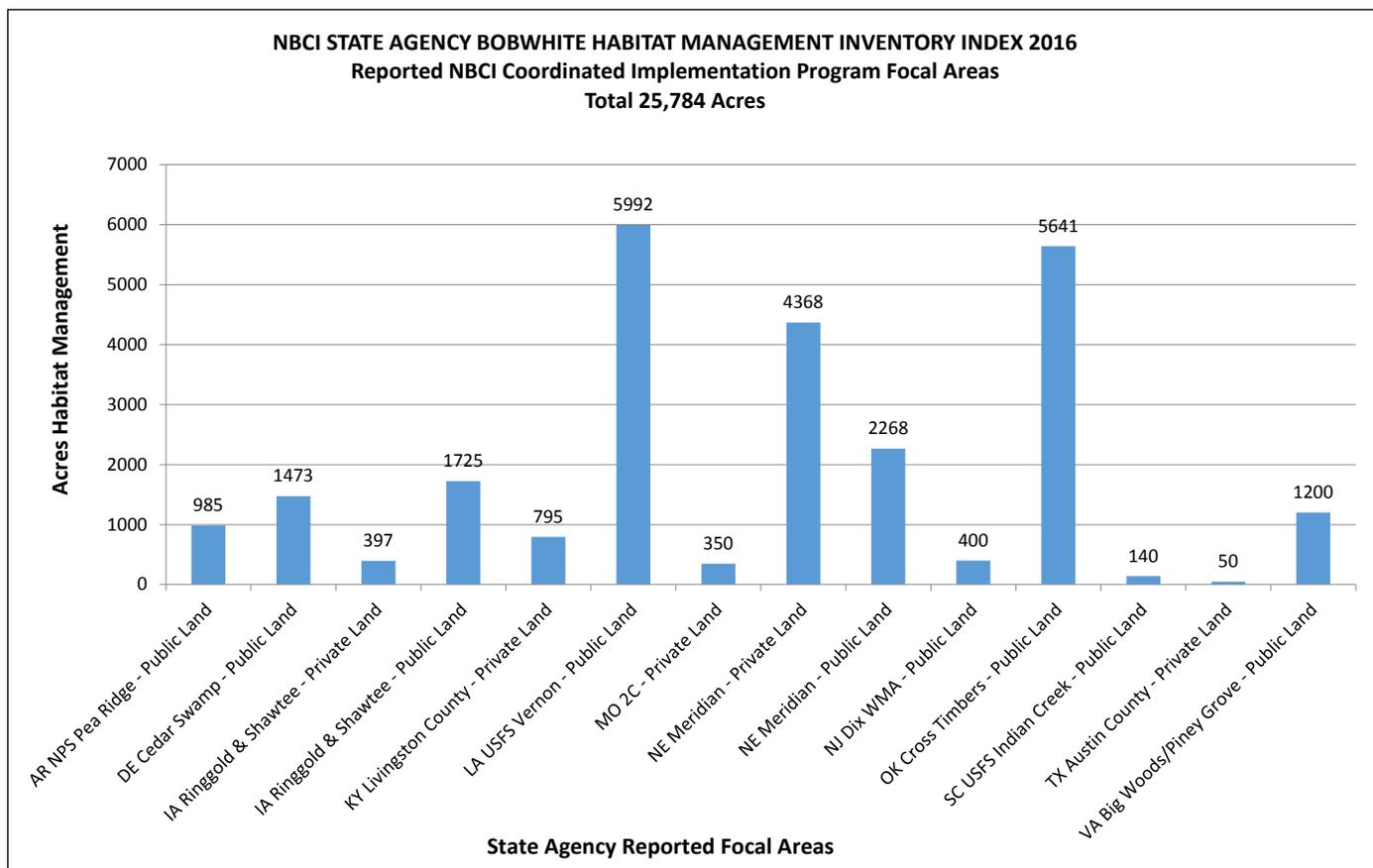
On this foundation of habitat management in NBCI CIP Focal Areas, state agencies and partners are producing many quail. Reported observations of quail and songbird abundance prior to the 2017 field breeding bird season include 29 NBCI CIP Focal and Reference areas, 746 monitoring points, 3,602 breeding bird counts, 14,749 birds counted at those points, 801 fall quail counts, and 1,732 calling quail counted at those points. A preliminary crude tally of calling male bobwhite during the breeding season reveals a marked benefit from habitat, with 61% more bobwhites heard on NBCI CIP Focal Areas than on Reference Areas (i.e., study areas with minimal prescribed bobwhite habitat).

NBCI Science services, including NBCI 2.0 geospatial data, NBCI National Quail Symposium Proceedings, NBCI



Inventory, and NBCI CIP, are built on the foundation of [www.quailcount.org](http://www.quailcount.org) and are designed to assist state agencies and partners in their work to restore and manage bobwhite populations. NBCI Science services are developed in collaboration with the NBTC Science

Subcommittee and Steering Committee, University of Tennessee Institute of Agriculture (UTIA) Forest, Wildlife and Fisheries Department, UTIA Information Technology Services, and University of Tennessee Libraries.



**Figure 1. NBCI Habitat Management Index for 2016 for 13 NBCI CIP Focal Areas, including projects enrolled, and those in development. This is a partial listing, e.g., excluding Ohio CIP, and including CIPs in development in Arkansas and Louisiana. Index is acres of habitat managed by prescribed fire, disking, spraying herbicide, cutting, planting, etc., during the 2016 reporting year. These data are reported in detail in the NBCI Habitat Management Inventory.**



## State Conservation Reports

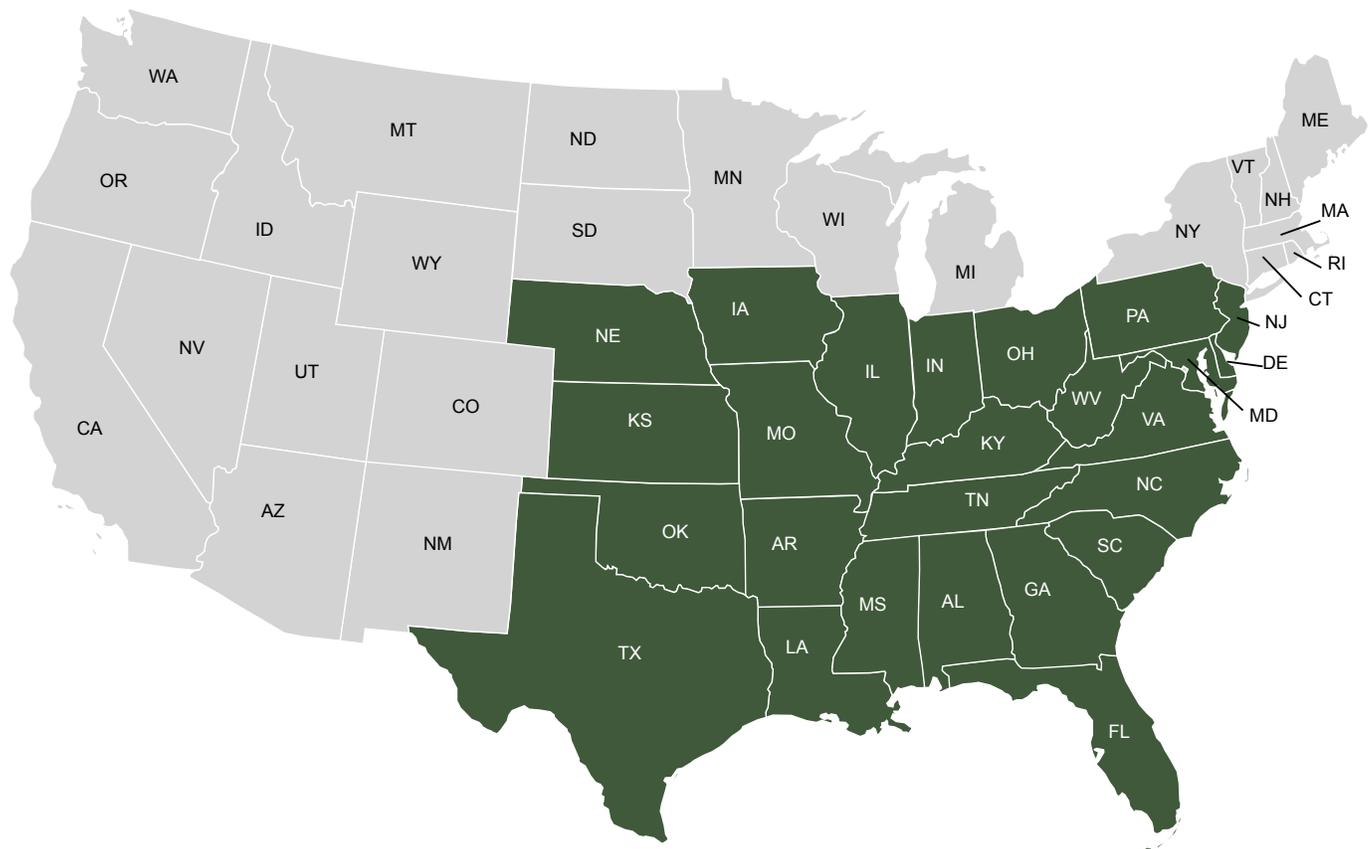
This section contains highlights of bobwhite conservation during 2016 and early 2017, as reported by each state's NBCI quail coordinator. Current information on 2017 bobwhite population and hunting information is available on state agency websites, which are embedded in the electronic version of this report on [www.bringbackbobwhites.org](http://www.bringbackbobwhites.org). State quail coordinator contact information can be found at the end of each report. State agency quail leadership changed substantially over the past year with 7 new or additional coordinators—Marcus Asher (Arkansas), Matt Broadway (Indiana), Justyn Foth (Delaware), Tom Keller (Pennsylvania), Michael Peters (West Virginia), Cody Rhoden (Kentucky), and Derek Wiley (Oklahoma).

Bobwhite conservationists continued aggressive and innovative restoration, including millions of acres of habitat management, education programs, monitoring, and research. Bobwhite populations grew in areas where weather was mild, and bobwhite hunting continued

to surge in the Midwest and Great Plains. Private land voluntary public access programs for quail hunting remained strong and expanded to more states.

Some state coordinators include charts of habitat management reported for their state for the NBCI Habitat Inventory. The same work is summarized in the NBCI Inventory section following the state reports section. A summary of hunting trends reported by state agencies follows the NBCI Habitat Inventory.

State agencies continued to expand quail restoration in spite of challenging budgets, including partnerships with public land agencies such as the National Park Service, and collaboration with private landowners via programs such as the USDA Farm Bill and USFWS Bird Joint Ventures. All are needed to bring about the landscape-scale change that is needed to restore sustainable bobwhite populations. Many of these partners are recognized in state reports and the NBCI Habitat Inventory.



**NBCI member states that make up the core historic bobwhite range**



## **Alabama – Alabama Department of Conservation and Natural Resources**

*Population:* Like most of the Southeast, Alabama's quail population has declined as much as 80% since 1960. On private lands, healthy, huntable populations exist only where land use patterns and management are directly targeting quail. Quail have rebounded on some Wildlife Management Areas (WMAs) and have a huntable population where habitat manipulation was possible, particularly in longleaf and shortleaf reforestation projects. Fall covey population surveys and spring call counts have now been initiated on thirteen WMAs, and these surveys show that the best concentrations are on Barbour WMA in the southeast portion of the state and Freedom Hills WMA in the northwest portion of the state. Also, Geneva State Forest WMA has a fair, huntable population in open pine stands. Efforts continue to increase populations on other WMAs through manipulation of contract farming with field buffers and timber thinning.

*Hunting:* Alabama Division of Conservation and Natural Resources (ADCNR) 2015-16 hunter surveys indicate approximately 11,600 quail hunters harvested about 267,000 quail. Less than 10% of this harvest was wild birds.

*Management:* ADCNR continues to manage for quail with the following programs:

- Managed select north Alabama WMAs with farming leases for small game by leaving larger buffer field edges and standing crops in the field. Continued longleaf pine restoration on approximately 5,000 acres on Barbour WMA and Fred T. Stimpson Sanctuary, along with prescribed burns to restore grasslands. Shortleaf pine restoration continued on 2,000 acres on ADCNR and Forever Wild lands on Lauderdale and Freedom Hills WMAs.
- A quail monitoring program is now carried out on 13 WMAs across the state. Fall covey count surveys and spring call counts were conducted in 2015 and 2016. Some of these WMAs have large agricultural fields and contract farming in grains, totaling almost 4,000 acres. Some of the management efforts now in place are following field edges and a biannual rotation of these buffers to maintain early successional habitat adjacent to the woodlands through fall disking. This has primarily been accomplished by well-defined modifications and requirements of the contracts with the farmers. In addition, as part of the requirements of the contract, a percentage of cropland has been left unharvested adjacent to these field buffers.
- Efforts continue between ADCNR and the National Forests of Alabama to establish quail management units on the four national forests in Alabama, beginning with Conecuh National Forest (CNF). Recently a Memorandum of Understanding (MOU) was signed between ADCNR and U.S. Forest Service (USFS) establishing a new WMA, the Boggy Hollow WMA, on a portion of CNF. This 7,000 acre area was a cooperative effort between ADCNR, USFS, the Conecuh Chapter of Quail Forever, and the National Wild Turkey Federation (NWTf). Beginning with the 2017 hunting season, this tract on the most southern portion of CNF will primarily focus on quail, with a reduced bag limit and limiting daily access to Wednesdays and Saturdays through a self-permit checking system. Over the next five years, management efforts will primarily focus on timber thinning and more frequent prescribed fire, as well as a reduction in the size of the burned units. The Quail Forever Chapter in south Alabama has a MOU with CNF, allowing them to manage some of the wildlife openings with annual and perennial plantings to benefit quail. ADCNR staff and CNF staff are working with the chapter to maintain these wildlife openings for quail in this new WMA, as well as wildlife openings on the remainder of CNF.

NBCI State Quail Coordinator: Mark Sasser, Non-Game and Quail Project Coordinator, [mark.sasser@dcnr.alabama.gov](mailto:mark.sasser@dcnr.alabama.gov)

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## **Arkansas – Arkansas Game and Fish Commission**

*Population:* Arkansas's quail population has declined about 70% over the past 30 years.

*Hunting:* About 4% of resident hunting license holders hunt quail.

*Management:* Quail management highlights include:

- Arkansas Game and Fish Commission (AGFC) designated 7 focal landscapes totaling 17,180,291 acres that will focus our habitat restoration efforts. In addition, we have deemed 5 wildlife management areas as "quail emphasis areas," and significant amounts of time and money will be budgeted to make conditions on these lands ideal for quail.
- On AGFC lands, 25,243 acres were improved in the name of quail using disking, prescribe fire, planting native plants, spraying, and timber stand improvement.



## State Conservation Reports

- Pea Ridge National Military Park (Arkansas NBCI Focal Area) completed 322 acres of cedar removal and 663 acres of prescribed burning.
- Landowners enrolled 2,166 acres of land into USDA Conservation Reserve Program Practices CP-2, CP-21, CP-33, CP-38E, and CP-42, while 16,819 acres of quail-friendly habitat were created using USDA Environmental Quality Incentives Program funding.
- AGFC's Arkansas Acres for Wildlife Program, along with private lands biologist assistance, facilitated 1,117 acres of early-successional habitat management.
- Reported 53,459 acres of quail management for the NBCI Habitat Management Inventory (page 47, Figure 1; page 71, Figures 1-4).
- A continuing education seminar, "Quail 101," was held in which 57 AGFC staff were trained by some of the foremost quail experts in the United States.
- Held 7 well-attended promotional meetings throughout the state to promote USDA Natural Resources Conservation Service's Working Lands for Wildlife and Pollinator Initiatives that resulted in 28 contracts totaling \$592,675.

NBCI State Quail Coordinator: Marcus Asher, Quail Program Coordinator, [marcus.asher@agfc.ar.gov](mailto:marcus.asher@agfc.ar.gov)

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### ***Delaware — Delaware Division of Fish and Wildlife***

**Population:** During the 2016 fall covey count field season (October 5 – November 10), surveys were conducted at Cedar Swamp Wildlife Area (WA) and Ted Harvey Conservation Area, our focal area and reference area, respectively. At Cedar Swamp WA, fall covey counts differed across survey rounds. During the first survey period, the observed mean coveys was 0.4 (Standard Error [SE] = 0.245, n = 5). During the second survey period (October 18), the observed mean coveys was 1.6 (SE = 0.812, n = 5), but ranged from 0 – 4 bobwhite coveys per survey point. During the third and final fall survey period, the observed mean bobwhite coveys was 3.4 (SE = 1.470, n = 5), but ranged from 0 – 7 bobwhite coveys per survey point. Comparatively, at Ted Harvey Conservation Area, the first and third survey period mean observed coveys was 0 per survey point. The second round mean observed coveys was 0.4 (SE = 0.245, n = 5).

**Hunting:** The 2015/2016 Hunter Mail Survey, annually sent to ≥ 20% of Delaware hunters, estimated 226 hunters harvested 2,239 quail. Hunters were asked to identify whether the birds they harvested were, to the best of their knowledge, wild or released pen-raised birds. Respondents indicated that 312 (13.93%) quail harvested were of wild origin.

**Management:** The Delaware Division of Fish and Wildlife (DFW) continues to partner with NBCI. Through this partnership, Division biologists and habitat managers are identifying Wildlife Management Areas within Delaware that would benefit from future habitat management and support a natural or reintroduced bobwhite population. To date in Delaware, accomplishments include:

- Cedar Swamp WA, in New Castle County, was designated as our first NBCI Coordinated Implementation Program (NBCI CIP) focal area for bobwhite. Approximately 27.27% (1,500 acres) of the area was identified as habitat that could support bobwhites.
- Division biologists completed breeding season (whistle call) surveys from June 18 – July 30, 2016. At both the focal and reference areas, 14 plots were surveyed for presence and distribution of bobwhite.
- Concomitantly to whistle call surveys, habitat assessment within plots was completed on both the focal and reference areas.
- From October 6 – November 10, DFW biologists conducted fall covey counts.
- Habitat management activities on the focal area have been focused on the gradual removal of agricultural leases and the establishment of hedgerows, field buffers, and native warm-season grass/forbs. Additional habitat management activities include chemical and mechanical removal of invasive species. Within large open fields, area managers are incorporating hedgerows and expanding field buffers to reduce large open areas and provide additional protective escape cover. These habitat management activities are expected to continue during the next several years.



- In 2016, DFW enhanced and restored 3,227 acres of upland habitat on state wildlife areas, which will likely benefit bobwhites. These management activities included selective thinning, wildflower and native grass establishment, prescribed burning, heavy disking, edge feathering, and invasive species control.

NBCI State Quail Coordinators: Justyn Foth, Ph.D., Waterfowl, Turkey, and Upland Gamebird Biologist, [justyn.foth@state.de.us](mailto:justyn.foth@state.de.us) and Jesse Baird, Wildlife Biologist, [charles.baird@state.de.us](mailto:charles.baird@state.de.us)

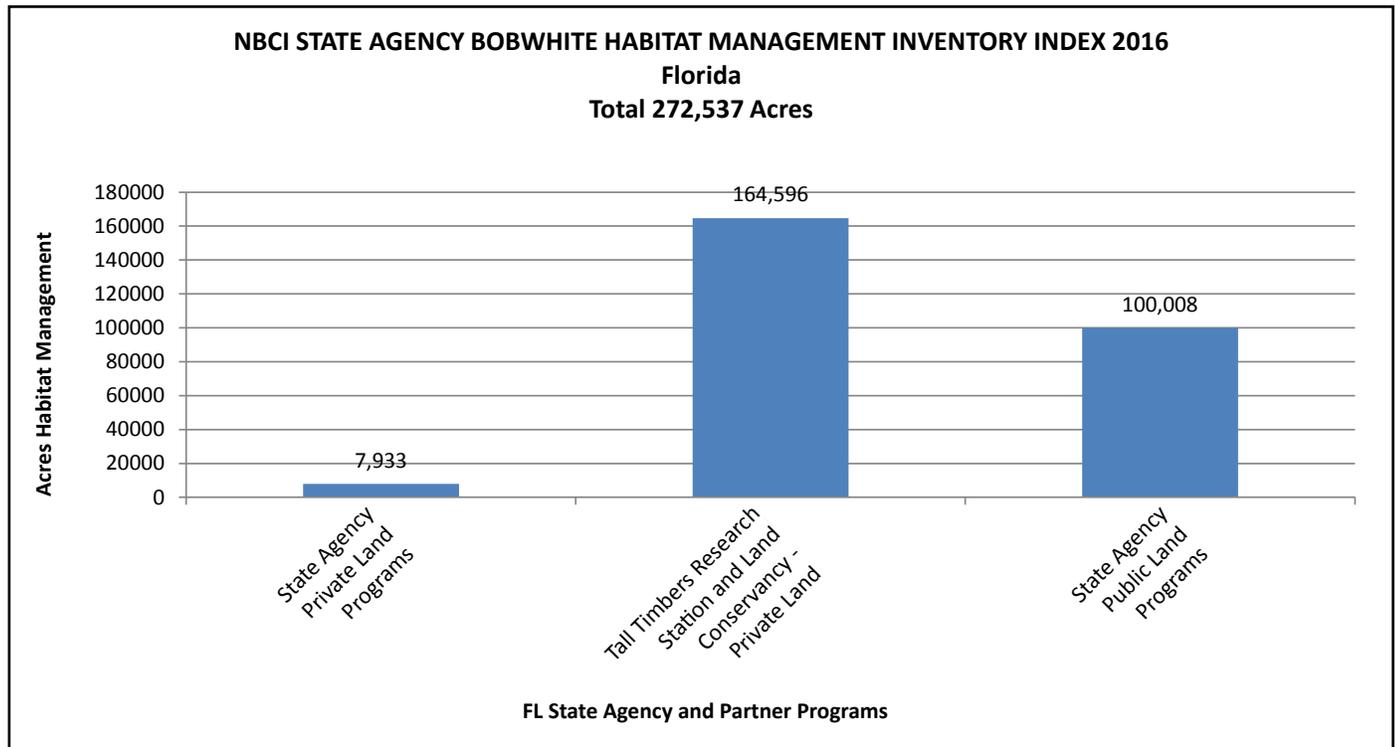
## ***Florida – Florida Fish and Wildlife Conservation Commission***

**Population:** Florida’s bobwhite population has declined by approximately 82% since 1966.

**Hunting:** Hunter and harvest estimates are based on results from a 2015-16 telephone survey which indicate 7,428 hunters harvested roughly 134,266 bobwhites. For comparison, annual bobwhite harvest was 2.7 million birds in 1970.

**Management:** Florida’s restoration and management of bobwhites continues to operate under a State Strategic Plan for Northern Bobwhite Restoration that is integrated with NBCI. Bobwhite management highlights include the following:

- To advance Florida’s strategy, the Upland Ecosystem Restoration Project (UERP) was developed in 2006 as a cooperative effort between the state’s four primary land management agencies (Florida Fish and Wildlife Commission [FWC], Florida Forest Service, Florida Department of Environmental Protection, and U.S. Forest Service) and Tall Timbers Research Station and Land Conservancy (TTRS). The primary objective of UERP is to prioritize, design, and implement on-the-ground management to improve populations of northern bobwhite and other grassland species on public lands throughout Florida.
- Collectively, under UERP and other efforts, Florida has over 209,000 acres of total area of quail habitat on public land under favorable management for bobwhites and other grassland species. These public land areas are collectively managed by the four primary land management agencies noted above. In addition, TTRS oversees management and research on 218,008 acres of total area of quail habitat on private land throughout Florida.
- Reported 272,537 acres of quail management for the NBCI Habitat Management Inventory (page 71, Figures 1-2, 4).



# State Conservation Reports

- Completed over 250 fall covey call counts on public land bobwhite focal landscapes. In addition, completed species and habitat monitoring for other fire-dependent grassland species on UERP focal landscapes.
- FWC private lands biologists worked with numerous landowners to provide technical assistance and cost share opportunities to create over 7,933 acres of new bobwhite habitat throughout the state.
- Officially designated a 19,000 acre focal area on the Kissimmee Prairie Preserve State Park.

NBCI State Quail Coordinator: Greg Hagan, Quail Biologist, [greg.hagan@myfwc.com](mailto:greg.hagan@myfwc.com)

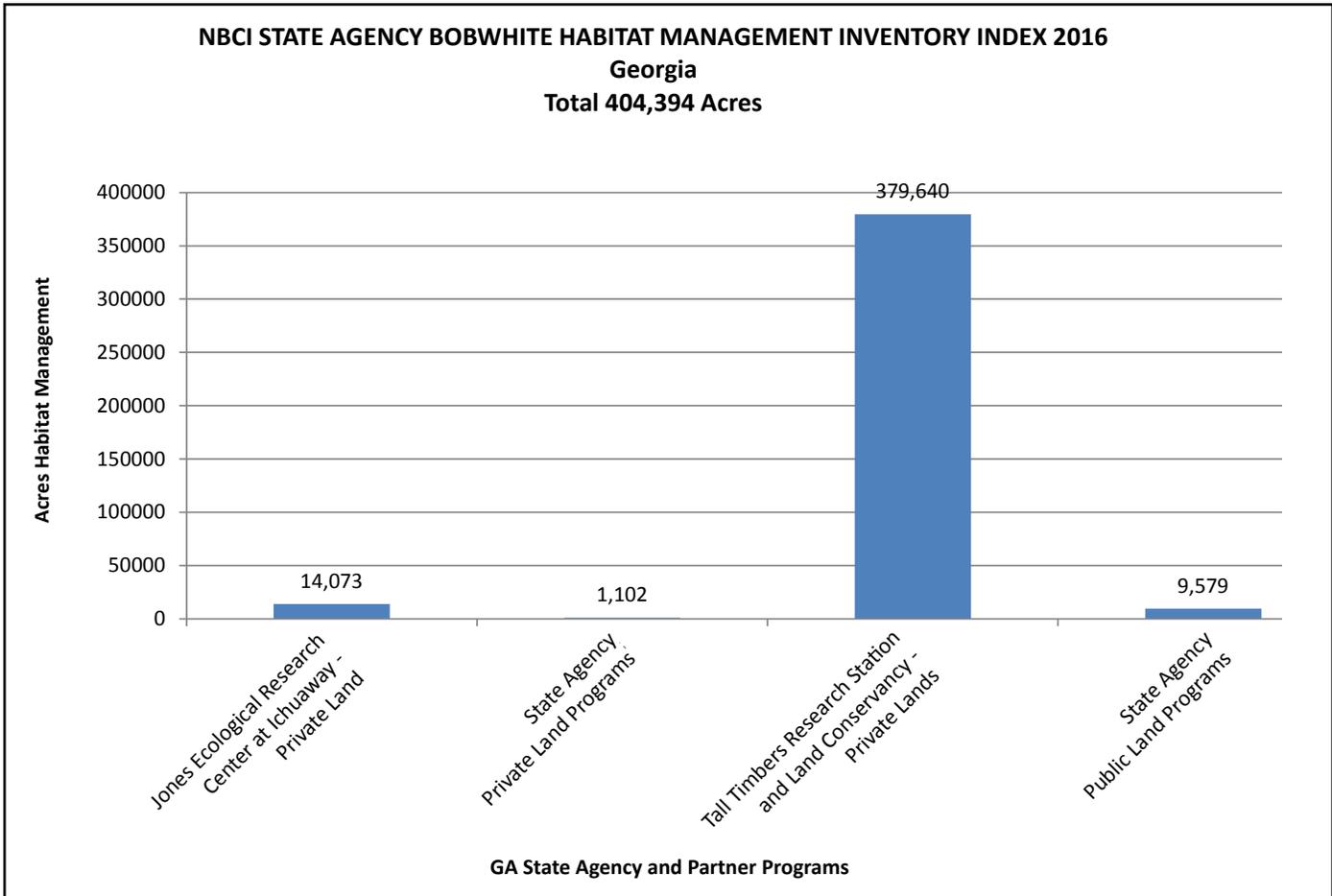
## **Georgia — Georgia Department of Natural Resources**

**Population:** Georgia Department of Natural Resources (GADNR) statewide bobwhite population index has declined by more than 85% since 1966.

**Hunting:** From 2012-15, estimated bobwhite hunter numbers declined by 7% (15,060 hunters for 2015 season;  $\pm 910$ ), and estimated bobwhite harvest increased by 26% (504,683 harvest for 2015 season;  $\pm 12,203$ ). The proportion of pen-reared quail in the harvest increased by 43% (458,916 harvest for 2015 season;  $\pm 12,184$ ), and the wild bobwhite harvest decreased by 43% (45,767 harvest for 2012 season;  $\pm 6,324$ ). Wild bobwhite harvest decreased from 2012-15 but remains 149% higher than numbers observed in 2009.

**Management:** GADNR bobwhite restoration efforts continue to follow the NBCI 2.0 step-down plan via Georgia's Bobwhite Quail Initiative (BQI): 2013-23 (released November 2014). Other quail management highlights include the following:

- BQI partnered with USDA Natural Resources Conservation Service to deliver the Bobwhite Quail and Southern Pine Savanna Restoration Pilot Project by enrolling over 4,000 acres on working farms and forests in Georgia's



Upper Coastal Plain. Practices such as thinning timber, prescribed burning, brush management, and disking are being implemented on this 4,000+ acres to manage for quail more intensively. The competitive ranking process for the project is based on the GADNR [NBCI Coordinated Implementation Program](#) (NBCI CIP) Focal Tier designation.

- Reported 404,394 acres of quail management for the NBCI Habitat Management Inventory (page 71, Figures 1-2, 4).
- BQI biologists provided technical assistance to landowners throughout Georgia's Upper Coastal Plain that impacted more than 1,102 acres of habitat.
- Georgia continues to focus intensive quail management efforts on five Wildlife Management Areas (WMAs), totaling about 20,000 acres that serve as core habitats in the BQI. 2016 saw nearly 10,000 acres of these areas managed intensively for huntable densities of quail.
- Monitoring efforts include fall covey counts on seven WMAs, two private focal areas, and Oconee National Forest. Spring monitoring for several pine savanna species was conducted on five WMAs and two private land properties. Several USDA CP-38 State Acres for Wildlife Enhancement (SAFE) properties were monitored by BQI, Private Lands, and Non-Game biologists to detect bobwhite and other breeding birds during the summer of 2016.
- The Florida/Georgia Quail Coalition (a partnership with GADNR, Quail Forever, Florida Fish and Wildlife Commission, and Tall Timbers Research Station and Land Conservancy directed at supporting bobwhite management on public lands) has contributed nearly \$50,000 to create more than 900 acres of habitat on Georgia WMA BQI Focal Areas. These funds are donated by Quail Forever chapters in Georgia that have an interest in restoring wild quail hunting opportunities on public lands.

NBCI State Quail Coordinator: Paul Grimes, State Quail Coordinator, [paul.grimes@dnr.ga.gov](mailto:paul.grimes@dnr.ga.gov)

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### ***Illinois — Illinois Department of Natural Resources***

*Population:* Illinois Department of Natural Resources (IDNR) roadside counts for bobwhite are very similar to the USGS North American Breeding Bird Survey protocol. In 2016, as reported in the [2016 Quail Annual Status Report](#), observers across Illinois recorded an average of 0.48 quail per stop (13% decrease), and quail were recorded at 24.0% of the stops (6% decrease).

*Hunting:* Harvest estimates are based upon results from the 2015-16 Illinois Hunter Harvest Survey. An estimated 7,665 hunters (32% decrease from 2014-15 season) harvested 29,674 wild quail (38% decrease from 2014-15 season). Quail hunters averaged 0.52 quail per trip.

*Management:* IDNR continues to operate under a statewide [Wildlife Action Plan](#), where quail are considered a species in greatest conservation need, and as a partner with NBCI. Quail management highlights include the following:

- The USDA Conservation Reserve Program (CRP) is by far the greatest source of potential wildlife habitat in Illinois. In April of 2017, Illinois had 895,495 acres of CRP, a 15,550-acre increase from March 2016, including:
  - [USDA CP-33 Habitat Buffers for Upland Birds](#) – 65,920 acres enrolled, a 4,342-acre increase from March 2016.
  - [USDA CP-38 State Acres for Wildlife Enhancement \(SAFE\)](#) – 24,462 acres enrolled, a 1,803-acre increase from March 2016.
  - [USDA CP-42 Pollinator Habitat Initiative](#) – 92,189 acres enrolled, more than double the acres from March of 2016.
- Reported 68,998 acres of quail management on state and private lands for the NBCI Habitat Management Inventory (page 71, Figures 1-4).
- In December 2016, Illinois was allocated an additional 15,000 acres of SAFE (CP-38) for the Grand Prairie and Southern Till Plain Natural Divisions. This brings the allocation for these SAFE areas to 32,600 acres; 16,840 acres are currently enrolled.
- Dr. Mike Eichholz and Dr. Eric Schaubert (Southern Illinois University) have not been able to move forward on a Pittman-Robertson grant to assess habitat and population dynamics and their effects on bobwhite populations



# State Conservation Reports

in Illinois due to the state’s budget impasse. This project is intended to help facilitate the monitoring and vegetation surveys for an Illinois Focus Area.

- Dr. Mike Ward and colleagues (University of Illinois) continued research investigating grassland wildlife response to the SAFE program, cover crops, and other agricultural practices.

NBCI State Quail Coordinator: Stan McTaggart, Agriculture and Grassland Wildlife Program Manager, [stan.mctaggart@illinois.gov](mailto:stan.mctaggart@illinois.gov)

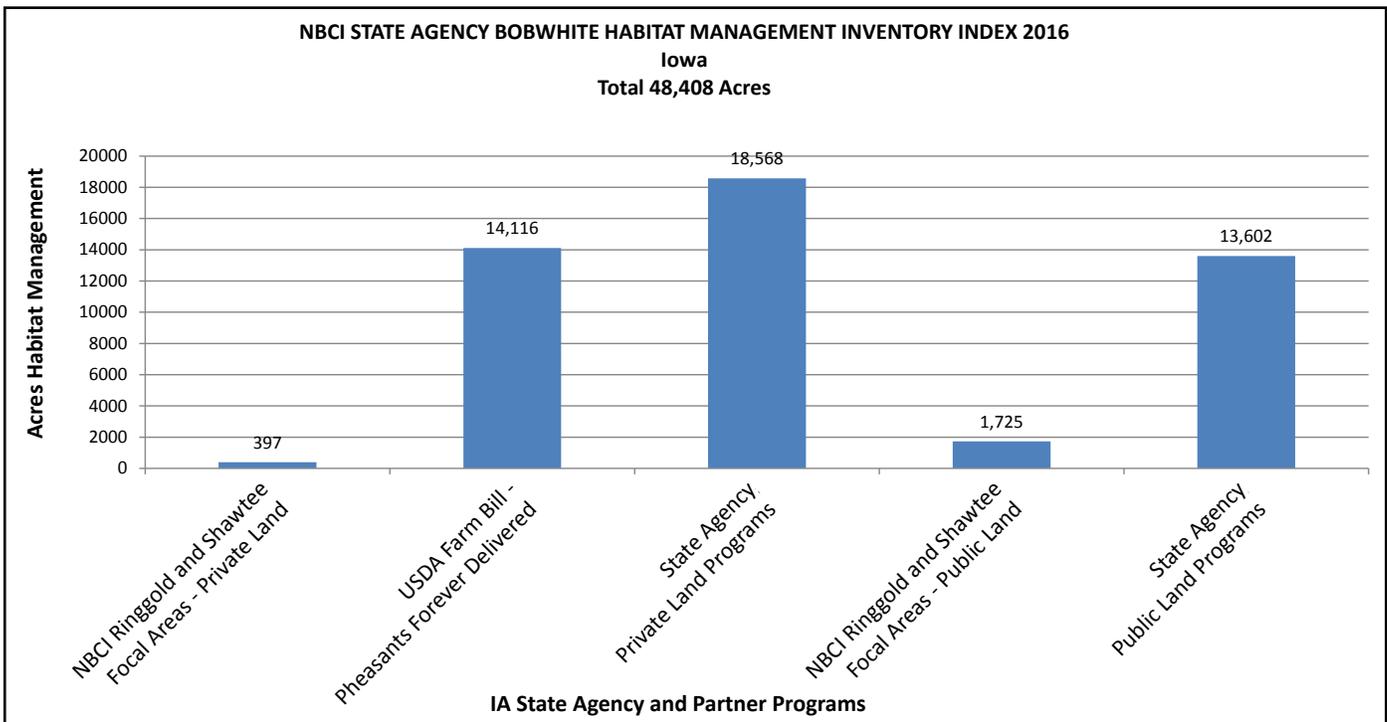
## ***Iowa — Iowa Department of Natural Resources***

**Population:** Iowa Department of Natural Resources (IDNR) 2016 statewide bobwhite August roadside index of 1.61 quail per 30-mile route was 22% higher than the 2015 index of 1.32. The last time Iowa’s statewide quail index was this high was 27 years ago in 1989. The 2016 counts are 126% and 8% above the 10-year and long-term (54-year) averages, respectively. Quail populations are at modern highs in Iowa in 2016, with populations expected even higher in 2017.

**Hunting:** Hunter numbers and harvest both increased during the 2015-16 hunting season compared to 2014-15 season. An estimated 9,762 hunters (compared with 6,546 in 2014-15) harvested 28,362 quail (compared with 10,705 in 2014-15). The 2015–16 quail harvest was 18% above the 10-year average. Hunting and harvest numbers for the most recent hunting season (2016-17) were not available at press time, but are expected to be some of the highest seen in a decade.

**Management:** IDNR manages bobwhite by partnering with multiple agencies, non-government organizations, and private citizens, as well as the NBCI. Quail management highlights include the following:

- Iowa continues participation in the NBCI Coordinated Implementation Program (NBCI CIP) with two officially identified focal areas, plus many other public lands receiving quail management focus.
- To increase bobwhite habitat in Iowa, the IDNR submitted a new USDA CP-38 State Acres for Wildlife Enhancement (SAFE) project targeted at restoring early successional habitat. Iowa was awarded 40,000 acres for this project in 2016 and enrolled all 40,000 acres in less than 2 months.
- Iowa has a 46,500-acre allocation of USDA CP-33 Habitat Buffers for Upland Birds, of which 25,110 acres have been enrolled.



- Iowa reported over 48,408 acres of management for the NBCI Habitat Management Inventory (page 47, Figure 1; page 71, Figures 1-3).
- The [Iowa Upland Game Bird Advisory Group](#) recommended that restoration activities for bobwhite should focus on habitat restoration and better landowner marketing.
- Iowa received a \$3 million USDA Voluntary Public Access grant to expand the [Iowa Habitat and Access Program](#). This program is creating quail habitat on private CRP acres across southern Iowa that will be open for public hunting. Over 24,000 acres have been enrolled in the program since early 2016. Each area has a habitat management plan and is open to public hunting.

NBCI State Quail Coordinator: Todd Bogenschutz, Upland Wildlife Research Biologist, [todd.bogenschutz@dnr.iowa.gov](mailto:todd.bogenschutz@dnr.iowa.gov)

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### ***Indiana — Indiana Division of Fish and Wildlife***

*Population:* Results of the Indiana Division of Fish and Wildlife (IDFW) 2016 statewide bobwhite whistle count index are unavailable due to a vacancy in the Farmland Game Biologist position and personnel limitations. Previously, 2015 results indicated a 7.9% increase over 2014. Without population index and harvest data, it would be inappropriate to speculate on how weather, or other factors, may have effected northern bobwhite numbers. However, spring and summer precipitation levels were not appreciably above average. Also, the 2016 winter conditions saw nearly snow-less months with mild temperatures in November and December.

*Hunting:* Bobwhite hunting season dates in Indiana are divided by Interstate 74; North Region dates were November 1 – December 15, 2016 (daily bag limit: 4). South Region dates were November 1, 2016 – January 10, 2016 (daily bag limit: 8). Currently, Indiana does not annually collect hunter harvest records for northern bobwhites; however, the triannual small game hunter survey report will include some harvest information for the previous 3 years and be available Winter 2017 on the state Department of Natural Resources website.

*Management:* Within IDFW, the Private Lands Unit, Public Lands Unit, and Wildlife Science Unit are working to improve quail habitat and management. Highlights for Indiana quail include:

- Gamebird Habitat Development Program = 1,644.8 acres.
- Wildlife Habitat Cost Share Assistance Program = 763.7 acres (mostly impacting quail, but not every acre).
- Total state cost share programs benefiting quail = 2,408.5.
- The Private Lands Unit continued working with landowners via the [Habitat Incentive Program](#) to create habitat in county priority areas across the state, creating a total of 7,497 acres that benefit bobwhites (including all programs – CRP, cost-share, SAFE, Game Bird Area, etc.)
- CP-38 State Acres for Wildlife Enhancement (SAFE) in Indiana has 15,508.8 acres enrolled.
- The Public Lands Unit improved over 4,500 acres on approximately 20 IDFW properties.
- Currently, the Wildlife Science Unit is implementing its northern bobwhite population monitoring, and is coordinating with Public and Private Lands personnel on determining focal and reference areas for an [NBCI Coordinated Implementation Program](#) (NBCI CIP).

NBCI State Quail Coordinator: Matthew Broadway, Farmland Game Biologist, [mbroadway@dnr.in.gov](mailto:mbroadway@dnr.in.gov)

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### ***Kansas – Kansas Department of Wildlife, Parks and Tourism***

*Population:* 2016 statewide bobwhite breeding abundance index was 23% above 2015 index and 18% and 28% above previous 5- and 10-averages, respectively.

*Hunting:* According to the 2015-16 hunting season statistics, 54,983 quail hunters harvested 414,391 bobwhites.

*Management:* Kansas Department of Wildlife, Parks and Tourism (KDWPT) continues to manage bobwhite throughout the state by partnering with multiple agencies, NGOs, and private citizens, as well as NBCI. Quail management highlights include the following:

- In 2012, KDWPT designated two focus areas in eastern Kansas for bobwhite restoration. To date, habitat improvements have been completed or obligated on 3,234 acres of private land and 4,878 acres of public land within these areas.



# State Conservation Reports

- Bobwhites are a species of conservation importance for both State Wildlife Grant and USDA program funding ranking processes.
- KDWP continues to evaluate CP-33 buffers in the state working with Kansas State University researchers.
- A Voluntary Public Access (VPA) grant has been approved for 2.7 million dollars and will create incentives for long-term lease agreements on quality properties through our existing Walk-In Hunting Access. The program enrolls properties newly enrolling in CRP and CCRP and provides incentives for the habitat as well as the access.

NBCI State Quail Coordinator: Jeff Prendergast, Small Game Specialist, [jeff.prendergast@ks.gov](mailto:jeff.prendergast@ks.gov)

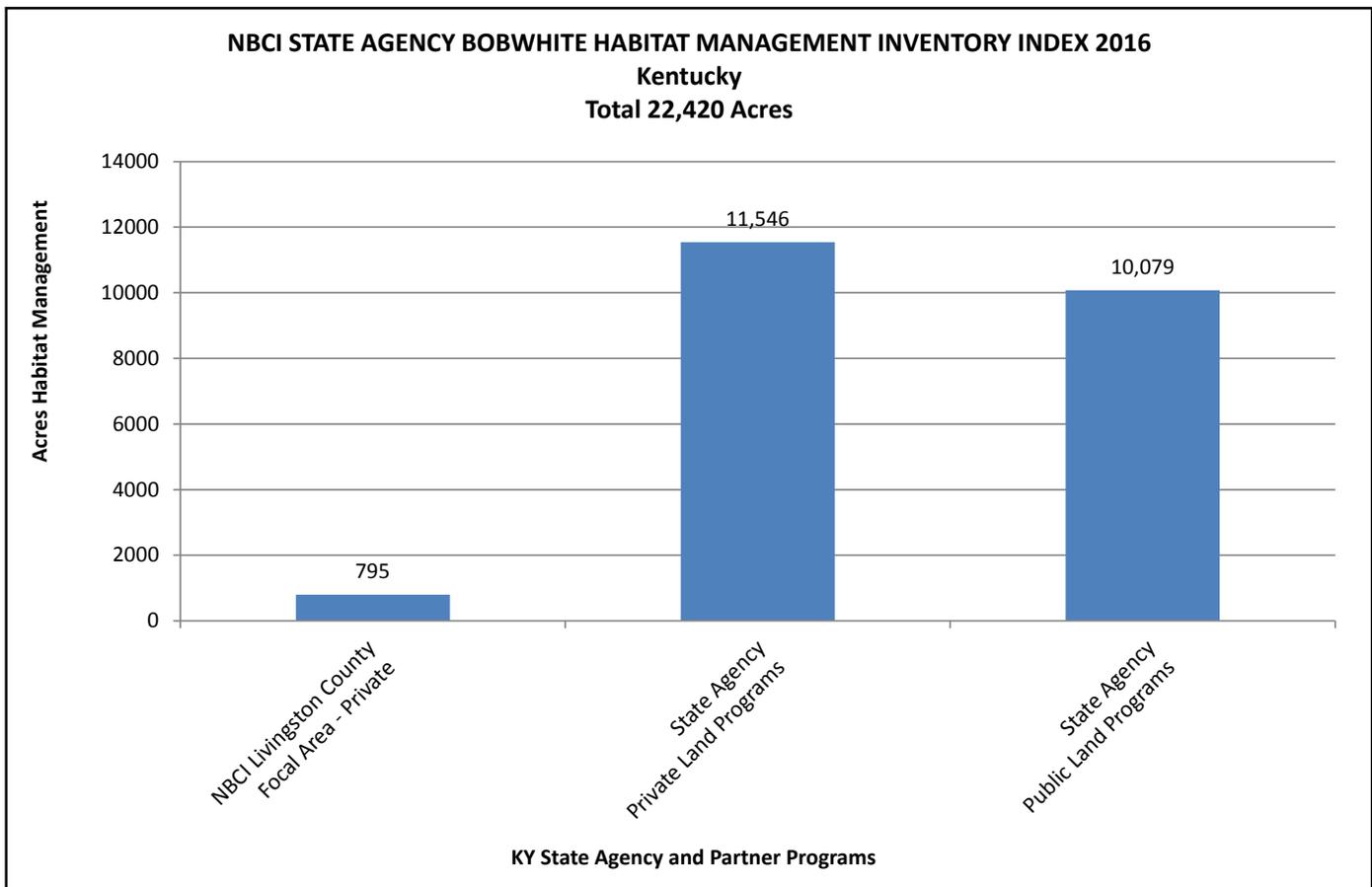
## **Kentucky – Kentucky Department of Fish and Wildlife Resources**

**Population:** According to the Kentucky Department of Fish and Wildlife Resources (KDFWR) statewide mail carrier survey, the bobwhite population has declined by more than 69% since 1960. The 2016 index is 69.1% below our 1981 restoration target. A 12.5% decrease in quail statewide was observed between 2015 and 2016.

**Hunting:** On average, hunters bagged 0.38 birds/hour in 2015-16 hunting season and observed 0.36 coveys per hour. The harvest rate is 30% below the 5-year average, whereas covey detections were 17% below the 5-year average.

**Management:** KDFWR continues to operate under a statewide Quail Plan and as a partner with the NBCI. Quail management highlights include the following:

- In collaboration with the Kentucky Prescribed Fire Council, the state enacted a Certified Burn Boss Program to allow expanded prescribed burning opportunities for the private sector.
- Analysis of KDFWR quail focus area data resulted in a 99% probability of growing a focus area’s bobwhite population if similar management actions are completed.
- The Bluegrass Army Depot Quail Focus Area conducted its first bobwhite quota hunt in more than a decade. The 2016 fall population was the largest since the project began in 2009.



- KDFWR hosted the first-ever National Bobwhite Leadership Workshop at Shaker Village in August 2016.
- The [Kentucky Bobwhite Battalion](#) Facebook community membership increased to over 3,300 members.
- KDFWR conducted site assessments of its bobwhite focus areas. These were collaboratively completed by the project leaders of each focus area and the small game program staff. The goal was to critically review the areas' management and build a vision for the future on each site.
- KDFWR Commissioner Greg Johnson Chairs the NBCI Management Board, the high-level national oversight, guidance, and support body for the bobwhite restoration movement.

NBCI State Quail Coordinators: John Morgan, Small Game Coordinator, [john.morgan@ky.gov](mailto:john.morgan@ky.gov) and Cody Rhoden, Small Game Biologist, [cody.rhoden@ky.gov](mailto:cody.rhoden@ky.gov)

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### **Louisiana – Louisiana Department of Wildlife and Fisheries**

*Population:* The Louisiana Department of Wildlife and Fisheries (LDWF) annual 2016 Bobwhite Whistle Survey combined results were not significantly different from 2015. Quail whistles heard were lower and continue to be near the lowest numbers across Louisiana since the survey began in 1983.

*Hunting:* The Big and Small Game Harvest Survey for 2015-16 estimated that 800 persons hunted wild quail and bagged an estimated 4,900 quail.

*Management:* LDWF continues to work with private, corporate, and government landowners and partners to improve quail habitat:

- LDWF East and West Gulf Coastal Plain Prescribed Burn Initiatives, National Fish and Wildlife Foundation Grant; LDWF Natural Heritage Program: total of 6,827 acres prescribe-burned in 2015-16.
- USDA Natural Resources Conservation Service (NRCS) programs in 2016: 1,288 acres were planted to longleaf pine and 5,386 acres prescribe-burned.
- Worked with NRCS, National Wild Turkey Federation, and other agencies to hold longleaf pine workshops for private landowners and land managers.
- Began work on the Kisatchie National Forest Vernon Bobwhite Emphasis Area, with 5,992 acres of habitat managed in 2016.
- Continued quail habitat improvements at Sandy Hollow Wildlife Management Area (WMA), including planning for 1,500 Acres of timber harvests and other habitat improvements.
- Additional prescribed burning was contracted on Sandy Hollow, Clear Creek, West Bay, and Bodcau WMAs for a total of 6,264 acres.
- Reported 26,234 acres of quail management for the NBCI Habitat Management Inventory (page 47, Figure 1; page 71, Figures 1-3).

NBCI State Quail Coordinator: Cody Cedotal, Resident Small Game/Wild Turkey Program Manager, [ccedotal@wlf.la.gov](mailto:ccedotal@wlf.la.gov)

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### **Maryland – Maryland Department of Natural Resources**

*Population:* Maryland's bobwhite population has declined more than 90% over the past 50 years. Some isolated pockets of wild quail may still exist in the southern region, but the highest densities occur in the eastern part of the state.

*Hunting:* The Maryland Department of Natural Resources (MDNR) 2015-16 Annual Hunter Mail Survey estimated 340 bobwhite hunters harvested 834 wild birds. The survey only requests data on wild quail hunts, but hunting of pen-raised quail remains popular.

*Management:* MDNR continues to partner with various agencies and organizations, focusing bobwhite restoration efforts on suitable public and private lands within the current range.

- Four MDNR Wildlife Management Areas encompassing about 11,000 acres continue to be managed with a focus on bobwhite and other early-successional species. Monitoring via summer and/or fall surveys indicates stable or increasing populations on most areas.
- Additional emphasis on active forest management and prescribed burning within the current quail range has led to many acres of new or planned projects.



# State Conservation Reports

- Approximately 20,000 acres are currently enrolled in quail-friendly practices under the USDA Conservation Reserve Program.
- Reported 4,201 acres of management for the NBCI Habitat Management Inventory (page 71, Figures 1-4).
- MDNR staff has increased technical assistance, outreach, and monitoring efforts on public and private lands in regions of the state where significant potential for population restoration exists.
- Washington College, with funding from MDNR, launched a new regional habitat initiative to restore bobwhite habitat and protect water quality in the upper Chesapeake Bay watershed.

NBCI State Quail Coordinator: Bob Long, Upland Game Bird Project Manager, [bob.long@maryland.gov](mailto:bob.long@maryland.gov)

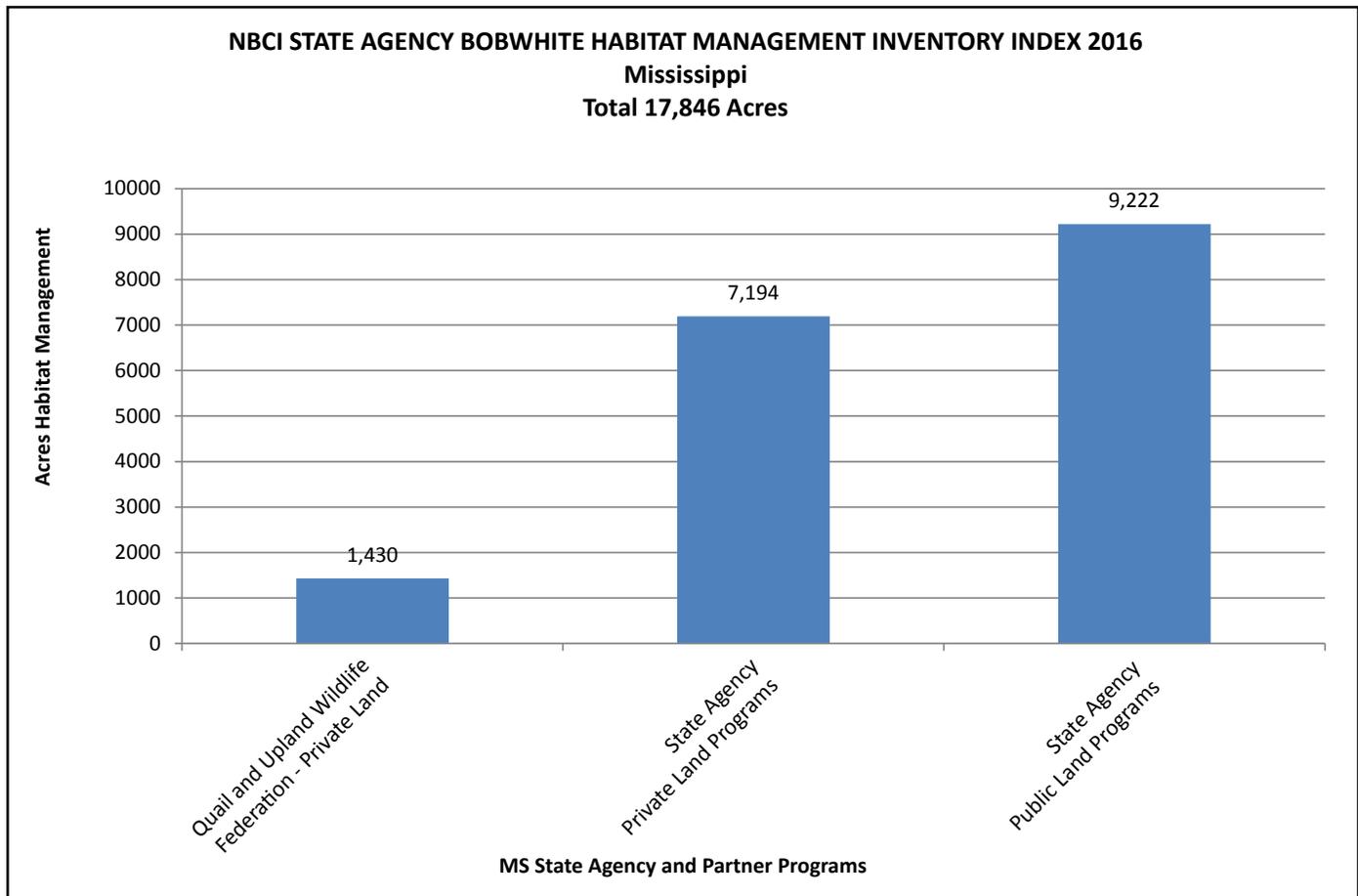
## ***Mississippi — Mississippi Department of Wildlife, Fisheries, and Parks***

*Population:* Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) 2016 Wildlife Management Area (WMA) bobwhite abundance index was 14% above 2015 index.

*Hunting:* 2015-16 hunting season statistics were below previous year, below previous 5-year average, and above previous 10-year average.

*Management:* Quail management highlights include the following:

- Continued promotion of USDA CP-38 Bobwhite Quail Habitat, CP-38 Black Belt Prairie Restoration, and USDA CP-33 Habitat Buffers for Upland Birds practices.
- Cooperated with conservation partners to implement quail-friendly habitat management via Mississippi Partners for Fish and Wildlife Program Uplands, Prairie, and Longleaf committees, State Wildlife Grants, and Fire on the Forty Initiative.
- Provided early successional habitat management technical assistance to private landowners statewide.



- Conducted quail-friendly forest and field management (prescribed burning, disking, selective herbicide, and other practices) on eight WMAs.
- Reported 17,846 acres of management for the NBCI Habitat Management Inventory (page 71, Figures 1-2, 4).
- Continued education and outreach via public contacts, website, and one quail management workshop.

NBCI State Quail Coordinator: Rick Hamrick, Habitat/Small Game Program Leader, [rickh@mdwfp.state.ms.us](mailto:rickh@mdwfp.state.ms.us)

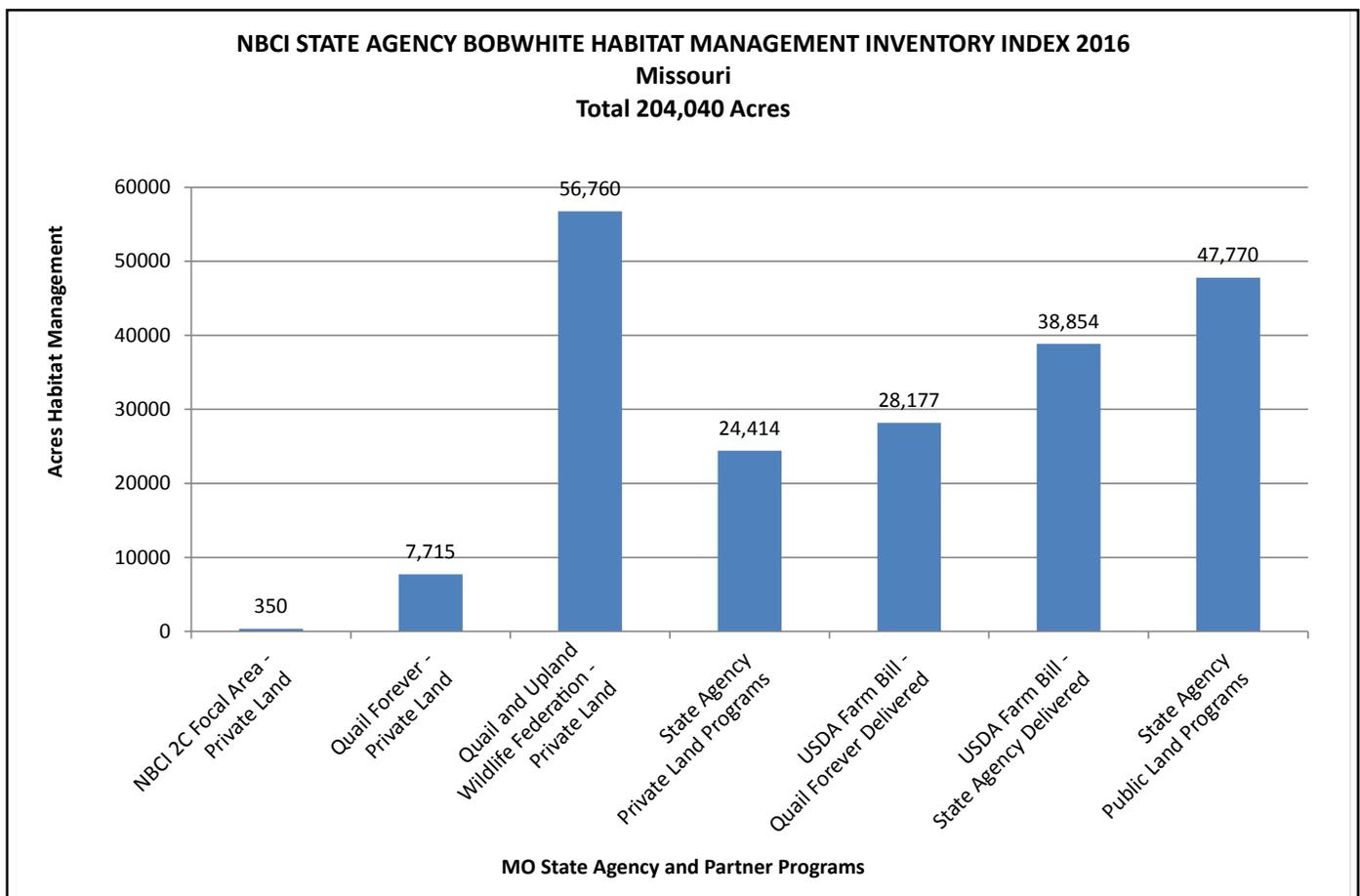
## **Missouri — Missouri Department of Conservation**

**Population:** The Missouri Department of Conservation (MDC) 2016 state bobwhite abundance index of 1.6 quail per 30 mile route was 47% below the 2015 index of 3.0. This is 6% below the 5-year average (2011-15 average = 1.7) and 30% below the 10-year average (2006-15 average = 2.3).

**Hunting:** Missouri's Small Game Post-Season Harvest Survey is conducted every other year; the most current data is from the 2014-15 season. The total number of hunters pursuing quail in 2014 was 18% below the 2012 total of 15,078. Averages for daily and season bags were up from 2012, as was total harvest. As expected, with fewer total quail hunters in 2014, total days afield was also down from 2012. In general, quail hunters in 2014 experienced the best hunting (based on average daily bag) since 1991. New survey data will be available late summer 2017, but based on field reports, quail hunting during the 2015 and 2016 seasons was similar to 2014 in northern and western portions of the state, where suitable habitat exists.

**Management:** Quail management highlights in 2016 include the following:

- MDC's Quail and Small Game Task Force continues to elevate small game issues with working groups focused on habitat, populations, outreach, focus areas, partners, and program review and assessment.
- Under the state's revised recovery plan, MDC staff will continue to proactively engage private landowners in 27



private land Quail Focus Areas (QFA), while 21 public land Quail Emphasis Areas (QEA) will serve as examples of quality quail and small-game habitat. These focus areas rank Medium or High using the Biologist's Ranking Information process of [NBCI 2.0](#). QEAs receive additional considerations during the budgeting and planning process, and private land QFAs are eligible for enhanced cost-share habitat assistance.

- Continued monitoring of quail abundance on 21 public land QEAs and 3 private land QFAs.
- MDC continues participation in the [NBCI Coordinated Implementation Program](#) (NBCI CIP) with a focal area project in Carroll County and is in the process of establishing a second CIP focal area.
- Reported 204,040 acres of management for the NBCI Habitat Management Inventory (page 47, Figure 1, page 71, Figures 1-4).
- Outreach efforts continued via the [Small Game Prospects](#) resource, [Covey Headquarters Newsletter](#), periodic [MOre Quail](#) blog, a habitat management calendar, news items, and public events.
- MDC continues to leverage conservation dollars through cooperative partnerships with the [National Wild Turkey Federation](#), [Quail Forever](#), and the [Quail and Upland Wildlife Federation](#). These partnerships have been used to increase private land cost-share funding pools, fund cooperative USDA Farm Bill biologist positions, and create and promote youth hunting opportunities.
- MDC staff are in year 4 of a 5-year research project to study reproductive success and population response to traditional management (crop strips, linear shrub rows, discrete patches of nesting cover) vs. grassland landscape management (native grassland community managed with fire and grazing).
- In collaboration with the University of Missouri, MDC started a 2-year quail brood study to evaluate brood survival on traditionally managed areas vs. grassland management areas.
- For the fourth year in a row, bobwhites on extensive grassland landscapes managed with fire and grazing initiated earlier covey break-up, pairing, and nesting. In addition, nest success has been higher on the grassland vs. traditional study sites. Based on telemetry locations of adults with broods, bobwhites choose present-year grazing patches and 1-year post-grazing units for brood habitat. Units that have received neither burning nor grazing for >2 years show very little use by bobwhites.

NBCI State Quail Coordinator: David Hoover, Small Game Coordinator, [dave.hoover@mdc.mo.gov](mailto:dave.hoover@mdc.mo.gov)

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### ***Nebraska — Nebraska Game and Parks Commission***

**Population:** The Nebraska Game and Parks Commission (NGPC) statewide abundance index from the 2016 Bobwhite Whistle Count survey was 7% higher than 2015, with regional indices of relative abundance ranging from a 16% decrease in the North-Central region to 52% increase in the Republican region. Data from the 2016 July Rural Mail Carrier survey indicated statewide indices were 12% lower than in 2015. Changes in indices ranged from a 21% decrease in the West Platte region, to a 16% increase in the Republican region.

**Hunting:** Data from the 2016-17 season are not yet available. During the 2015-16 bobwhite hunting season (31 October 2015-31 January 2016), 17,747 hunters harvested 91,472 bobwhites during 120,168 days afield. These figures were up compared to the 11,651 hunters (+52%) harvesting 52,947 bobwhites (+73%) during 88,670 (+35%) days afield the previous year.

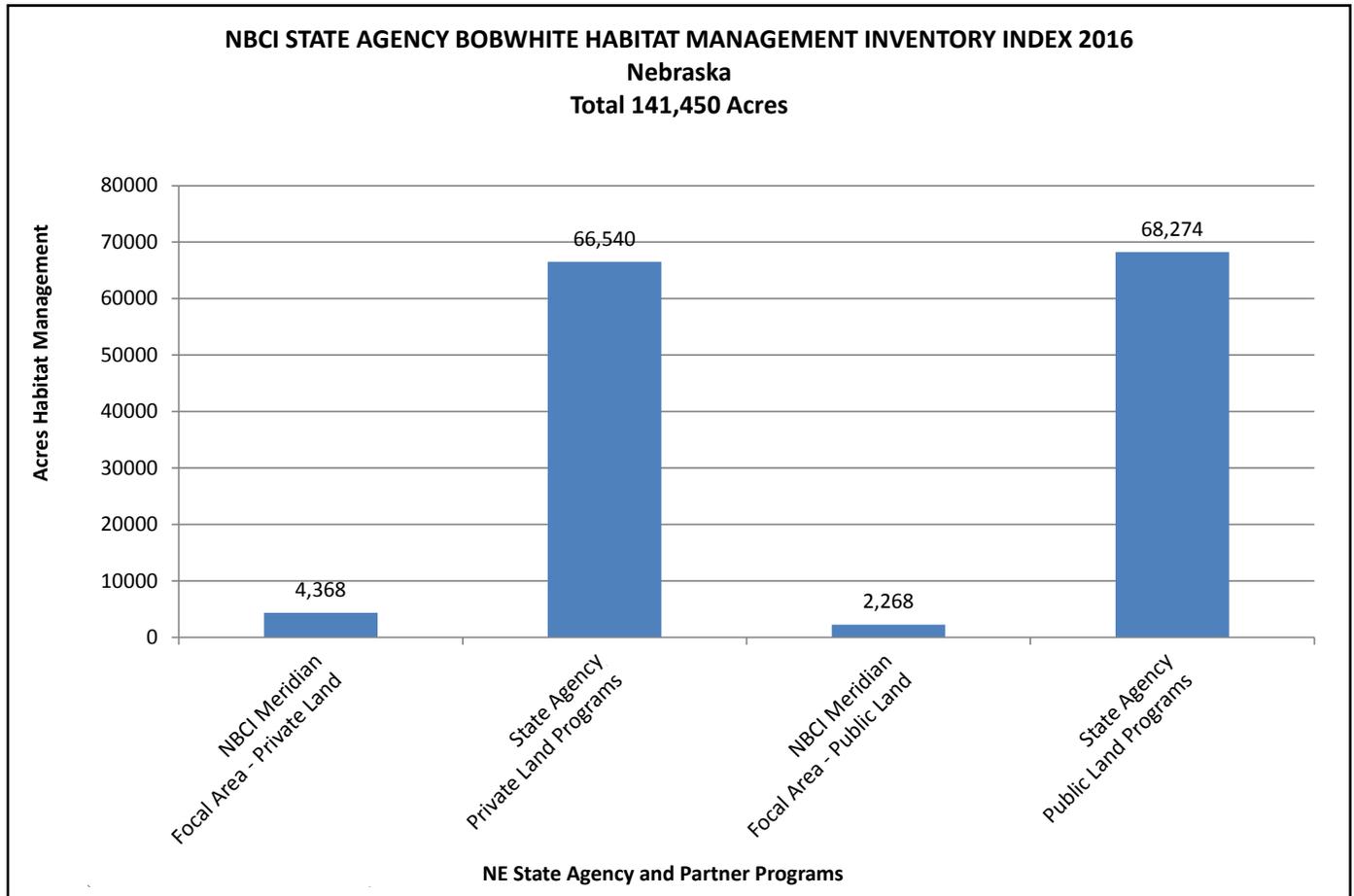
**Management:** NGPC continues to partner with the NBCI and to implement early successional habitat management on public lands for the benefit of bobwhites and other upland game species. Nebraska implemented the [NBCI Coordinated Implementation Program](#) (NBCI CIP) on the Meridian Quail Initiative Focus Area in Jefferson and Thayer counties. Spring whistle and fall covey count surveys were completed in the focus area and the reference area again in 2016. Edge feathering and other habitat management activities were conducted on private land and public hunting areas within the focus area using funds from a grant awarded by the Nebraska Environmental Trust and Federal Aid in Wildlife Restoration grant W41T. NBCI CIP habitat assessment was conducted during the summer of 2016. A summary of habitat improvements and research follows:

- As part of the Early Successional Habitat Initiative, 68,274 acres across the state were managed for the benefit of quail, pheasants, and other upland game.
- As part of the Focus on Pheasants program, 65,300 acres were managed for upland game, including bobwhite.



- Reported 141,450 acres of quail management for the NBCI Habitat Management Inventory (page 47, Figure 1; page 71, Figures 1-2).
- University of Nebraska doctoral student Mandy Lipinski continues field work on a Federal Aid in Wildlife Restoration project investigating micro-climatic impacts on bobwhite habitat use and population dynamics in south-central Nebraska. MS student Vicki Simonsen is investigating trade-offs in reproductive investment due to landscape context of nests and predation risk.

NBCI State Quail Coordinator: Dr. Jeffrey J. Lusk, Upland Game Program Manager, [jeff.lusk@nebraska.gov](mailto:jeff.lusk@nebraska.gov)



***New Jersey — New Jersey Department of Environmental Protection, Division of Fish and Wildlife***

*Population:* Very low:

- USGS North American Breeding Bird Survey data: 0.00/route in 2016; 0.00/route in 2015; 0.01/route during 2012-16; 0.07/route during 2007-16; and, 5.92/route during 1966-2016.
- Audubon Christmas Bird Count data: 0.21/circle in 2017; 0.00/circle in 2016; 0.07/circle during 2013-17; 0.19/circle during 2008-17; and, 8.73/circle during 1966-2017.

*Hunting:* Wild quail hunting season has been closed since September 2011. Hunting pen-raised birds is permitted at two New Jersey Department of Environmental Protection (NJDEP) Wildlife Management Areas (WMAs) and on licensed shooting preserves.

*Management:* NJDEP Division of Fish and Wildlife (NJDFW) continues to operate under a statewide Quail Plan and partner with multiple agencies, non-government organizations (NGOs), and private citizens. A formal Recovery Plan draft is anticipated in 2017. Quail management highlights include the following:

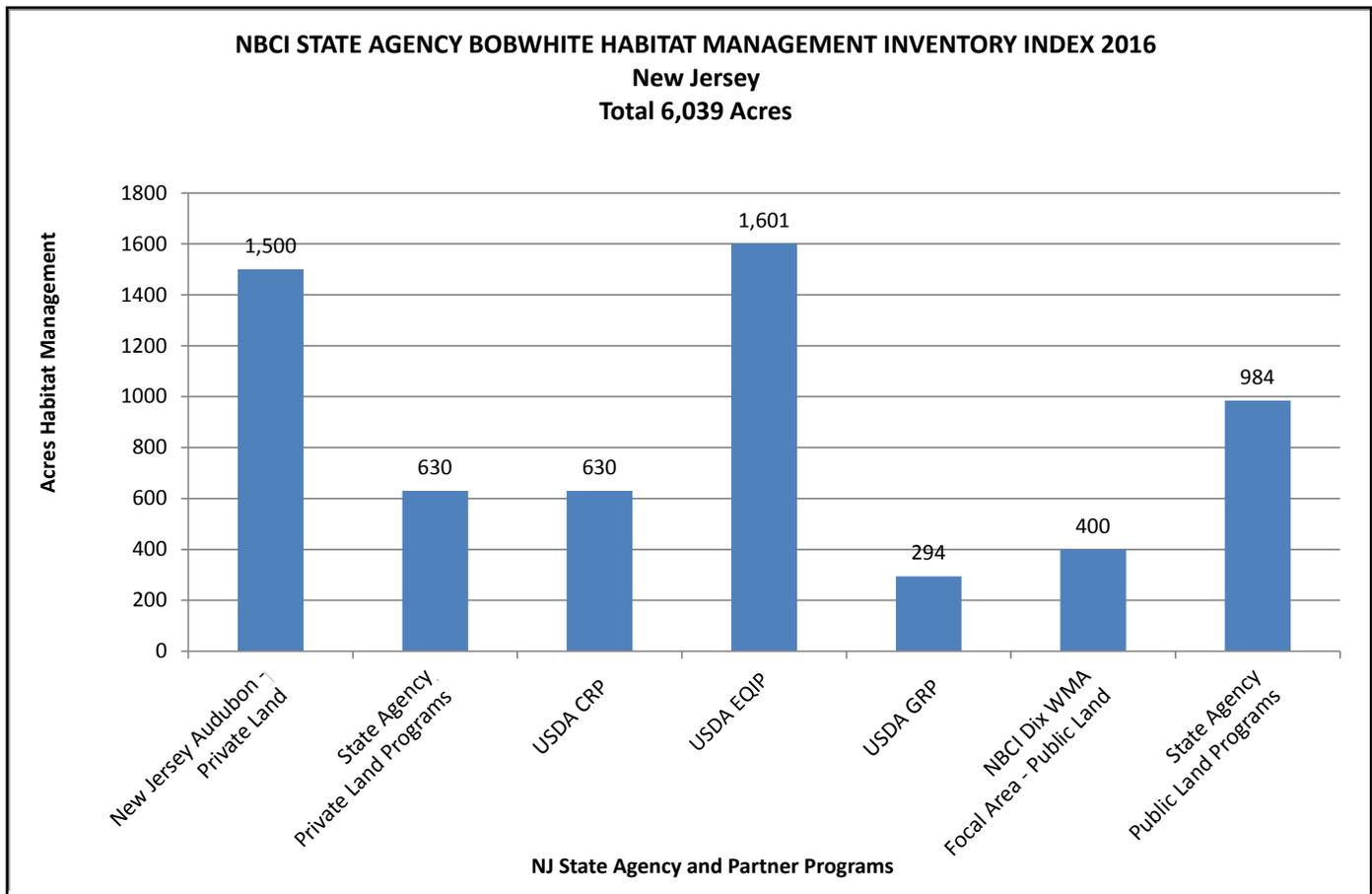
- Conservation partners NJDFW, New Jersey Audubon, Tall Timbers Research Station and Land Conservancy



(TTRS), [U.S. Fish and Wildlife Service](#), [University of Delaware \(UDEL\)](#), [Pine Island Cranberry Company](#), and [Pine Creek Forestry](#) completed the second year of its three-year research study on translocation with mixed results. Good nest success and recruitment in Year One were followed by poor nest success in Year Two when northern pine snakes, a state-threatened species, depredated all known nests. Winter weather does not appear to be a limiting survival factor, although the past two winters have been relatively mild. The final shipment of 80 Georgia quail were released late March/early April 2017. Preliminary findings were presented by UDEL graduate students at the 2016 Wildlife Society meeting in North Carolina.

- NJDFW staff visited seven interested landowners (2,603 acres owned) within [NBCI Coordinated Implementation Program \(NBCI CIP\)](#) focal areas and provided management plans. About 325 acres of management occurred via ongoing cooperation between sportsmen, NGOs, and NJDFW on quail habitat projects at a local sewage authority.
- New Jersey Natural Resources Conservation Service (NRCS) has designated seven southern counties for enrollment in their Environmental Quality Incentives Program, Working Lands for Wildlife, focusing on pine savannas for northern bobwhite. The number of applications received to date has been encouraging.
- Reported 6,039 acres of quail management for the NBCI Habitat Management Inventory (page 47, Figure 1; page 71, Figures 1-4).
- Quail in the Classroom initiated by the NJ Outdoor Alliance Environmental Projects is not accepting any new applications due to changes in personnel. A few schools have continued the program on their own initiative.

NBCI State Quail Coordinator: Jimmy Sloan, Upland Habitat and Wildlife Biologist, [james.sloan@dep.nj.gov](mailto:james.sloan@dep.nj.gov)



## **North Carolina — North Carolina Wildlife Resources Commission**

**Population:** Quail populations across the state have declined for many years and remain near all-time lows, with quail particularly scarce in the piedmont and mountains. The [USGS North American Breeding Bird Survey](#) serves as the state's primary quail monitoring reference for regional and statewide trends. Populations are generally declining, but stable or increasing in a few areas where landowners are committed to intensive habitat restoration and management.

**Hunting:** Each year, the North Carolina Wildlife Resources Commission (NCWRC) uses a [post-season survey](#) to estimate the number of hunters, hunting effort, and harvest of all game species in the state. During the 2015-16 season, approximately 12,000 hunters spent 65,000 days hunting quail and harvested 56,000 birds. The bulk of this hunting and harvest occurred in the coastal plain of eastern North Carolina, with very little quail hunting taking place in the piedmont and almost none in the mountains. The agency's [Avid Hunter Survey](#) captures additional important information about quail hunting in the state and points to higher success rates on private lands as compared to Game Lands.

### **Management:**

- Researchers and students from North Carolina State University are currently engaged in the second year of a project investigating nest survival and nest-site selection in the presence of growing-season fire on Fort Bragg Military Installation.
- NCWRC biologists used acoustic sound recorders to survey for bobwhites at 18 points on two managed areas during the entire month of October 2016. Six units were on Sandy Mush Game Land in western North Carolina. The other 12 units were deployed on the Corporate CURE (Cooperative Upland habitat Restoration and Enhancement) area in the eastern part of the state. Preliminary results were encouraging, with bobwhites detected at all 18 points. Plans are underway to refine techniques and use acoustic recorders to survey additional areas in 2017.
- Reported 32,354 acres of management for the NBCI Habitat Management Inventory (page 71, Figures 1-2).
- Continued outreach via *The Upland Gazette*, covering early-successional species and habitats. The [Upland Gazette](#) is now included each year in spring and fall issues of *Wildlife in North Carolina*, the agency's magazine, which has more than 50,000 subscribers.

NBCI State Quail Coordinators: Christopher D. Kreh, Upland Game Bird Biologist, [chris.kreh@ncwildlife.org](mailto:chris.kreh@ncwildlife.org) and Mark D. Jones, Wildlife Research Program Supervisor, Private Lands Program, [mark.jones@ncwildlife.org](mailto:mark.jones@ncwildlife.org)

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## **Ohio – Ohio Department of Natural Resources, Division of Wildlife**

**Population:** Ohio's bobwhite population estimate, based on recent surveys, is less than 72,000 (i.e., this is the upper confidence limit on the mean estimate). Rates of change among population indices since 1984 indicate a population half-life of about 7 years (i.e., population will decline 50% in 7 years) unless rates of decline change in future years.

**Hunting:** Results of Ohio Department of Natural Resources (ODNR) Division of Wildlife hunter harvest surveys over the last 2 years show that quail hunting participation has declined significantly in Ohio. In 2011-12, we estimated about 3,000 hunters pursued wild quail in Ohio. In our most recent surveys (2014-15 season), 0.5% of licensed hunters reported pursuing quail, which translates to approximately 1,800 hunters of wild quail. Average hunting effort remains at about 1 day out of Ohio's 24-day season, with a daily bag of 1-2 birds. Ohio offers a 4-bird daily bag limit.

**Management:** ODNR Division of Wildlife partnered with Pheasants Forever/Quail Forever and Highland County landowners to develop in 2015 Ohio's first [NBCI Coordinated Implementation Program](#) (NBCI CIP) quail focal area, the Fallsville Quail Heritage Area. This area is approximately 10,000 acres in size with about 25% of the area consisting of public wildlife areas. Habitat assessments, fall covey counts, and spring bird surveys have been completed for the first year. Ohio is also investigating a second quail focus area in southeastern Ohio on the Crown City Wildlife Area in Gallia and Lawrence Counties. However, because there are few other reference quail populations in the area, it will likely not be included as an NBCI CIP focal area.

NBCI State Quail Coordinator: Nathan Stricker, Wildlife Biology Supervisor, [nathan.stricker@dnr.state.oh.us](mailto:nathan.stricker@dnr.state.oh.us)

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# State Conservation Reports

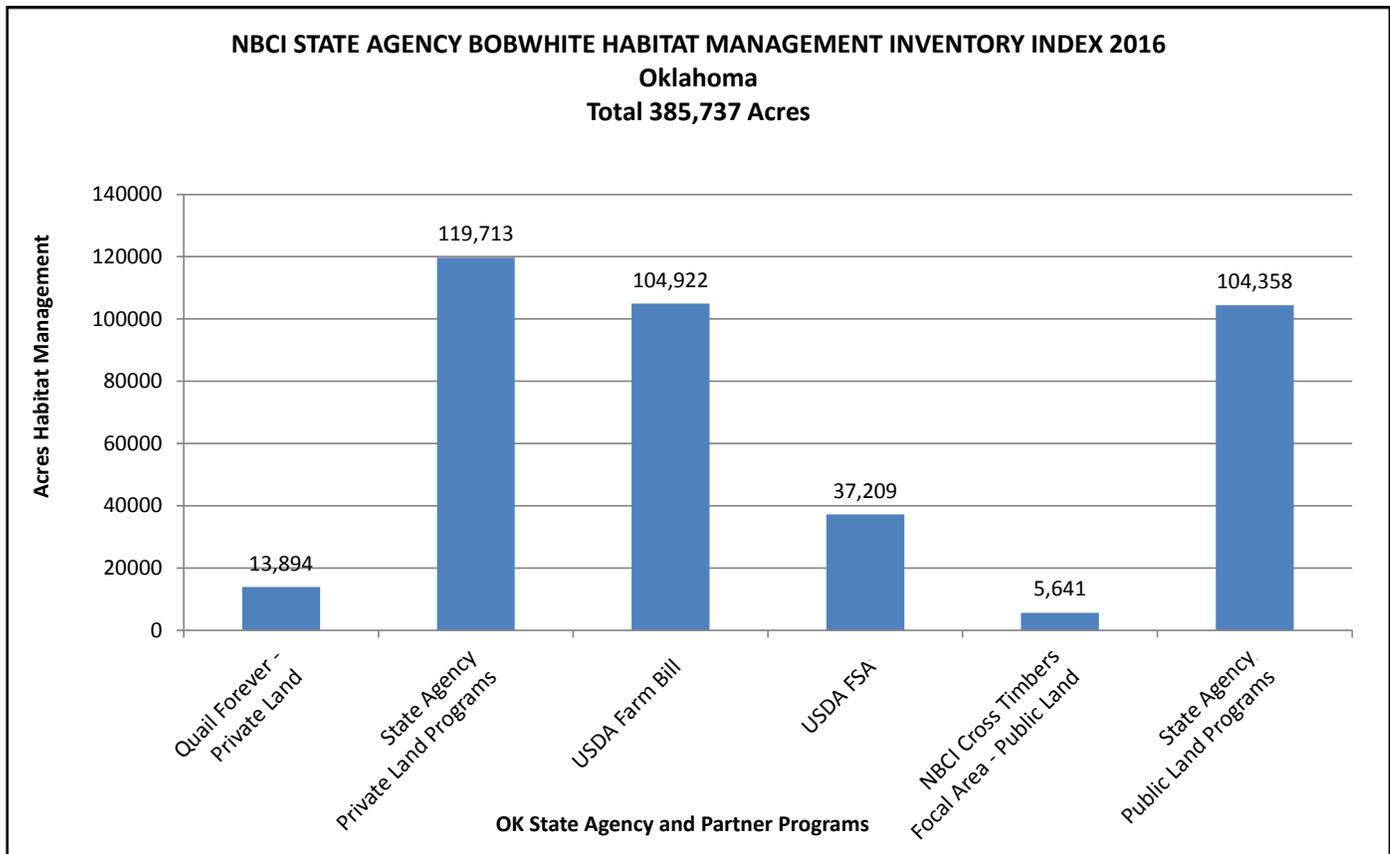
## Oklahoma — Oklahoma Department of Wildlife Conservation

**Population:** The quail forecast in Oklahoma for both August and October surveys combined yielded an increase in our population index of 38.47% from our 2015 results. The 2016 population was also higher than the 27-year historical average by 44.6%. The severe drought of 2011-12 depressed bird numbers across Oklahoma. When rainfall returned, quail and pheasant populations rebounded exceptionally well. Production during the summer of 2016 was about average across the state, with the exception of southwest Oklahoma. Southwest Oklahoma had a 67% increase from 2015, effectively carrying the production increase for the rest of the state. Provided sufficient rainfall and a mild summer in 2017, we are hoping for another solid year of quail hunting in Oklahoma.

**Hunting:** From 1986-2016, hunter numbers have declined by 74.9% (111,000 to 27,830), but are up 48% from our lowest estimate in 2013. Estimated hunter numbers increased 27% from 2015 (20,276). The estimated number of quail harvested has also decreased by 81.8% (2,700,000 to 491,485), but we are up 16.7% from the harvest from last year (409,284 in 2015; 491,495 in 2016). These numbers are higher due to four successful reproductive seasons, highly managed public lands, and more private landowners' awareness and managing their properties accordingly. Such management practices include: prescribed burning, cattle grazing, pasture resting, strip disking, native grass plantings, eastern red cedar removal, timber thinning, less mowing and haying during peak nesting, and awareness of the effects of herbicide sprayings.

**Management:** Technical assistance was provided on 119,713 acres during 2016 to assist private landowners with quail conservation. Highlights:

- The Oklahoma Department of Wildlife Conservation (ODWC) continued its partnership with Oklahoma State University (OSU) to conduct research on two ODWC Wildlife Management Areas. The current research project is winding down with results being reviewed for publication. A new round of research will begin this fall.
- ODWC also continued the NBCI Coordinated Implementation Program (NBCI CIP) monitoring in south-central to north-central Oklahoma. The ODWC, Oaks and Prairies Joint Venture, and OSU have teamed up to monitor



eight counties in Oklahoma: Love, Jefferson, Pontotoc, Johnston, Pawnee, Osage, Nowata, and Craig counties. To date, three spring and fall monitoring seasons have been surveyed within the CIP focal area, and two seasons in two reference areas. In addition, CIP habitat surveys have been completed within all 39 monitoring points.

NBCI State Quail Coordinator: Derek Wiley, Upland Game Biologist, [derek.wiley@odwc.ok.gov](mailto:derek.wiley@odwc.ok.gov)

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### **Pennsylvania – Pennsylvania Game Commission**

**Population:** Between 1966 and 2012, bobwhite populations declined by 9.1% annually. Between 2001 and 2012, the decline continued at 9.5% annually. The relative abundance index in 2002-12 was 0.27 compared to 20.7 for the eastern USA (USGS North American Breeding Bird Survey [BBS] data 1966-2012). Pennsylvania Game Commission (PGC) and partners completed a detailed Breeding Bird Atlas in 2012. Northern Bobwhites were determined to be breeding in only 18 of over 4,000 survey blocks. In 2014, a detailed analysis of all existing population data (e-bird, Breeding Bird Atlas, BBS, Christmas Bird Count, and survey of land managers throughout the state) was conducted by the Department of Ecosystem Science and Management at The Pennsylvania State University (PSU). No locations in the state showed persistence of bobwhites in every decade since 1960. The PGC conducted intensive surveys in the last known locations of bobwhites using a playback caller in June-July 2014. No northern bobwhite were detected. As a result of these studies, researchers at PSU and the PGC have concluded that wild northern bobwhite have been extirpated in Pennsylvania.

**Hunting:** The PGC does not raise and release bobwhites, but many sportsman clubs and shooting preserves do for the purposes of training and hunting. Based on a survey of game bird propagators, we estimate that over 60,000 pen-reared bobwhites were released in 2013, primarily for dog training. Bobwhites harvested in Pennsylvania are from pen-reared and released birds. Most of the state is now open to put-and-take quail hunting.

**Management:**

- PGC completed a statewide quail plan and is a partner with NBCI. The plan does recommend identifying the best locations for restoration, the establishment of bobwhite focus areas, and wild bobwhite reintroduction efforts, if necessary, to re-establish populations of this once-native game bird. The initial focus area has been selected at Letterkenny Army Depot in Chambersburg, Pennsylvania, one of the historical strongholds of bobwhite in the state. A Memorandum of Understanding (MOU) and long-term management plan have been completed to develop this important partnership and guide the project into the future. Monitoring and habitat management operations will begin in 2017. Other crucial partnerships within the project include NBCI and Quail Forever. Reintroduction efforts will require the support of other states in providing wild northern bobwhite for Pennsylvania reintroduction efforts. The PGC Strategic Plan calls for establishing Bobwhite Quail Focus Areas (BQFAs) and reintroductions of bobwhites by 2020.

NBCI State Quail Coordinators: Scott Klinger, Wildlife Biologist, [scklinger@pa.gov](mailto:scklinger@pa.gov) and Tom Keller, BQFA Coordinator, [thkeller@pa.gov](mailto:thkeller@pa.gov)

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### **South Carolina – South Carolina Department of Natural Resources**

**Population:** The South Carolina Department of Natural Resources (SCDNR) 2016 statewide bobwhite whistling cock census was 13% above the 2015 index and 74% below the long-term average. The 2016 summer bobwhite quail brood survey indicated that the average brood size and age ratio increased from 2015. The total number of adults observed increased slightly while the number of chicks observed nearly doubled. While the 2016 survey indicated higher nesting success over the prior year, the statewide reproduction was still slightly lower than the 5-year average and certainly lower than the 10-year average.

**Hunting:** The most recent information on statewide quail hunting (2014) indicated that about 7,079 hunters harvested 75,653 wild quail during 35,224 days afield. Average hunter success in the annual Quail Hunter Survey, most recently published for 2016-17 hunting season, was 0.25 coveys per hour of hunting.

**Management:** Quail management highlights for 2016 include:

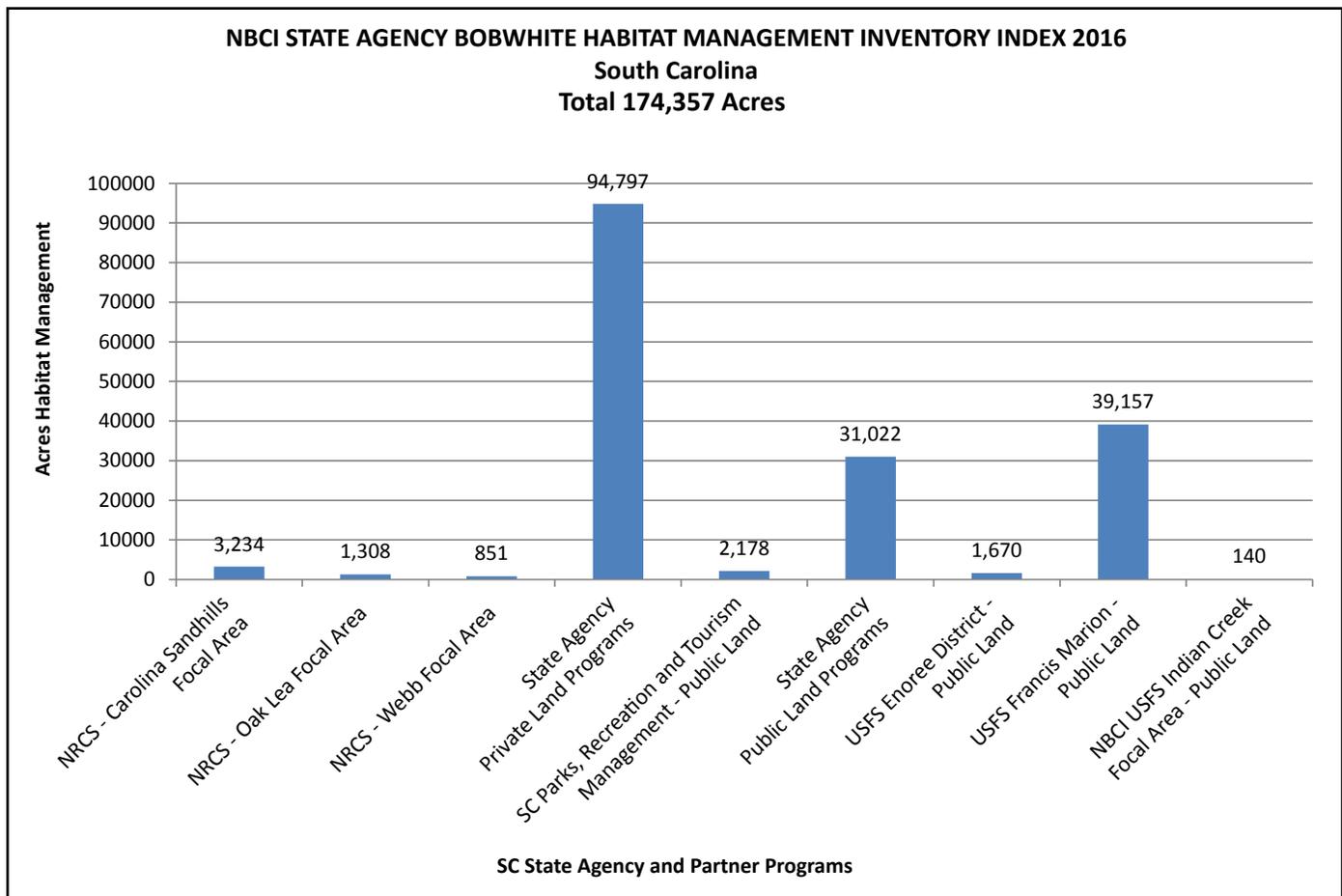
- The South Carolina Bobwhite Initiative (SCBI) was officially launched in 2015. Find out more about the initiative



on the [SCBI webpage](#) or at [facebook.com/scbobwhites](https://facebook.com/scbobwhites). The SCBI Facebook page has recently eclipsed 1,000 followers who receive timely updates on progress made in “bringing back the whistle” and are able to converse with other bobwhite aficionados.

- Monitoring and habitat manipulation began in earnest in 2016. Spring bird counts, fall covey counts, and habitat surveys were completed on each of the four focal areas.
- U.S. Forest Service, SCDNR, and Quail Forever worked together to create a partner biologist position in the state. Jordan Nanney is the first Quail Forever staff placed in South Carolina, and his office is in the heart of the Indian Creek Focal Area.
- Two joint Natural Resources Conservation Service and SCDNR Farm Bill Biologist positions were also created to assist landowners with the federal assistance programs in the focal areas. Ms. Susan Sullivan is working Clarendon, Calhoun, and Orangeburg Counties, and Mrs. Amy McGrath is working in Chesterfield, Darlington, and Lee counties.
- The Bobwhite Quail Whistling Cock Census was conducted for the 38th year, and the Annual Summer Bobwhite Quail Brood Survey was conducted for the 23rd year.
- Reported 174,357 acres of quail management for the NBCI Habitat Management Inventory (page 47, Figure 1; page 71, Figures 1-2, 4-5).
- Maintained [quail page](#) on the SCDNR website.

NBCI State Quail Coordinator: Michael Hook, Small Game Program Leader, [hookm@dnr.sc.gov](mailto:hookm@dnr.sc.gov)



**Tennessee — Tennessee Wildlife Resources Agency**

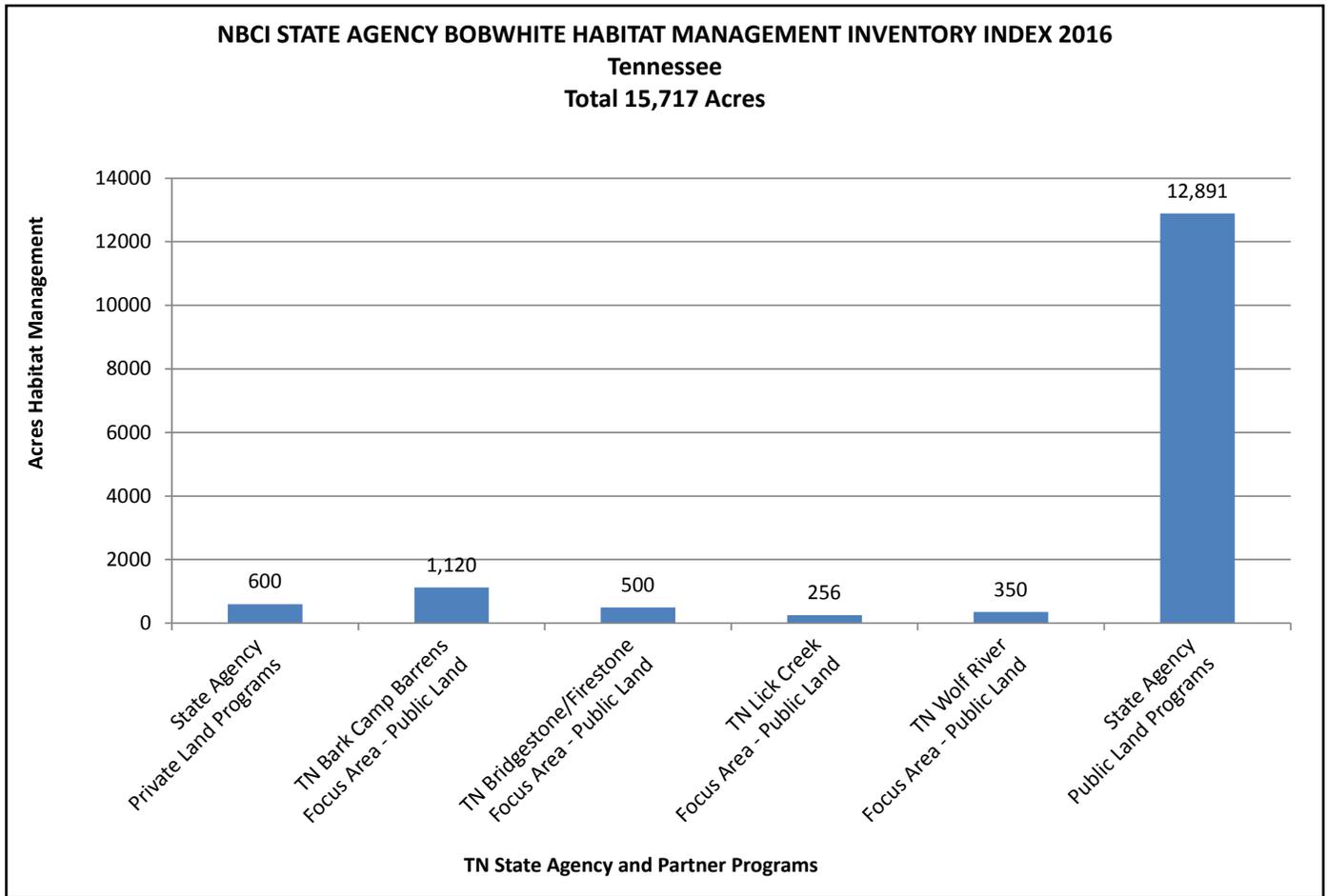
**Population:** Tennessee’s quail population continues to decline or remains locally stable. We have collected spring counts on anchor Wildlife Management Areas (WMAs) for 2014, 2015, and 2016. We conducted training for fall covey counts on focus areas in 2016. We are entering data into the Eastern Avian Knowledge Network database. Spring counts will be continued in 2017.

**Hunting:** Tennessee Wildlife Resources Agency (TWRA) has no harvest estimate but is developing a survey for focus areas.

**Management:**

- Tennessee implemented four focus areas in 2015, each anchored by a WMA. In addition to the survey implementation as noted above, we hope to have an NBCI Coordinated Implementation Program (CIP) focal area established by 2018. Our forestry program is developing usable space on anchor areas as well as on other agency properties, and 2,226 acres were created in anchor areas during 2015-16.
- Reported 15,717 acres of quail management for the NBCI Habitat Management Inventory (page 71, Figures 1-2, 5).
- Tennessee hosted the 2017 National Bobwhite Technical Committee Annual Meeting and Eighth National Quail Symposium (Quail 8), so much effort was to planning and fundraising.
- Other plans include appointment of an agency Quail Team to lead in the implementation of CIP, revise plans, and provide training opportunities for agency biologists, managers, and technicians in quail management.

NBCI State Quail Coordinator: Roger Applegate, Wildlife Population Biologist, [roger.applegate@tn.gov](mailto:roger.applegate@tn.gov)



# State Conservation Reports

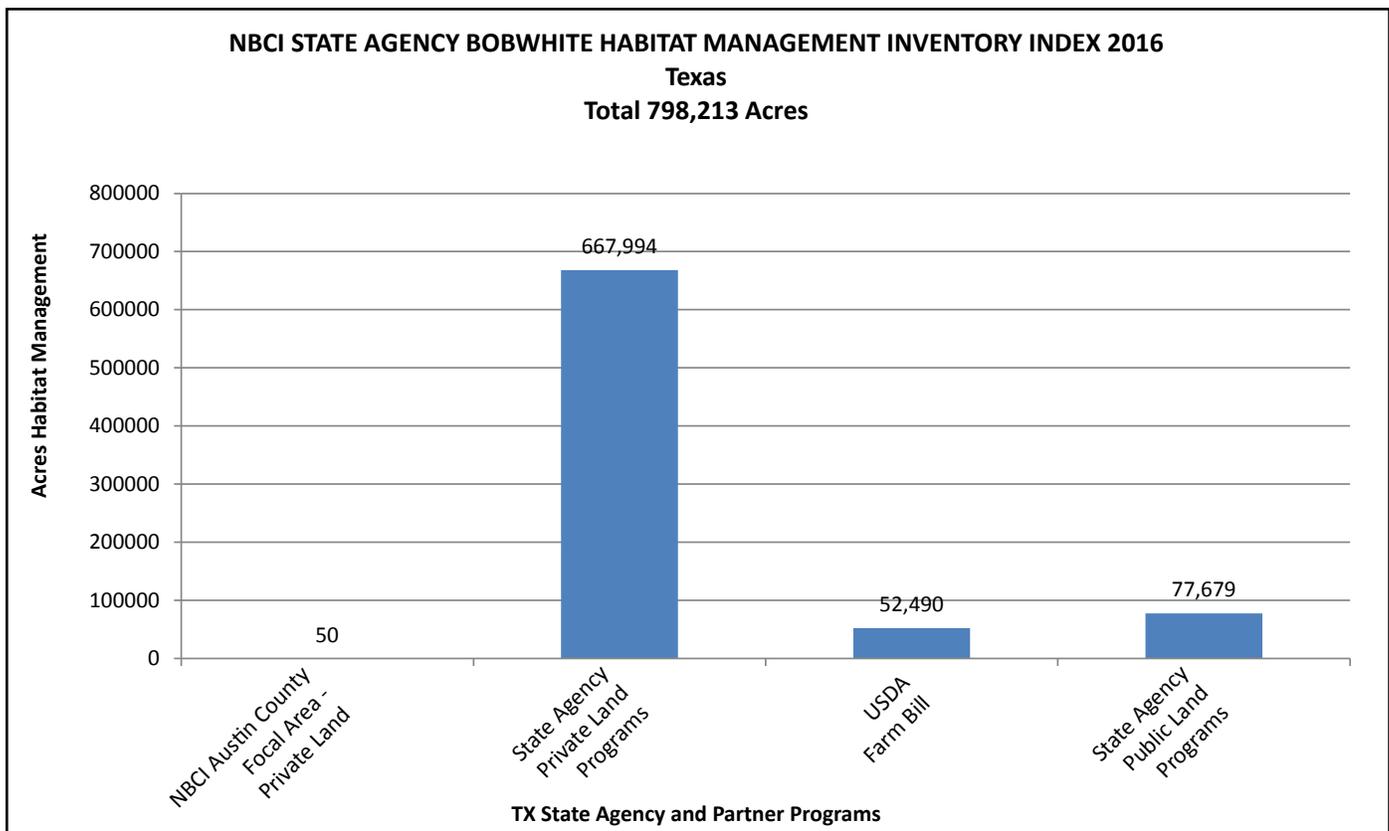
## Texas — Texas Parks and Wildlife Department

**Population:** According to Texas Parks and Wildlife Department (TPWD) surveys, bobwhite populations dramatically increased prior to the 2016-17 hunting season in key areas, primarily due to the timing and amount of rainfall and below-average summer temperatures for two to three consecutive years. The Rolling Plains ecoregion recorded a new all-time high population index (mean = 50.2 bobwhites per 20-mile route). Bobwhite overwinter survival appears good and habitat conditions look good going into the 2017 breeding season.

**Hunting:** TPWD hunter numbers for 2015-16 increased for the third year in a row from 40,595 in the previous year to 59,882; estimated quail harvest increased 68% from previous year (944,619). The small game hunter survey questionnaire excludes pen-reared birds in the harvest estimate as of 2013.

**Management:** Quail conservation efforts include continued development of quail focal areas as outlined by the NBCI Coordinated Implementation Program (NBCI CIP) in four ecological regions. Only one focal area has been reporting both spring and fall counts and is included in the official CIP program. TPWD quail conservation highlights include:

- The Oaks and Prairie Joint Venture (OPJV) partners, with the National Wild Turkey Federation serving as the lead partner, received a Regional Conservation Partnership Program (RCPP). The deliverable for this combined effort is 95,000 acres of improved native grasslands over the life of the project through the Environmental Quality Incentives Program on qualifying projects in Texas and Oklahoma.
- The new RCPP will build upon OPJV’s successful Grassland Restoration Incentive Program. The program has delivered over \$1.1 million in funding to producers who have restored wildlife habitat on over 57,000 acres of grasslands in its first 3 years of existence.
- About 667,994 acres of quail habitat were developed on private lands and another 77,679 acres on public lands under the direction of state wildlife personnel.
- USDA Farm Bill habitat programs specific to quail were implemented on 52,490 acres in fiscal year 2016. Programs specific to lesser prairie-chickens (USDA CP-38 State Acres for Wildlife Enhancement) and bobwhite are included in this estimate.



- Current bobwhite research across several conservation entities and institutions includes the following: population response to habitat management at the cooperative and county scale; human dimensions; evaluation of wild quail translocation; potential parasite (field trials with medicated feed) and toxin impacts; and quail genetics, dispersal, productivity and supplemental feeding.

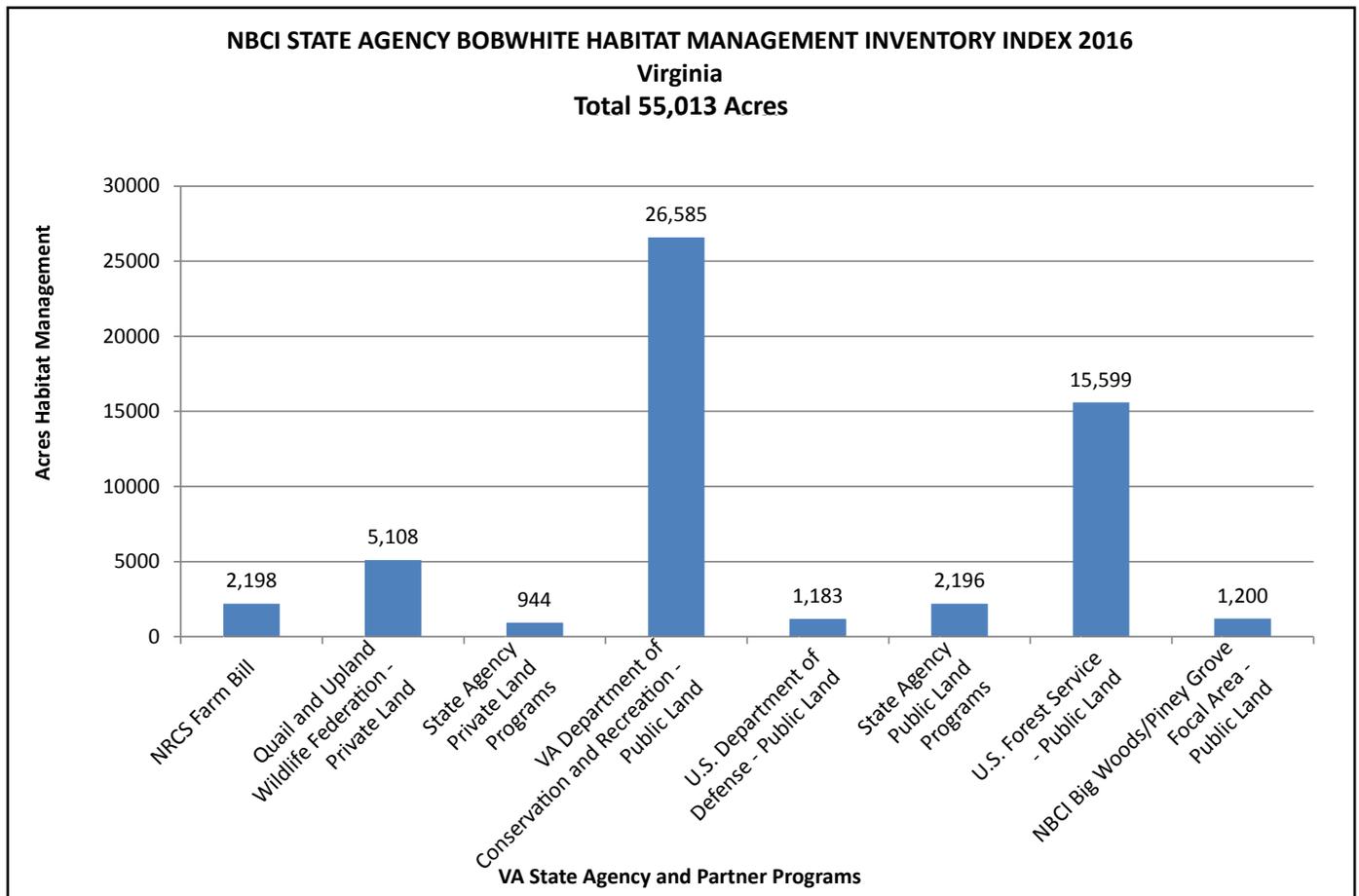
NBCI State Quail Coordinator: Robert Perez, Upland Game Bird Program Leader, [robert.perez@tpwd.texas.gov](mailto:robert.perez@tpwd.texas.gov)

**Virginia — Virginia Department of Game and Inland Fisheries**

*Population:* While Virginia’s quail population continues to decline in many areas, populations seem to have stabilized in some areas, and there are a few areas where increases seem likely but are hard to document. Anecdotal reports from avid quail hunters suggest a modest increase is underway in portions of our focal regions. One hunter reported finding 85 unique coveys of quail this season.

*Hunting:* For the 2016-17 hunting season, 29 avid quail hunters reported on 348 hunts. They found 467 coveys and averaged finding 1.34 coveys per hunt with a statewide average of 2.5 hours per covey find (all up from last season). Our hunter harvest and effort survey for the 2015-16 season indicated the number of quail hunters decreased slightly from 3.7% to 3.6% of all licensed hunters. The survey indicated a total of 115,703 quail were harvested, of which 12,261 were wild quail, comparable to the 2011-12 season.

*Management:* Virginia Department of Game and Inland Fisheries (VDGIF) Quail Recovery Initiative completed its seventh implementation year on June 30th, 2016. We prepared a comprehensive report on our agencies’ actions on behalf of bobwhites since 1980 (see General Assembly Report). VDGIF’s recently completed 2017 Quail Plan Revision is expected to be posted online in autumn 2017. Quail management highlights through the first seven years included:



- 2,981 site visits made to landowners owning over 360,404 acres of land.
- Quail DVD Answering the Call widely distributed.
- 438 tracts of land and 422 landowners in the Quail Management Assistance Program totaling 104,482 acres enrolled with 14,529 (14%) under some form of quail management.
- New forestry-related Best Management Practices (BMPs) Memorandum of Understanding with Virginia Department of Forestry signed and program underway and revised offering cost-share for eight wildlife-friendly forestry BMPs, including prescribed fire. Total projects completed to date: 114. Total acres: 3,736.
- Reported 55,013 acres of quail management for the NBCI Habitat Management Inventory (page 47, Figure 1; page 71, Figures 1-5).
- Preparing for the fourth year of June call counts and point habitat assessments per NBCI Coordinated Implementation Program (NBCI CIP) monitoring protocol for focal areas.

NBCI State Quail Coordinators: Marc Puckett, Small Game Project Leader, [marc.puckett@dgif.virginia.gov](mailto:marc.puckett@dgif.virginia.gov) and Jay Howell, Small Game Project Leader, [jay.howell@dgif.virginia.gov](mailto:jay.howell@dgif.virginia.gov)

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### **West Virginia – West Virginia Department of Natural Resources**

*Population:* Statewide, turkey and grouse broods are tracked by West Virginia Department of Natural Resources (WVDNR) Wildlife Resources employees, who are also asked to record Northern Bobwhites seen or heard. Each of the last three years, only one bird has made this report with none occurring on state or federal lands. Given the location of each of these sightings, it is highly likely that they were pen-reared and/or escaped/released birds. It is legal in WV to utilize bobwhites for dog training or shoot-to-retrieve field trials, and their locations have been in marginal areas. The first West Virginia Breeding Bird Atlas (1984-89) confirmed bobwhites in 6% of priority blocks (424 1/6th of a 7.5 minute USGS quadrangle [quad] maps) surveyed. Adding those blocks that had probable breeders increased this percentage to 12.5% of the quads sampled. This survey was repeated in 2009-14 with an increase in intensity of effort (i.e., more quads were surveyed negating direct trend comparisons), however, the percentage occurrences are telling. In this survey, only two confirmed cases (0.1% of priority blocks) of breeding were reported, and these were the observation of recently-fledged young which were very likely recently released pen-reared birds. A total of 28 “probable” breeders were recorded statewide, with 24 of them being singing males. Only one of the “probable” observations was a mated pair, and given that they were observed along the Nicholas/Webster County line (85% and 93% forested, respectively) in the heart of the interior forest, they were likely released animals. Given the rapid decline, distribution, and type of observations in the current survey contrasted against the prior survey, it is highly unlikely that wild populations exist in self-sustaining, biologically viable numbers. In the unlikely case that wild quail do persist, they do so in very small, unsustainable numbers, likely in eastern counties such as Berkeley, Hampshire, or Pocahontas.

*Habitat:* In the 1950s, West Virginia was 57% forested; according to the Division of Forestry, it’s 78% forested today, and the age composition of that forest is almost 70% saw timber, 22% pole stage, and only 8% seedling/sapling (young forest). Compounding the problem of too little young forest is that the 8% is not evenly distributed across the landscape. Where the National Forests and even some State Forests used to contain a diversity of age classes, purposeful reductions, if not outright elimination, of active timber management have resulted in entire regions of the state exceeding 90% forested. Much is not grouse habitat, let alone quail.

*Hunting:* While Northern Bobwhites are considered a huntable species with a daily bag limit of three, their harvest is directly related to shoot-to-retrieve hunts, field trials, and dog training opportunities.

*Management:* For all intents and purposes, Northern Bobwhites have been extirpated from West Virginia. Our participation with the National Bobwhite Conservation Initiative is based on our interest in creating and expanding early successional, shrub-land, and young forest habitat to increase the relative abundance of the suite of species adapted to it.

NBCI State Quail Coordinator: Michael Peters, Migratory Game Bird Coordinator, [michael.l.peters@wv.gov](mailto:michael.l.peters@wv.gov)

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## NBCI State Agency Bobwhite Habitat Inventory Index 2016

By Tom Dailey | National Bobwhite Conservation Initiative

The NBCI State Agency Habitat Inventory is an index of the potential for bobwhite to occur on the landscape, now or in the near future, as identified by the state's quail coordinator. For 2016, 22 state agency coordinators reported 3,191,266 acres of bobwhite habitat management for 103 programs, a substantial increase in acreage and programs over the previous 5 years of the inventory.

### Introduction

This is the sixth annual National Bobwhite Conservation Initiative (NBCI) State Agency Bobwhite Habitat Inventory (hereafter, Inventory), an index of habitat management over the past year as reported by state agency quail program coordinators. The Inventory fulfills part of the 2010 charge of the NBCI Management Board to document "all things being done to benefit bobwhites in each state." The Inventory documents acres of management of plant succession (prescribed fire, disking, prescribed grazing, cutting, chemical application, etc.), planting vegetation, and protecting vegetation (deferred grazing and haying, leaving crop residue, leaving standing crops, etc.). Inventory management is for the 2016 reporting year, which varies across states and among years.

The Inventory is divided into 3 primary land categories based on a combination of ownership, leadership, and funding source: 1) **State Agency Public Land** includes management on the wildlife agency's land (Figure 1); 2) **State Agency-Based Private Land** includes management on private lands that is funded, led, or made possible by the wildlife agency and is generally not reported in other private land categories (Figure 2); and 3) **USDA Farm**

**Bill** includes acres managed under the USDA Farm Bill program (Figure 3). The **Partner Private Land** (Figure 4) and **Public Land** (Figure 5) categories include programs administered by partner agencies, organizations, and institutions and are generally not featured in Figures 1-3. For the second year, most participating state agencies reported acres of habitat management on **NBCI Coordinated Implementation Program (CIP) Focal Areas** (see article on page 46).

Multiple management treatments on any one acre can be counted >1 time per year (e.g., burning, chemical treatment, and planting 1 acre in same year equals 3 acres of habitat management). Less common and avoided when feasible, acres are sometimes counted more than once across land categories. For example, NBCI CIP Focal Area acreage might also be counted in Figures 1-3, and state coordinators sometimes lack a system for separating management jointly delivered by >1 partner. Importantly, contributions by all partners are recognized.

Does existence of habitat management mean that wild bobwhites can be expected at a particular program's physical location? Not necessarily. Inventory protocol specifies that habitat is suitable for bobwhites in the reporting year, or will be in the near future. It can take several years after initial management for some habitats to become suitable for bobwhites, followed by a bobwhite population response. Bobwhites occupy, or increase in an area, based on survival and reproduction, which are affected by weather and other non-habitat factors, and by movement into an area, which is affected by distance from existing populations to the area (e.g., habitat fragmentation). Further, as described in detail in 2012 and 2013 State of the Bobwhite reports, because of variability among NBCI states and partners in ability to measure habitat, the NBCI Inventory is appropriately interpreted as an index of habitat management. As an index of the amount of habitat management beneficial to bobwhites, comparisons among years, states, partners, and programs should be made cautiously.



*Wildlife Technician conducts a covey count at an NBCI Training Workshop.*

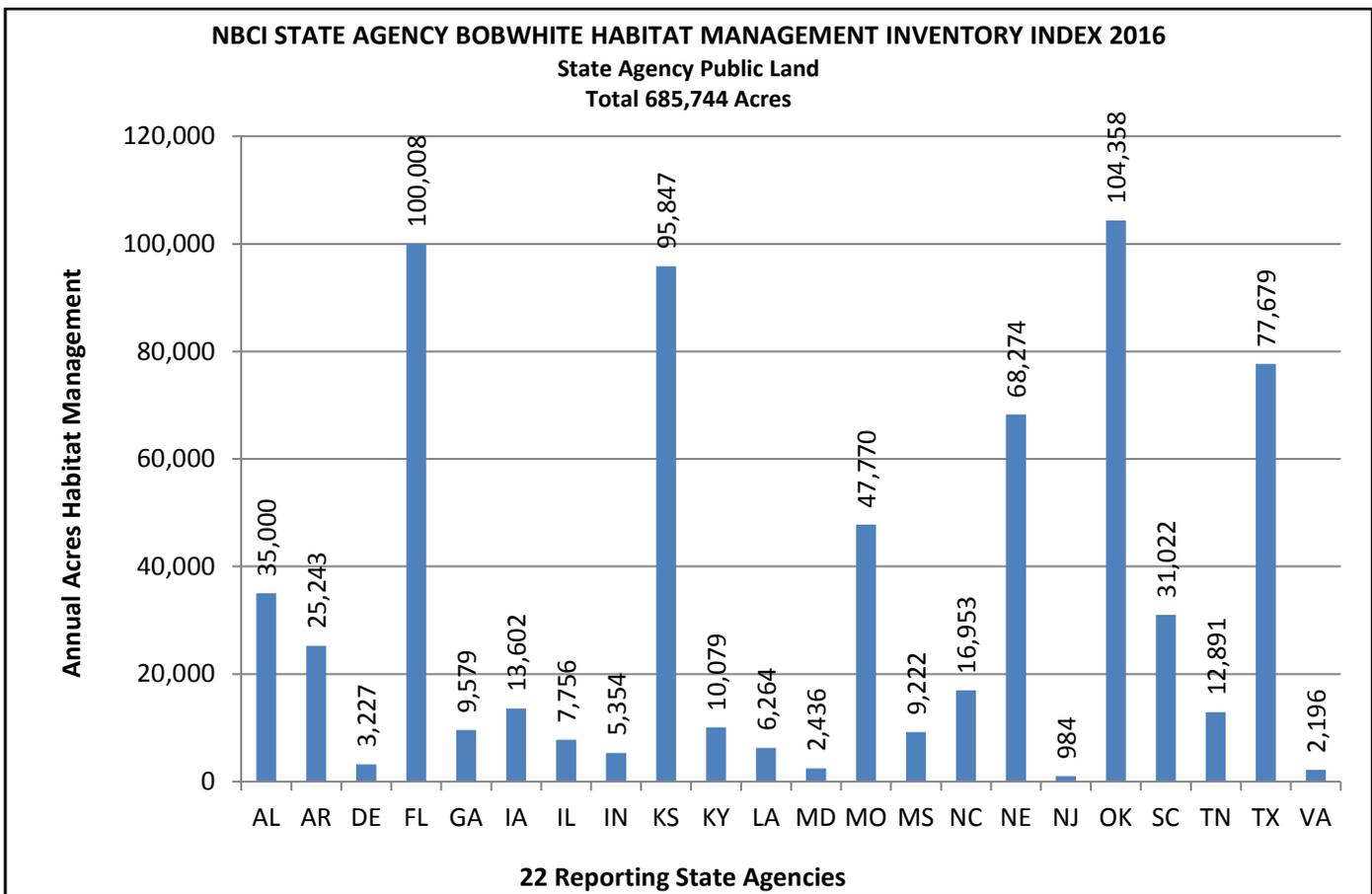


To better describe the amount of uncertainty in habitat data, coordinators grade their confidence in acreage they report by choosing among 7 levels of confidence (very confident, moderately confident, somewhat confident, neutral, somewhat uncertain, moderately uncertain, and very uncertain). The highest confidence is often based on measurement of bobwhite abundance, and this aspect is a foundation of the NBCI Coordinated Implementation Program. Such detailed measurement, however, is not feasible at large scales, so the Inventory’s coordinator confidence ratings provide a qualifier for expectations for bobwhite to occupy habitat and/or to be abundant. This is particularly useful for large areas where bobwhites were known to exist and some kind of habitat program had been implemented, but there is no measurement of habitat quality (e.g., stage of plant succession) or actual bobwhite abundance.

In summary, the NBCI Inventory is an index of the potential for bobwhite to occur on the landscape, as identified by

each state’s quail coordinator. As one state coordinator put it, “Although I classified my confidence as very uncertain because I lack data, I know those acres provide a great deal of benefit to bobwhites, so I wanted to report something. Thus, I took a wild stab just so that practice would be identified as an important one in our state.” On the other hand, some states are conservative in what they report, limiting acres reported to those enrolled in specific quail habitat programs with annual verification of compliance.

In addition to differences among states in capacity to collect data and reporting strategy (e.g., conservative or liberal inclusion of habitat management), some states were constrained in 2016 by other factors. Similar to previous years, quail coordinators for Pennsylvania Game Commission and West Virginia Division of Natural Resources believe that wild bobwhite population abundance was inadequate for responding to habitat management and did not submit data. Per NBCI Inventory



**Figure 1. 2016 NBCI State Agency Bobwhite Habitat Management Index for 22 state public land programs. Index is acres of habitat managed by prescribed fire, disking, grazing, spraying herbicide, cutting, planting, etc., during the reporting year (ranging from January 1, 2015 to March 28, 2017).**



protocol, presence or potential presence (immigration or translocation) of wild bobwhite are minimum criteria for claiming habitat management for an area.

## Results

Twenty-two state agency coordinators reported 3,191,266 acres of bobwhite habitat management, 18% more than the 2.7 million acres reported last year. Management in 2016 included:

- 685,744 acres on state wildlife agency publicly-owned lands (State Agency Public Land Management, Figure 1);
- 1,072,635 acres on private lands through state wildlife agency efforts (State Agency-Based Private Land Management, Figure 2);
- 638,145 acres on private lands through the USDA Farm Bill (Private Land U.S. Department of Agriculture Farm Bill, Figure 3);
- 680,360 acres on Partner Private Lands (Figure 4);
- 88,598 acres on Partner Public Lands (Figure 5); and
- 25,784 acres on NBCI CIP Focal Areas (article on page 46).

The “reporting year,” 2016, included dates ranging from July 1, 2015, to March 28, 2017, varying with fiscal years, accounting systems, etc. Across all land categories, acreage for the 22 reporting states was as follows:

- 50,000 acres (AL),
- 53,459 acres (AR),
- 5,275 acres (DE),
- 272,537 acres (FL),
- 404,394 acres (GA),
- 48,408 acres (IA),
- 68,998 acres (IL),
- 7,153 acres (IN),
- 397,420 acres (KS),
- 22,420 acres (KY),
- 26,234 acres (LA),
- 4,201 acres (MD),
- 204,040 acres (MO),
- 17,846 acres (MS),
- 32,354 acres (NC),
- 141,450 acres (NE),
- 6,039 acres (NJ),
- 385,737 acres (OK),
- 174,357 acres (SC),
- 15,717 acres (TN),
- 798,213 acres (TX), and
- 55,013 acres (VA).



**Biologist conducting field visit to assess suitability of habitat management, in this case prescribed fire, to benefit bobwhites.**



## State Agency Public Land Management

For 2016 management of state wildlife agency public lands, 22 state agencies reported 685,744 acres of bobwhite habitat management (Figure 1), a 22% decrease from 0.881 million acres reported in 2015, a 7% increase over 0.642 million acres reported in 2014, and an 17% decrease from the 0.825 million acres reported in 2013. State coordinator acreage reports (state, coordinator confidence) included the following:

- 35,000 (AL, neutral);
- 25,243 (AR, somewhat uncertain);
- 3,227 (DE, somewhat confident);
- 100,008 (FL, moderately confident);
- 9,579 (GA, moderately confident);
- 13,602 (IA, moderately confident);
- 7,756 (IL, moderately uncertain);
- 5,354 (IN, very uncertain);
- 95,847 (KS, somewhat uncertain);
- 10,079 (KY, moderately confident);
- 6,264 (LA, very confident);
- 2,436 (MD, neutral);
- 47,770 (MO, moderately confident);
- 9,222 (MS, very confident);
- 16,953 (NC, somewhat confident);
- 68,274 (NE, moderately confident);
- 984 (NJ, moderately confident);
- 104,358 (OK, somewhat uncertain);
- 31,022 (SC, very confident);
- 12,891 (TN, moderately confident);
- 77,679 (TX, very confident); and
- 2,196 (VA, moderately confident).

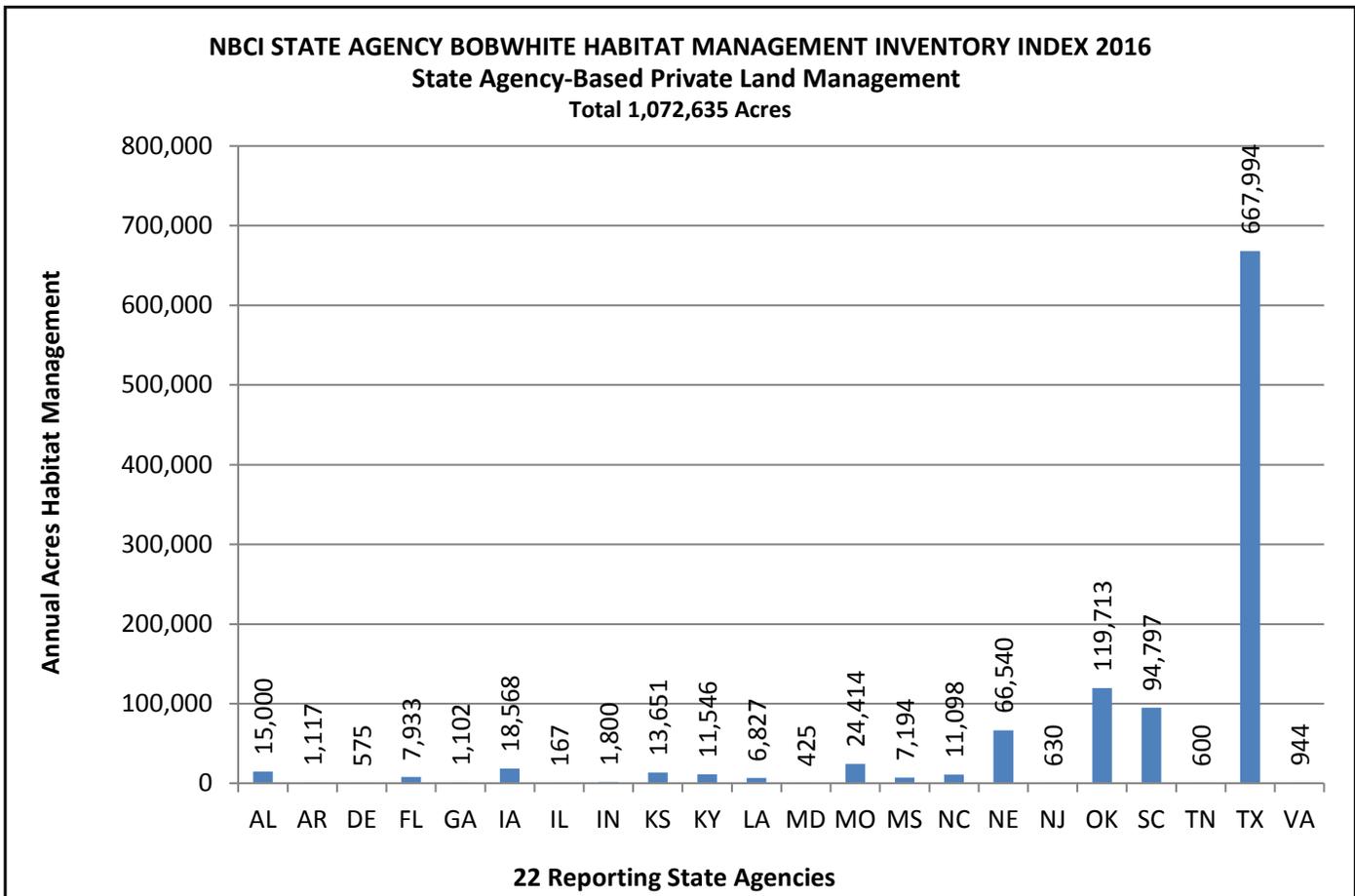


Figure 2. 2016 NBCI State Agency Bobwhite Habitat Management Index for 22 state-led private land programs. Index is acres of habitat managed by prescribed fire, disking, grazing, spraying herbicide, cutting, planting, etc., during the reporting year (ranging from January 1, 2015 to March 28, 2017).



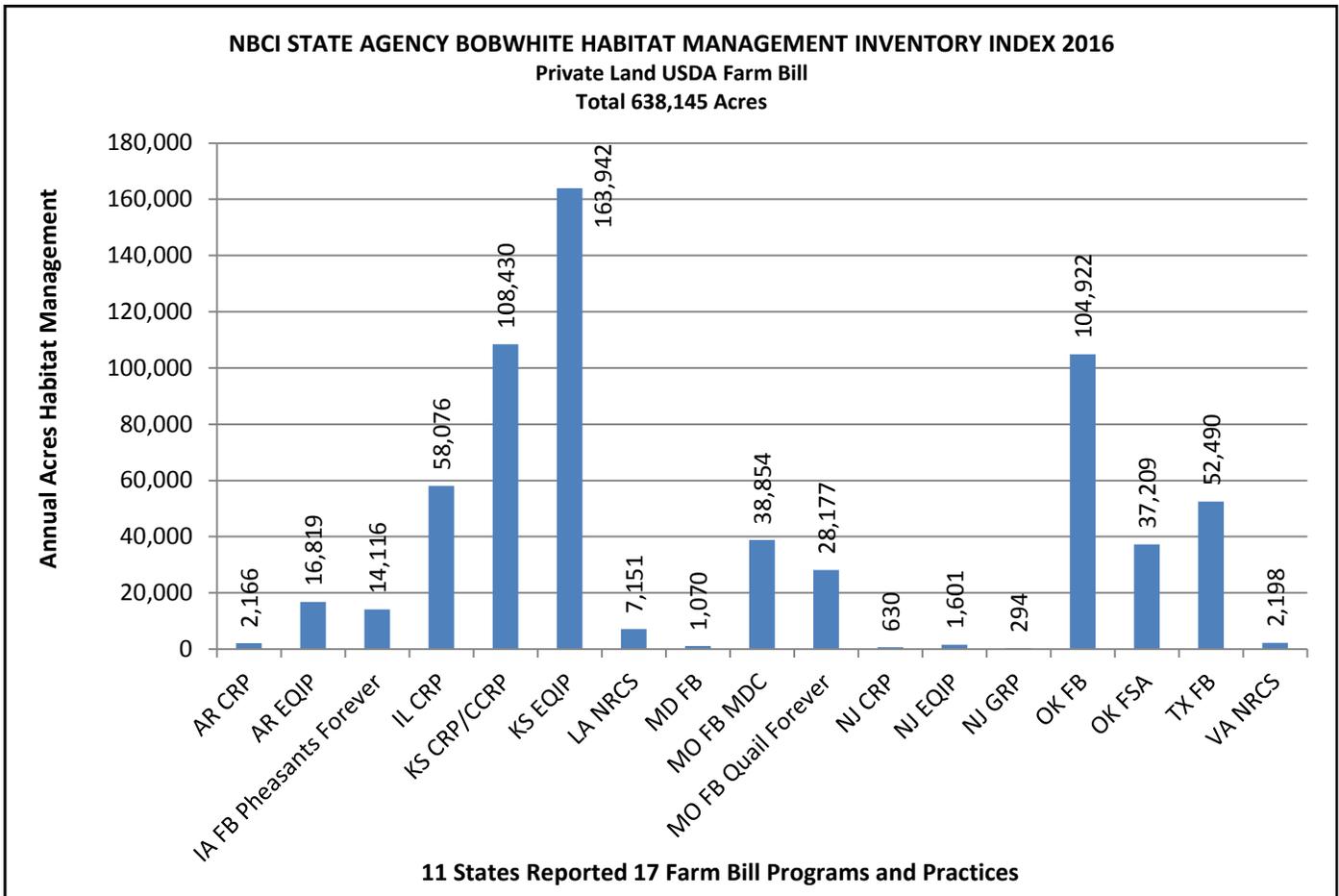
**State Agency-Based Private Land Management**

For 2016 on private lands, where management was based on state agency work and not a part of the USDA Farm Bill, 22 state agencies reported 1,072,635 acres of bobwhite habitat management (Figure 2), a 124% increase over 478,019 acres in 2015, a 243% increase over 312,813 acres in 2014, and 249% greater than 307,281 acres in 2013. State coordinator acreage reports (state, coordinator confidence) included the following:

- 15,000 (AL, neutral);
- 1,117 (AR, moderately confident);
- 575 (DE, neutral);
- 7,933 (FL, very confident);
- 1,102 (GA, somewhat confident);
- 18,568 (IA, moderately confident);
- 167 (IL, moderately uncertain);
- 1,800 (IN, very uncertain);

- 13,651 (KS, moderately confident);
- 11,546 (KY, moderately confident);
- 6,827 (LA, moderately confident);
- 425 (MD, somewhat confident);
- 24,414 (MO, moderately confident);
- 7,194 (MS, moderately confident);
- 11,098 (NC, somewhat confident);
- 66,540 (NE, moderately confident);
- 630 (NJ, neutral);
- 119,713 (OK, moderately uncertain);
- 94,797 (SC, very uncertain);
- 600 (TN, very confident);
- 667,994 (TX, moderately confident); and
- 944 (VA, moderately confident).

Management in this category is markedly greater than the previous year, largely because of increased acreage reported by Texas Parks and Wildlife Department (TPWD)—166,093 acres in 2015 and 667,994 in 2016, a



**Figure 3. 2016 NBCI State Agency Bobwhite Habitat Management Index for 11 states and 17 U.S. Department of Agriculture Farm Bill funded programs. Index is acres of habitat managed by prescribed fire, disking, grazing, spraying herbicide, cutting, planting, etc., during the reporting year (ranging from July 1, 2015 to December 31, 2016). Acronyms on page 83.**

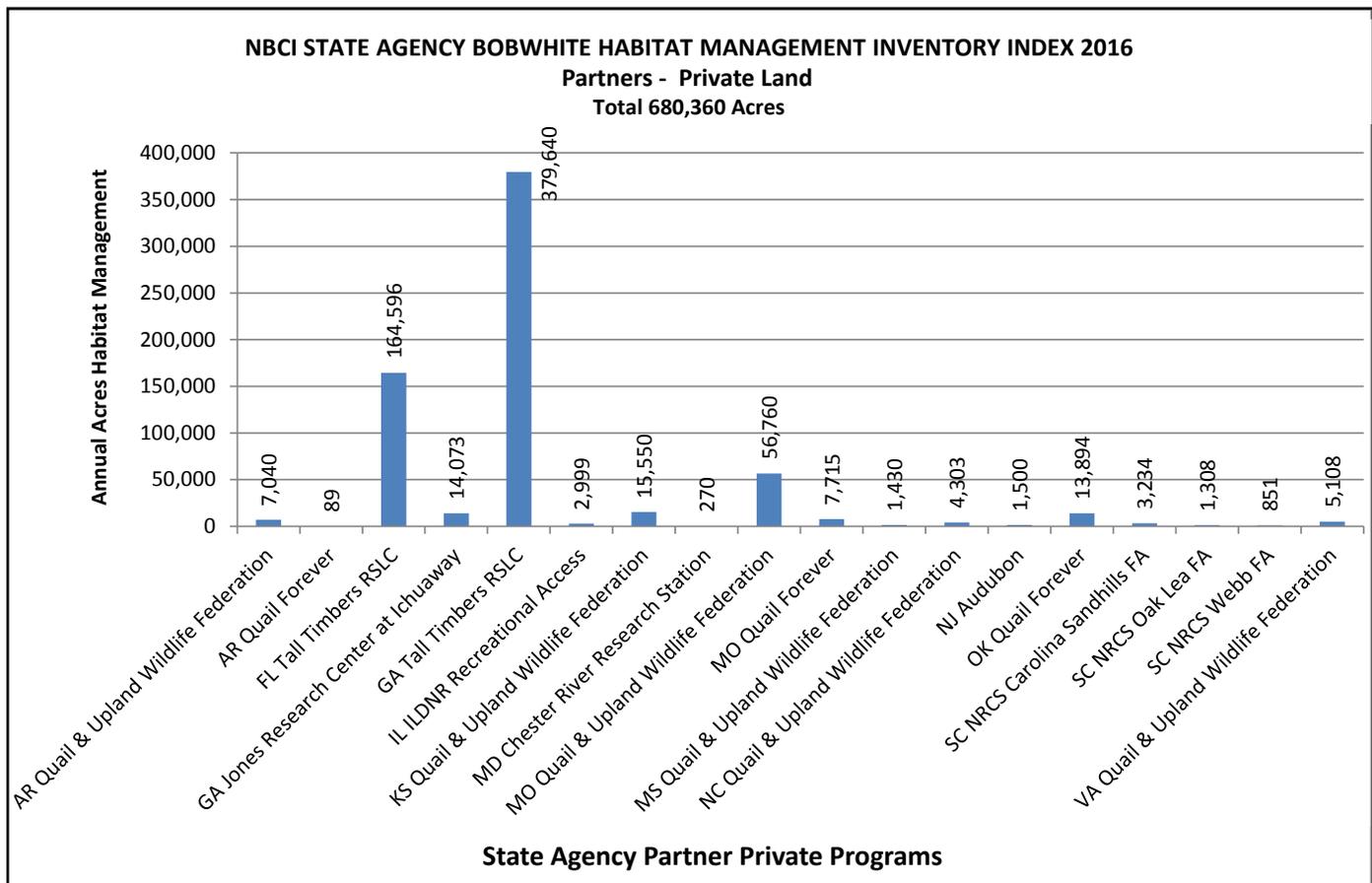


302% increase. As explained by TPWD quail coordinator Robert Perez, TPWD private land biologists have been trained on the use of prescribed grazing to retain the value of habitat for all wildlife, and had not previously been reporting prescribed grazing acres unless the landowner was specifically interested in bobwhite abundance in the Rolling Plains. TPWD has changed the criteria in its reporting system to capture prescribed grazing acreage for wildlife within the bobwhite range in the Rolling Plains of Texas, resulting in a pronounced jump in acres reported in the NBCI Habitat Inventory. Similarly, in previous NBCI Habitat Inventories, deferred grazing during drought in select areas was reported as management activity potentially benefiting bobwhite.

## Private Land Enrolled in U.S. Department of Agriculture Farm Bill

For 2016, on private lands where management was based on USDA Farm Bill programs, 11 state agencies reported on 17 programs, practices, and management delivered by partners for a total 638,145 acres of bobwhite habitat management (Figure 3). Quail-friendly management via the Farm Bill program is up from 603,963 acres reported in 2015 and 435,329 acres reported in 2014, but remains down from 739,736 acres reported in 2013. State coordinator acreage reports (state, program/practice/delivery, coordinator confidence rating) included the following:

- 2,166 acres (AR, CRP, moderately confident);
- 16,819 acres (AR, EQIP, moderately uncertain) (AR CRP/EQIP, 18,985 acres);
- 14,116 acres (IA, delivered by Pheasants Forever, moderately confident);



**Figure 4. 2016 NBCI State Agency Bobwhite Habitat Management Index for 18 partner private land programs. Index is acres of habitat managed by prescribed fire, disking, grazing, spraying herbicide, cutting, planting, etc., during the reporting year (ranging from January 1, 2015 to January 1, 2017). Acronyms on page 83.**



- 58,076 acres (IL, CRP, moderately confident);
- 108,430 acres (KS, CRP/CCRP, somewhat confident);
- 163,942 acres (KS, EQIP, moderately uncertain) (KS CRP/CCRP/EQIP, 272,372 acres);
- 7,151 acres (LA, NRCS, moderately confident);
- 1,070 acres (MD, Farm Bill, neutral);
- 38,854 acres (MO, delivered by MDC, somewhat uncertain);
- 28,177 acres (MO, delivered by Quail Forever, moderately confident) (MO MDC/QF, 67,031 acres);
- 630 acre (NJ, CRP, neutral);
- 1,601 acres (NJ, EQIP, very uncertain);
- 294 (NJ, GRP, somewhat uncertain) (NJ CRP/EQIP/GRP, 2,525 acres);
- 104,922 acres (OK, Farm Bill, somewhat uncertain);
- 37,209 acres (OK, FSA, somewhat confident) (OK Farm Bill/FSA, 142,131 acres);
- 52,490 acres (TX, Farm Bill, moderately confident);
- 2,198 acres (VA, NRCS, moderately confident).

Among states, Kansas reported by far the most quail-friendly management through USDA Farm Bill programs, followed by Oklahoma, then Missouri, Illinois, and Texas. Although general CRP acreage has declined considerably, states have worked with the USDA to increase focus on bobwhites and other wildlife in remaining practices.

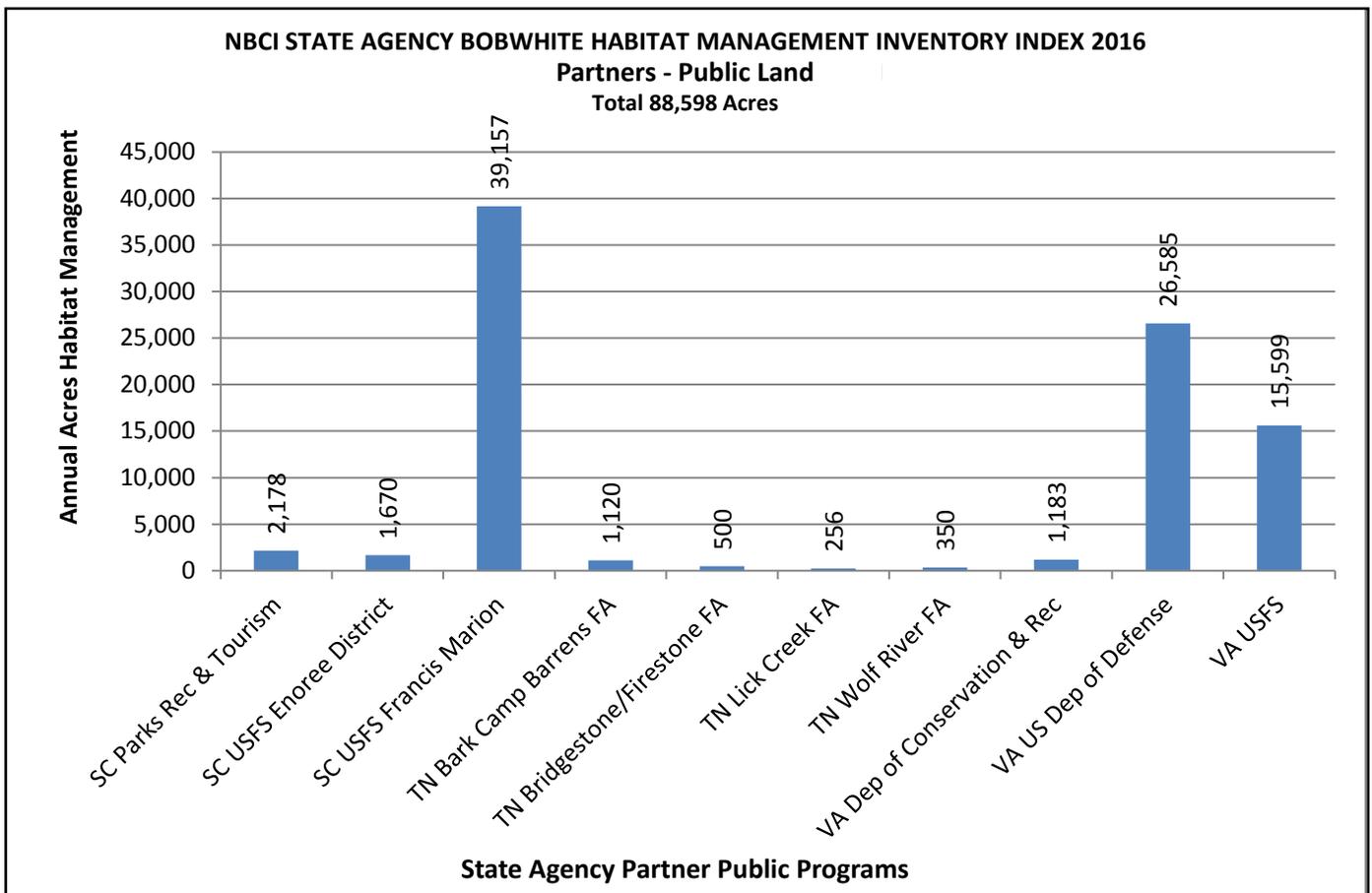


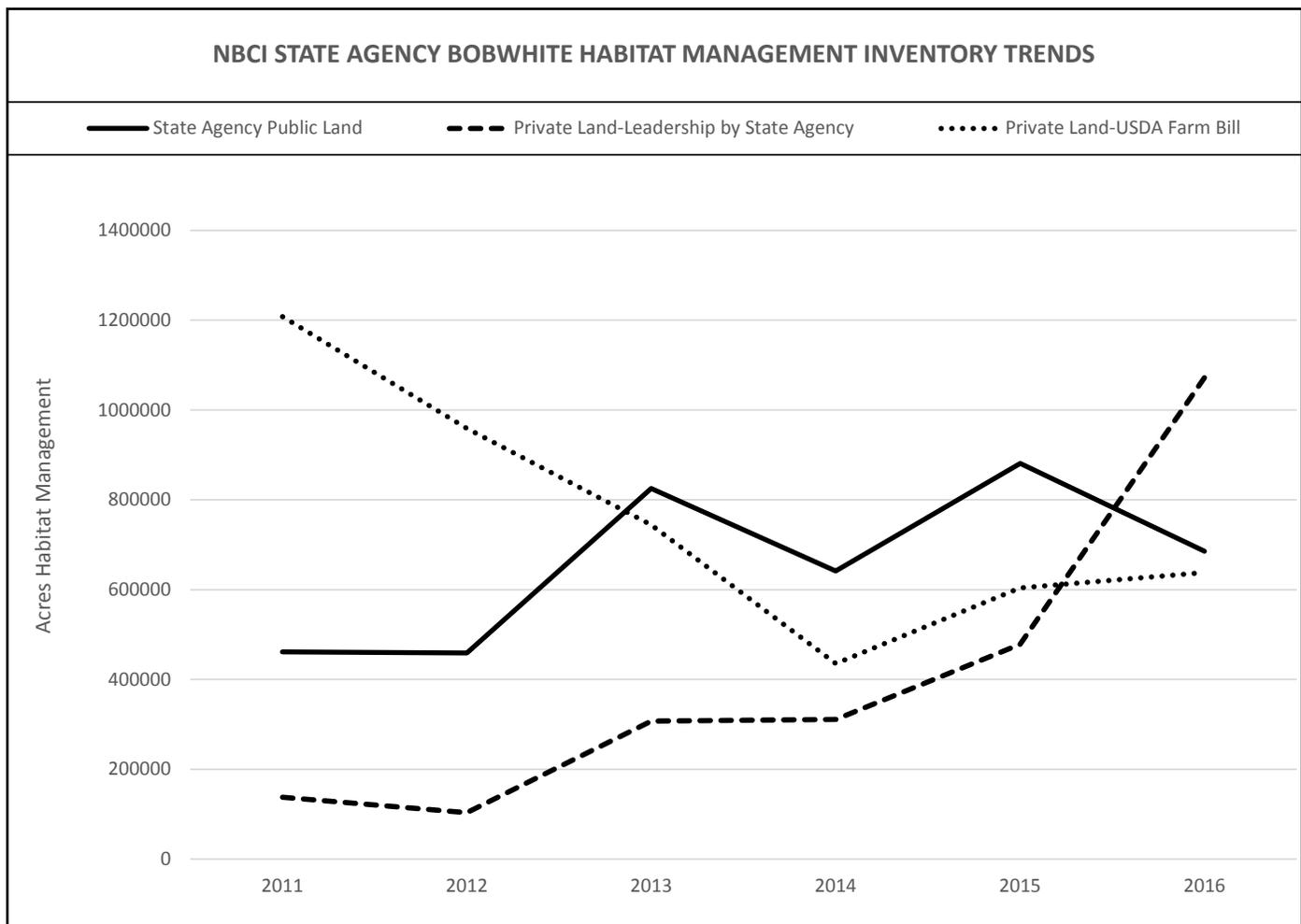
Figure 5. 2016 NBCI State Agency Bobwhite Habitat Management Index for 10 partner public land programs. Index is acres of habitat managed by prescribed fire, disking, grazing, spraying herbicide, cutting, planting, etc., during the reporting year (ranging from July 1, 2015 to December 31, 2016). Acronyms on page 83.



## Partner Private Land

For 2016, 13 state agencies reported on 18 partner private land programs that contribute to quail management for a total of 680,360 acres (Figure 4). These programs were reported previously in the miscellaneous private and public lands category and continue to recognize the important contributions in Legacy Landscapes (e.g., Tall Timbers Research Station and Land Conservancy) and by quail non-government organizations such as Quail Forever and Quail and Upland Wildlife Federation. State quail coordinators are increasingly recognizing partner management, resulting in a more diverse picture of quail conservation, including programs of the USDA Farm Bill that specifically target quail restoration. State coordinator acreage reports (state, program/practice/delivery, coordinator confidence rating) included the following:

- 7,040 (AR, Quail and Upland Wildlife Federation, very uncertain);
- 89 (AR, Quail Forever, moderately confident);
- 164,596 (FL, Tall Timbers Research Station and Land Conservancy, very confident);
- 379,640 (GA, Tall Timbers Research Station and Land Conservancy, moderately confident);
- 14,073 (GA, Jones Ecological Research Center at Ichuaway, moderately confident);
- 2,999 (IL, Illinois Department of Natural Resources, IDNR, Recreational Access, somewhat uncertain);
- 15,550 (KS, Quail and Upland Wildlife Federation, somewhat confident);
- 270 (MD, Chester River Research Station, somewhat confident);
- 56,760 (MO, Quail and Upland Wildlife Federation, somewhat uncertain);



**Figure 6. Trends in NBCI State Agency Bobwhite Habitat Inventory Index, 2011—2016. Includes data from standardized categories identified in Figures 1-3.**



- 7,715 (MO, Quail Forever, very confident);
- 1,430 (MS, Quail and Upland Wildlife Federation, moderately confident);
- 4,303 (NC, Quail and Upland Wildlife Federation, moderately confident);
- 1,500 (NJ, New Jersey Audubon, very confident);
- 13,894 (OK, Quail Forever, very confident);
- 3,234 (SC, NRCS Carolina Sandhills FA, somewhat confident);
- 1,308 (SC, NRCS Oak Lea FA, moderately confident);
- 851 (SC, NRCS Webb FA, moderately confident); and
- 5,108 (VA, Quail and Upland Wildlife Federation, somewhat confident).

### **Partner Public Land**

For 2016, 3 state agencies reported on 10 partner public land programs that contribute to quail management for a total of 88,598 acres (Figure 5). State coordinator acreage reports (state, program/practice/delivery, coordinator confidence rating) included the following:

- 2,178 (SC, SC Parks, Recreation, and Tourism, very confident);
- 1,670 (SC, USFS—Enoree District, very confident);
- 39,157 (SC, USFS—Francis Marion, moderately confident);
- 1,120 (TN, Bark Camp Barrens Focus Area, very confident);
- 500 (TN, Bridgestone/Firestone Focus Area, moderately confident);
- 256 (TN, Lick Creek Focus Area, very confident);
- 350 (TN, Wolf River Focus Area, very confident);
- 1,183 (VA, VA Department of Conservation and Recreation, moderately confident);
- 26,585 (VA, Department of Defense, somewhat confident); and
- 15,599 (VA, U.S. Forest Service, moderately confident)

### **NBCI Coordinated Implementation Program (CIP) Focal Areas**

The 2017 NBCI Inventory provided coordinators of the NBCI CIP the second opportunity to report preliminary habitat data for their focal areas. Twelve coordinators reported 25,784 acres of habitat management for 13 NBCI CIP Focal Areas. Iowa is the first state to implement a second NBCI CIP and added Shawtee Focal Area management to their report this year. Reporting states include those collecting and submitting bird and quail population data to NBCI for 2016 or prior years, and some of the states that plan to submit data in 2017. NBCI CIP progress and a habitat chart are described in an article on page 46. Reported acres of management include (CIP name: public or private land, acres of habitat management, coordinator confidence rating, state agency/partner):

- AR NPS Pea Ridge: public land, 985 acres, very confident, Arkansas Game and Fish Commission/Pea Ridge National Military Park—National Park Service;
- DE Cedar Swamp: public land, 1,473 acres, moderately confident, Delaware Division of Fish and Wildlife;
- IA Ringgold and Shawtee: private land, 397 acres, very confident; and IA Ringgold and Shawtee: public land, 1,725 acres, very confident, Iowa Department of Natural Resources;
- KY Livingston County: private land, 795 acres, very confident, Kentucky Department of Fish and Wildlife Resources;
- LA USFS Vernon: public land, 5,992 acres, very confident, Louisiana Department of Wildlife and Fisheries/Kisatchie National Forest, Vernon Unit—United States Forest Service;
- MO 2C: private land, 350 acres, very confident, Missouri Department of Conservation/Quail Forever;
- NE Meridian: private land, 4,368 acres, very confident; and NE Meridian: public land, 2,268 acres, very confident, Nebraska Game and Parks Commission;
- NJ Dix WMA: public land, 400 acres, moderately confident, New Jersey Division of Fish and Wildlife;
- OK Cross Timbers: public land, 5,641 acres, very confident, Oklahoma Department of Wildlife Conservation/Oaks and Prairies Joint Venture;
- SC USFS Indian Creek: public land, 140 acres, very confident, South Carolina Department of Natural Resources/Sumter National Forest/United States Forest Service;



- TX Austin County: private land, 50 acres, very confident, Texas Parks and Wildlife Department/Oaks and Prairies Joint Venture; and
- VA Big Woods/Piney Grove: public land, 1,200 acres, moderately confident, Virginia Department of Game and Inland Fisheries.

### Summary

In this sixth year of the NBCI State Agency Habitat Management Inventory, state agency participation remains steady with 19-22 states providing data during 2011-16 reporting years. For this year, the 22 state agency coordinators reported 3,191,266 acres of bobwhite habitat management for 103 programs, a substantial increase in acreage over last year (2,695,645 acres), and the previous 5 years of the inventory. Coordinators also reported on more programs than in the past, recognizing efforts by partners to put habitat on the ground.

Across the past 6 years, three of the NBCI Inventory land categories—State Agency Public Land, State Agency-Based Private Land, and Private Land enrolled in USDA

Farm Bill—have been standardized and are displayed in Figure 6. Year-to-year changes are described under each category, and shifts among categories over years are described in previous State of the Bobwhite Reports. The notable change for the 2016 reporting year is the large increase in State Agency-Based Private Land, attributed largely to increased capacity to report bobwhite-friendly grazing management in Texas. Other favorable trends include the stability of State Agency Public Land management since 2013, and the increasing recovery of bobwhite-friendly management under the USDA Farm Bill Program.

In summary, it is clear from the NBCI Habitat Inventory that state wildlife agencies and partners are continually working on the foundation of bobwhite populations and habitat management. Regardless of program size, land is being improved for the benefit of many species of wildlife, and in many cases, quail hunting is improved.



## Status of Bobwhite Hunting Report: If You Build It, They (Hunters) Will Come

By Tom Dailey | National Bobwhite Conservation Initiative

The 2017 NBCI Hunting Inventory of state agency statewide quail hunting surveys is a one-year update of the 5-year retrospective analysis in the 2016 State of the Bobwhite Report. See that report for background on state surveys and the range-wide, long-term decline in wild quail hunting. Of the 25 NBCI states, Arkansas, Florida, Tennessee, and West Virginia seldom collect quail hunting data, and other states collect data less frequently than annually.

The 2017 report is intended to identify the upward trend in quail hunting resulting from a few years of mild weather in the Great Plains and Midwest, providing some understanding of the potential for recovery of quail hunting as a recreational activity. The NBCI continues to report the gross number of quail hunters, disregarding any distinction between wild and pen-raised quail, thus providing an index of the potential interest in wild quail hunting.

### Results

Sixteen states reported on recent annual hunting surveys. Alabama, Florida, Illinois, Iowa, Kansas, Louisiana, Nebraska, New Jersey, North Carolina, Oklahoma, Texas, and Virginia reported on the 2015-16 hunting season, and Delaware, Maryland, and Mississippi reported on the 2016-17 season. To this, the NBCI Inventory adds the previously reported data for the 2014-15 season in Georgia, Missouri, and South Carolina.

The estimated number of quail hunters in the NBCI Inventory ranged from 226 in Delaware to 59,882 in Texas (Figure 1). Total number of quail hunters for the 16 states reporting new data was 221,453, and they spent 1,109,165 days in the field. Comparing the 16 states reporting data in 2016 and 2017, large increases in number of hunters in Nebraska (52%), Iowa (49%), Texas (48%), and Kansas (26%) were balanced by continued declines or small

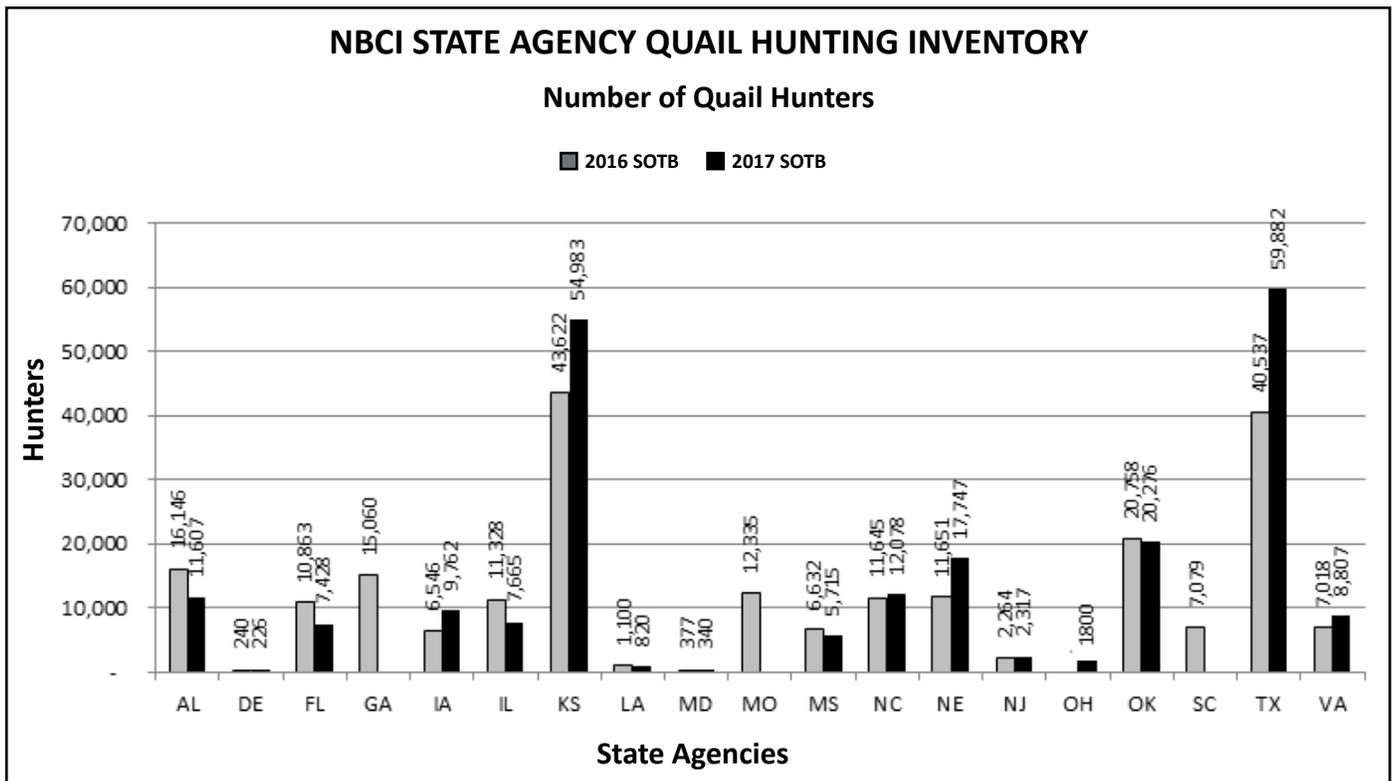


Figure 1. Estimated number of quail hunters (pursuing wild or pen-raised quail) in 19 states reporting for the 2016 and 2017 NBCI Hunting Inventory.



improvements in many other states. Kansas, Nebraska, Oklahoma, and Texas combined accounted for 69% of quail hunters and 64% of hunting trips. As noted in previous reports in 2011 and 2016, most of the hunting in these top-performing states is of wild bobwhites.

A common question is “how many quail hunters are there in the 25 NBCI states?” This was estimated as 357,542 in 2011 and 249,846 in 2016. Combining data for states reporting in 2016 and 2017 (Figure 1), NBCI conservatively estimates there are at least 255,927 bobwhite hunters, and that they spend over 1 million days in the field each hunting season. The estimated number of hunters includes many assumptions (e.g., no change in hunting in Georgia, Missouri, and South Carolina over a 2-year period), and the data are not comprehensive (e.g., no data from some states, states with data often do not report on a large part of the hunting community, such as those older than 65, landowners, etc.).

### **Discussion**

The surge in wild bobwhite hunting the past few years in Iowa, Kansas, Nebraska, Oklahoma, and Texas demonstrates the continued importance of this iconic game bird to the culture and economy of many states. This hunting recovery resulted largely from a positive bobwhite population response to the presence of suitable habitat and mild weather, and was predicted by each state agency based on population surveys. This recovery is occurring across a wide variety of hunting properties, including leased and pay-to-hunt ranches in Texas, and state and federal agency public lands and hunting access programs (e.g., in Iowa, Kansas, Missouri, Nebraska, and Oklahoma). Also, the recovery is aided by extra privileges for youth and by the fact that quail hunters are very mobile, traveling from east to west to take advantage of increased opportunities.

State agency quail coordinators continue to be optimistic about sustained and increased quail hunting based on favorable weather in areas with suitable habitat. Because of the complexity of quail hunting, particularly the reliance on trained bird dogs and highly-developed hunting skills, a lag in hunter response is not surprising. Regardless of the speed of recovery, quail enthusiasts are enjoying good days in the field and demonstrating that a viable and potent quail hunting community still exists.



## NBCI State Agencies

- Alabama Department of Conservation and Natural Resources (ADCNR)
- Arkansas Game and Fish Commission (AGFC)
- Delaware Division of Fish and Wildlife (DFW)
- Florida Fish and Wildlife Conservation Commission (FWC)
- Georgia Department of Natural Resources (GADNR)
- Illinois Department of Natural Resources (IDNR)
- Indiana Division of Fish and Wildlife (IDWF)
- Iowa Department of Natural Resources (IDNR)
- Kansas Department of Wildlife, Parks and Tourism (KDWP)
- Kentucky Department of Fish and Wildlife Resources (KDWFR)
- Louisiana Department of Wildlife and Fisheries (LDWF)
- Maryland Department of Natural Resources (MDNR)
- Mississippi Department of Wildlife, Fisheries and Parks (MDWFP)
- Missouri Department of Conservation (MDC)
- Nebraska Game and Parks Commission (NGPC)
- New Jersey Division of Fish and Wildlife (NJDFW)
- North Carolina Wildlife Resources Commission (NCWRC)
- Ohio Department of Natural Resources (ODNR)
- Oklahoma Department of Wildlife Conservation (ODWC)
- Pennsylvania Game Commission (PGC)
- South Carolina Department of Natural Resources (SCDNR)
- Tennessee Wildlife Resources Agency (TWRA)
- Texas Parks and Wildlife Department (TPWD)
- Virginia Department of Game and Inland Fisheries (VDGIF)
- West Virginia Division of Natural Resources (WVDNR)

## Acronyms

- 2C QFA – Carroll County Quail Focal Area
- BBS – USGS North American Breeding Bird Survey
- BMP – Best Management Practices
- BRQFA – Bee Ridge Quail Focal Area
- BQFA – Bobwhite Quail Focus Areas
- BQI – Bobwhite Quail Initiative
- CIP – Coordinated Implementation Plan (NBCI CIP)
- CNF – Conecuh National Forest
- CP – Conservation Practice (as used in the Conservation Reserve Program)
- CP-33 – Habitat Buffers for Upland Birds
- CP-38 – State Acres for Wildlife Enhancement, SAFE
- CCRP – Continuous Conservation Reserve Program
- CRP – Conservation Reserve Program
- CURE – Cooperative Upland Habitat Restoration and Enhancement
- DNR – Department of Natural Resources
- ESH – Early Successional Habitat
- FB – Farm Bill (CCRP, CRP, EQIP, GRP, etc.)
- FSA – Farm Service Agency
- EQIP – Environmental Quality Incentives Program
- FA – Focus or Focal Area
- FSA – Farm Service Agency
- GRP – Grassland Reserve Program
- KNF – Kisatchie National Forest
- LC – Land Conservancy
- LEAD – Letterkenny Army Depot
- MOU – Memorandum of Understanding
- MSU – Mississippi State University
- NBCI – National Bobwhite Conservation Initiative
- NBTC – National Bobwhite Technical Committee
- NGO – Non-Governmental Organization
- NPS – National Park Service
- NRCS – Natural Resources Conservation Service
- NWTF – National Wild Turkey Federation
- OPJV – Oaks and Prairie Joint Venture
- OSU – Oklahoma State University
- P-R – Pittman-Robertson
- PCQ – Park Cities Quail
- PF – Pheasants Forever
- PLC – Private Land Conservationist
- PSU – Pennsylvania State University
- QEA – Quail Emphasis Area
- QF – Quail Forever
- QFA – Quail Focus Area
- RCPP – Regional Conservation Partnership Program
- RC – Research Center
- REC – Recreation
- RS – Research Station
- SAFE – State Acres for Wildlife Enhancement, CP-38
- SCBI – South Carolina Bobwhite Initiative
- SCQC – South Carolina Quail Council
- SCQFA – Scott County Quail Focal Area
- SE – Standard Error
- TPNP – Tallgrass Prairie National Preserve
- TTRS – Tall Timbers Research Station and Land Conservancy
- UDEL – University of Delaware
- UERP – Upland Ecosystem Restoration Project
- USFS – United States Forest Service
- USFWS – United States Fish and Wildlife Service
- USDA – United States Department of Agriculture
- USGS – United States Geological Survey
- UT – University of Tennessee
- UTIA – University of Tennessee Institute of Agriculture
- VPA-HIP – Voluntary Public Access and Habitat Incentive Program
- WA - Wildlife Area
- WLFW – Working Lands For Wildlife
- WMA – Wildlife Management Area
- WSWF – Wildlife and Sport Fish Restoration





# Thanks to our sponsors!



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